



# The Wicked Character of Psychosocial Risks: Implications for Regulation

■ **Anne Helbo Jespersen**<sup>1</sup>

*Industrial PhD candidate, Bureau Veritas Denmark, and Center for Industrial Production, Aalborg University, Denmark*

■ **Peter Hasle**

*Professor, PhD, Center for Industrial Production, Aalborg University, Denmark*

■ **Klaus T. Nielsen**

*Associate Professor, PhD, Department of People and Technology, Roskilde University, Denmark*

## ABSTRACT

Psychosocial risks constitute a significant problem in most workplaces, and they are generally considered more difficult to regulate than many other occupational health and safety risks. This article investigates the challenges of regulating psychosocial risks in the workplace. The difficulties lie in the particular nature of psychosocial risks: their complexity, uncertainty, value, and power divergences. Psychosocial risks therefore resemble 'wicked problems', typically characterized by unclear cause-effect relationships and uncertain solutions. We use the 'wicked problems' concept to show how workplace regulation, and particularly the enforcement in the form of inspection and audits of certified occupational health and safety management systems, face challenges in assessing psychosocial risks and the strategies used by regulators to overcome these challenges. While regulation has become more effective in several countries, a better understanding of the nature of the challenges is still needed. It is necessary to accept the uncertain nature of psychosocial risks in the search for more efficient regulation. Achieving more effective regulation should involve stakeholders in the workplace who deal with the prerogatives of management, and should help develop the competencies of the inspectors and auditors in the field.

## KEY WORDS

*Audit / inspection / enforcement / standards / wicked problems*

## DOI

10.19154/njwls.v6i3.5526

## Introduction

Psychosocial risks are now widely acknowledged as a priority in occupational health and safety (OHS) (European Agency for Safety and Health at Work, 2012). Mental and physical health problems associated with workplace psychosocial risk factors are a significant, well-documented health issue (Cox et al., 2008; Goh et al., 2015; Leka et al., 2008; Leka et al., 2010).

<sup>1</sup> E-mail: [anne.helbo@dk.bureauveritas.com](mailto:anne.helbo@dk.bureauveritas.com)



The research-based understanding of psychosocial risks has evolved from many quarters over a long period (Karasek, 1979; Karasek & Theorell, 1990; Siegrist, 1996). The awareness of and focus on psychosocial risks as a regulatory topic have grown slowly over many years. Norway was the first country to enact legislation focusing on the psychosocial work environment (Gustavsen, 1977), and even at that time, the shortcomings of a traditional labor inspection strategy were acknowledged (Gustavsen, 1980). In 1989, with the adoption of the EU OHS Framework directive (89/391/EEC), psychosocial risks became encompassed by the OHS regulation due to the general provision that ‘The employer shall have a duty to ensure the safety and health of workers in every aspect related to the work’ [Article 5(1)]. However, general provisions do not ensure enforcement. Denmark provides an example. Denmark has had a general provision since 1977, and the Labor Inspectorate began enforcement in the 1980s. However, political agreements have restricted the scope of the enforcement. In reality, genuine enforcement began only in the late 1990s (Rasmussen et al., 2011).

In several countries, OHS authorities are now taking more regulatory actions to deal with psychosocial risk factors, most often those related to bullying, harassment, and risks of violence (for an overview see Lippel & Quinlan, 2011). Outside the narrow confines of state regulation, many aspects of psychosocial risks have attracted attention. Hence, attempts are being made to revise management standards for OHS (such as OHSAS 18001) so that they encompass psychosocial risks (Hohnen & Hasle, 2011; Hohnen et al., 2014; Leka et al., 2011).

Research into the regulatory aspects of psychosocial risk is a relatively new field, with only few published studies (though see Kompier et al., 1994 for an earlier study). However, the researchers all point out the difficulties in regulating psychosocial risks compared with physical and safety risks (Hohnen & Hasle, 2011; Lippel & Quinlan, 2011; Starheim & Rasmussen, 2014). The regulatory difficulties appear in both the labor/factory inspection process (Lippel & Quinlan, 2011) and in the OHSM systems auditing process (Hohnen & Hasle, 2011; Jespersen et al., 2016). In this article, we use a broad concept of regulation (inspired by Jordana & Levi-Faur, 2004) by which regulation denotes all societal actions intended to change behavior for the greater good, and we therefore include both labor inspection and OHS management (OHSM) systems audits.

Regulation of psychosocial risks using the traditional instruments has been difficult because of difficulties in specifying standards and in enforcing these via inspection (Johnstone et al., 2011; Rasmussen et al., 2011). The same kinds of difficulties occur with the setting of management standards and subsequent related audits of OHSM systems (Hohnen et al., 2014). The few studies available have not focused on the underlying causes of these difficulties, much less the consequences for regulation strategies. It is the aim of this article to help fill this research gap. We do this by presenting a theoretical analysis of the nature of psychosocial risk and comparing that to some of the prevailing strategies for regulation of psychosocial risks. In our analysis, we focus especially on the workplace activities in terms of inspection and third-party audits. Our analysis builds on the existing studies of regulation as implemented in practice. The descriptions of regulatory practices are based on the special issue of *Safety Science* on regulation and inspection of psychosocial risks (Lippel & Quinlan, 2011) and traces older and recent literature from that reference.

In this study, we introduce the concept of ‘wicked problems’ (Head & Alford, 2013; Rittel & Webber, 1973) as a theoretical framework for understanding psychosocial risks. We argue that these psychosocial risks share important features of ‘wicked problems’, notably high levels of social complexity, uncertainty, and divergence of value. We conclude that regulation of psychosocial risks may require revising the traditional regulation approach focused on checking specification standards and instead relying on greater use of procedural enforcement and a professional reflexive judgment of the psychosocial risk management process.

The common thread in our article is the ‘wicked problems’ concept. Hence, using the existing literature, we elucidate what we consider to be the uniquely ‘wicked’ features of psychosocial risks compared with physical risks. We then describe the consequences of these features for the regulation of psychosocial risks as described in the literature, presenting some examples of psychosocial risk regulation. In the final section, we discuss the implications of this understanding of psychosocial risk for future development of regulation.

## The nature of psychosocial risks

In recent decades, significant changes have taken place in the organization and management of work. These changes have resulted in increasing attention being paid to psychosocial risks and new challenges in the field of OHS (Bluff & Gunningham, 2004; European Risk Observatory Report, 2007). The control of psychosocial risks differs from the control of more conventional OHS risks, as psychosocial risks cannot be managed, measured, and observed in an objective and technical manner (Leka et al., 2011). Cox et al. (2000) define psychosocial risks as ‘those aspects of work design and the organization of management of work, and their social and organizational contexts, which have the potential for causing psychological, social or physical harm.’ The content of psychosocial risks can be summarized in terms of the risks related to different job characteristics, work environments, and organizational characteristics. Typical psychosocial risks—or ‘hazards’ as they are termed by Leka & Cox (2010)—are summarized in Table I. The most significant of the emerging psychosocial risks is related to new forms of employment contracts that generate or exacerbate job insecurity, intensify work input, or create higher emotional demands (European Agency for Safety and Health at Work, 2012; Quinlan et al., 2001).

Consider this ensemble of risk factors, a number of key characteristics distinguish psychosocial risks from most other occupational risks. Psychosocial risks are often multicausal, contextualized, rarely directly visible (often not directly observable), and highly political or politicized (relating, for instance, to the employer prerogative) (Hohnen et al., 2014). Moreover, psychosocial risks, unlike most physical OHS risks, are to a large extent determined by the way in which people perceive them and are therefore dependent on subjective differences in the perception of a problem or risk (Rick & Briner, 2000). These variable, subjective perceptions make it difficult to establish a fixed set of norms and prescriptive standards that could be observed and measured objectively (Hasle & Petersen, 2004; Johnstone et al., 2011). Characteristic of psychosocial risks is their connection to the management and organization of work and thereby also to the



**Table 1** Psychosocial hazards (Leka & Cox, 2010)

<b>Content of work</b>	<b>Risk factors</b>
Job content	Lack of variety or short work cycles, fragmented or meaningless work, underuse of skills, high uncertainty, continuous exposure to difficult clients, patients, pupils, etc.
Workload and work pace	Work overload or too little work, machine pacing, high levels of time pressure, continually subject to deadlines.
Work schedule	Shift work, night shifts, inflexible work schedules, unpredictable hours, long or unsociable hours.
Control	Low participation in decision-making, lack of control over workload, pacing, shift working, etc.
Environment and equipment	Inadequate equipment availability, suitability or maintenance; poor environmental conditions such as lack of space, poor lighting, excessive noise.
<b>Context of work</b>	
Organizational culture and function	Poor communication, low levels of support for problem solving and personal development, poor managerial support; lack of definition of, or agreement on, organizational objectives.
Interpersonal relationships at work	Social or physical isolation, poor relationships with superiors, interpersonal conflict, lack of social support, harassment, bullying, poor leadership style, third-party violence.
Role in organization	Role ambiguity, role conflict, and responsibility for people
Career development	Career stagnation and uncertainty, under-promotion or over-promotion, poor pay, job insecurity, low social value of work.
Home-work interface	Conflicting demands of work and home, low support at home, problems relating to both partners being in the labor force (dual career).

power disparity in workplaces. Psychosocial risks are rooted in the employers’ ability to organize work tasks, allocate resources, and manage operations that in turn create the risks at work (Walters, 2011). The explicit overlap between psychosocial risks and industrial relations is reflected in the differing or directly opposing interests and the imbalance of power with regard to work organization (Moncada et al., 2011). Employers and workers often have not just different but directly conflicting interests (Nichols & Tucker, 2000), and the imbalance of power between employers and workers makes it hard for workers to challenge the employer’s prerogative. In terms of prevention, addressing psychosocial risks therefore involves identifying risk factors arising from the work organization and management. For these reasons, the prevention of workplace psychosocial risks is difficult to address (Leka et al., 2015), as it entails challenges to management practices and the managers’ exercise of power. Managers tend to avoid confronting issues of power and management style; however, it precisely these practices that is critical to an understanding of how psychosocial risks and related occupational illnesses evolve.

## Wicked problems

The nature of psychosocial risks shares many characteristics of what are termed ‘wicked problems’ (Rittel & Webber, 1973). The wicked problem concept has proven useful for understanding certain complex issues in modern society that require solution strategies, which differ from the technical-rational decision-making approach. Wicked problems thus differ from ‘tame’ problems in which elements of the problem are more clearly definable and solutions identifiable.

The ‘wicked problems’ construct was introduced more than 40 years ago by Rittel & Webber (1973). It was based on a critique of the predominant technical-rational approach to decision-making, planning, and implementing of social policy, especially related to complex issues (Head, 2008). Since then, the wicked problem concept has gained popularity due to its ability to provide understandings that could be helpful in meeting the challenges faced by today’s policy-makers, scholars, and practitioners. Wicked problems are generally seen as linked to the complexity of elements, subsystems, and interdependencies and to the uncertainty in relation to risks, consequences of action, and changing patterns. Wicked problems reflect situations where there is a divergence and fragmentation of viewpoints, values, and strategic intentions (Head & Alford, 2013).

Rittel & Webber (1973) originally identified 10 primary characteristics of wicked problems, while Weber & Khademian (2008) later elaborated on these characteristics with regard to the relationship between the challenges from wicked problems and the strategies to meet these challenges. Weber & Khademian noted the following key features:

- Precise causes and effects are difficult to identify;
- Problem-solving process is fluid;
- Little, if any, consensus regarding problem definition or identification of solutions;
- Multiple stakeholders;
- Diverse perspectives;
- High degree of interdependence among stakeholders;
- Many trade-off among competing values; high conflict potential;
- Increased political and social complexity;
- Informal, socially embedded, and diverse sources of knowledge;
- Cannot be solved ‘once and for all’; solutions are provisional and uncertain.

Head & Alford (2013) identify a spectrum of problems types that would not only help to explain the features typical of wicked problems generally but also shed light on the differential features and intensities of specific problems. Not all problems are either tame or wicked. At one end of the spectrum are unambiguously tame problems, that is, those with low levels of complexity and diversity. For such tame problems, both the definition of the problem and the likely solution are clear. Along the tame-wicked continuum, there are degrees of wickedness. The more complex and diverse the situation, the more wicked the problem. For the most wicked problems, both the problem definition and the solution are unclear. The character of such wicked problems can therefore be quite different according to the degree of wickedness, implying a range of appropriate responses to more or less wicked problems.



## Responses to wicked problems

The distinctive characteristics of wicked problems require specific approaches for addressing them. Head & Alford (2013) suggest three strategies that can increase effectiveness in dealing with wicked problems:

- 1) the problems have to be seen from multiple perspectives;
- 2) a focus on creating a collective learning culture based upon collaborative discussions of strategies; and
- 3) effectively engaging many stakeholders in the problem area.

In addition, they emphasize that one possible way to address wicked problems may be systems thinking in a nontechnical sense (see also Senge, 1990). Systems thinking attempts to overcome the mechanistic and linear metaphors of ‘command-and control.’ Instead, systems thinking employs a holistic approach, acknowledging that social knowledge is provisional and context-dependent. Systems thinking also entails taking account of a complex web of inputs, processes, and outputs that can lead to desired outcomes.

Given the complex nature of wicked problems, the knowledge challenges are particularly acute. Weber & Khademian (2008) point out that any effort to effectively tackle wicked problems requires efforts to draw on broad knowledge bases, from the technical and scientific to the local and context dependent. Moreover, it is necessary to develop usable new knowledge that can be applied to solving or ameliorating the wicked problem. Shared knowledge rather than command and control can form the basis for the kind of cooperation that can tackle wicked problems.

## Psychosocial risks as wicked problems

The wicked problem construct can help to provide a better understanding of the challenges involved in regulating psychosocial risks, in so far as so many features of psychosocial risks can be characterized as wicked problems. We highlight these features in Table II.

While psychosocial risks thus share many key features of wicked problems, not all psychosocial risks are equally wicked. Some elements of risks resemble more conventional, ‘tame’ risks. Protection against violence at work in the form of, say, bank robberies or violent social clients may partly be relatively easily achieved by technical means, such as alarms and physical barriers, even though the causes of such violence may often be wicked and beyond the control of the workplaces. While most psychosocial risks have a wicked character compared with most physical risks, wicked elements can also be found in physical risks. Some workplace accidents, for example, can be prevented by a number of relatively simple technical means, such as constructing physical barriers between the employees and the hazard, but when it comes to human behavior, even the most straightforward interventions share several features with wicked problems. Another example is musculoskeletal disorders (MSDs) that also exhibit wicked characteristics. It has been found that MSD may be caused by psychosocial risks alone or in combination with physical strains (Hauke et al., 2011), while for health care workers, the physical strain from lifting and carrying patients is also influenced by management practices and individual behavior.

**Table II** Comparison of key characteristics of psychosocial risks and wicked problems

<b>Wicked problems</b>	<b>Psychosocial risks</b>
Precise causes and effects are difficult to identify	Most potential effects, such as stress and depression, involve several psychosocial risks as well as nonwork-related causes and marked by considerable individual differences. Effects of interventions are partly unpredictable and unintended (the effects of interventions depend on employees' interpretation of management intentions).
Problem-solving process is fluid	A solution for one individual may not work for another (a specific work task might be viewed as a positive challenge by one person but as a stressor by another). A solution may alter the understanding of the original problem (stress prevails despite several different attempts to solve the problem).
Little, if any, consensus regarding problem definition or identification of solutions	Even though an overall consensus (Tab. I) exists on the list of possible risk factors, there is no agreement on their relative importance, the level of acceptable risks, or on possible solutions.
Multiple stakeholders	In the optic of OHS legislation, psychosocial risk may be reduced to a basic relationship between employer and employee, but the realities of organizational life mean that effects and solutions are influenced by numerous social relationships between groups of employees, managers at different levels, and by external stakeholders.
Diverse perspectives	The many different stakeholders rarely share understandings and solutions to psychosocial risks due to differences in interests between management and employees.
High degree of interdependence among stakeholders	Workable solutions depend on involvement of many stakeholders at the same time.
Many trade-offs among competing values; high conflict potential	Solutions to psychosocial problems often interfere with management prerogatives, thus creating potential conflict between the rights of ownership and the protection of employees.
High degree of political and social complexity	The competing values and potential conflicts are mirrored at the societal level, where regulators find it difficult to establish a stable, objective basis for regulatory measures.
Informal, socially embedded, and diverse sources of knowledge	Research in psychosocial risks provides important knowledge, but compared with expert knowledge of physical risks, it is the subjective experience of the individual and groups of employees and managers that determines the range and effectiveness of feasible actions.
Cannot be solved 'once and for all'; solutions are provisional and uncertain	Psychosocial risks are embedded in all social relations; their dynamic character requires continuing solutions, thus entailing perpetual uncertainty.



## Psychosocial risks and implications for OHS regulatory enforcement

All enforcement of legislation builds on setting acceptable standards<sup>1</sup>, which are used to assess compliance with the legislation. In many cases, however, it is not possible for regulators and enforcers to set clear threshold values for a safe and healthy psychosocial work environment, and this constraint has impeded the effectiveness of traditional approaches to regulatory enforcement. Inability to set objective threshold values is certainly also a problem for some physical risks, especially those that include human elements in connection with accident prevention and ergonomic risks.

Viewing psychosocial risks as wicked problems can be a useful analytical framework for comprehending such difficulties. Together with the rapid developments of society and technology—and hence work—this forms the context for the move from a command-control approach to a more reflexive approach to regulation (Wilthagen, 1994). The reflexive approach focuses on processes and systems in which improved management of health and safety is pursued (Walters et al., 2011). The command and control regulatory approach is based on an assumption of transparent cause-effect relationships, to which expertise can be applied and then transformed into measurable enforcement levels (Hasle & Sørensen, 2011; Wilthagen, 1994). Command and control is most appropriate when the effective solutions are known (Bluff & Gunningham, 2004) or when the problems are tame, a state of affairs that rarely applies to psychosocial risks. As part of this regulatory development, the use of legislative standards has changed from the traditional specification standard that formed the basis for command-control enforcement to new types of standards, which, alongside 1) specification standards also include 2) general duties, 3) performance standards, and 4) systematic process and systems-based standards (Bluff & Gunningham, 2004).

The four types of standards are often used in combination. All four are deployed in the regulation of psychosocial risks, although the performance approach is deployed less frequently in practice. The general duties approach is found in the EU Framework Directive from 1989 as well as in the legislation of the Nordic countries and many other countries (Lippel & Quinlan, 2011). Here, the legislation imposes a general obligation on the employer to ensure a safe and healthy work environment, but this stipulation does not exclude psychosocial risks. The systematic process and systems type of standard approach is used, for instance, in the provisions for systematic risk assessment as required by the EU Framework Directive that must also include psychosocial risks. The more extended requirements for systematic processes and systems contain some examples of public requirement (Frick & Kempa, 2011), but in this case, regulation is often left to OHSM system standards such as OHSAS 18001. In principle, these standards are voluntary, and private and public organizations can obtain OHSM system certificates that are subject to third-party audits. However, such OHSM systems are in some cases integrated into public regulation regimes (Jespersen, Hohnen & Hasle, 2016). Frick & Kempa (2011) have offered some critical evaluations of the risks involved in delegating both regulatory standard setting and regulatory monitoring and enforcement to private actors.

The new ways of regulating psychosocial risk are generalized in that the legislation contains general provisions about duties and processes, and the application of such broadly formulated requirements constitutes a challenge for enforcement of psychosocial regulation. Inspectors in the public regimes and auditors in the certification regime

face the problem of checking whether risk assessment and other systematic management procedures are operating effectively, and whether such measures in fact ensure a safe and healthy psychosocial work environment. The lack of detailed specifications and the wicked nature of many psychosocial risks make it difficult to assess whether the work environment is appropriately safe and healthy. It is therefore necessary for inspectors and auditors to establish operational procedures so that psychosocial risks can be amenable to inspection and audits. In the next sections, we describe examples of the attempts to establish such procedures, first in the sphere of public regulation and in a subsequent section in the private realm of voluntary OHSM systems standards.

### **Strategies for dealing with psychosocial risks through public enforcement efforts**

The EU Agency for Occupational Safety and Health, in an evaluation of the achievements of OHS regulation, concluded that while there has been some degree of success in identifying and reducing physical and technical risk factors in the work environment, no comparable success has been achieved in the regulation of psychosocial risks (Eurofound, 2014). Enforcement in this field is in its infancy, and much ground needs to be covered before efficient operational strategies can be considered to be in place. It is therefore interesting to analyze some of the current public strategies and assess the extent to which they have found ways to cope with the wicked nature of psychosocial risks. As stated previously, the public regulation of psychosocial risks has been developing for several decades, but only few examples are described in the scholarly literature.

A thematic issue of the journal *Safety Science* devoted to ‘Psychosocial hazards in the workplace: challenges for regulators labor inspectors and worker representatives’ (Lippel & Quinlan, 2011) discussed issues of regulation and enforcement. Further indications of progress in this field are provided by a recent report on workplace inspection of the psychosocial work environment coauthored by representatives from all five Nordic labor inspectorates (Hansen et al., 2015). The *Safety Science* articles and the Nordic report indicate that there are severe regulatory challenges, as exemplified by the Swedish difficulties with inspection of the psychosocial work environment (Bruhn & Frick, 2011). From these publications, we have selected two cases that have been subject to sufficient scientific scrutiny enabling them to be reliably assessed. They also represent quite different public strategies for enforcement of psychosocial work environment regulation with a focus on enforcement. The cases are 1) inspection of psychosocial risks in Denmark (Rasmussen et al., 2011; Starheim & Rasmussen, 2014), and 2) the more voluntary approach to management standards in the UK (Leka et al., 2011; Mellor et al., 2011).

### **Tools for government inspection of psychosocial risks in Denmark**

One example of the development of a traditional enforcement strategy in order to cover psychosocial risks is provided by the Danish Working Environment Authority (Eurofound, 2014; Rasmussen et al., 2011; Starheim & Rasmussen, 2014). In 1995, the Working Environment Authority and the social partners concluded a political agreement that enforcement of regulation of psychosocial risks should be restricted only to those



risks related to the individual's job function, whereas risks related to implementation of management strategies and the employers' prerogatives are not included and thereby not regulated.

On the basis of a minor revision of the Working Environment Act in 2004, the Danish Working Environment Authority developed a guidance tool for inspection of psychosocial risks. The guidelines cover a broad range of psychosocial risk factors associated with work organization. The Authority has developed a practice whereby inspectors assess a variety of psychosocial risks during all ordinary inspections, as well as during those inspections specifically targeted at psychosocial risks. The inspection procedure is tailored to the main sectors, and the result is a 24-sector guidance tool, which can help the inspectors assess psychosocial risks. The factors assessed cover the most important and prevalent psychosocial risks (quantitative demands related to workload and pace of work, emotional demands, work-related violence, traumatic experiences, night and shift work, and bullying and sexual harassment). The focus during the inspection is to assess whether there is a balance between the prevalence of the psychosocial risk factors and the prevention measures taken by the enterprise. The inspectors use the guidance tools to prepare for the inspection as well as during the on-site visit. The goal is to gather concrete evidence of whether psychosocial risks are being properly managed. This is done by asking employees a set of questions about their daily work. In order to establish whether the workload is too high, for example, employees can be asked: 'Do you often have to skip lunch in order to complete your work?' 'Do you often have unplanned overtime work?' 'If you have too much work to complete in normal working hours, who can you consult in order to solve the problem?' Responses to these types of questions, when combined with other data such as the written risk assessments, may result in requiring the employer to make certain improvements. The inspectors use qualitative interviews to access the local knowledge of the employees and managers. In the wicked problem context, the labor inspectors, by means of the interviews, try to obtain access to the informal, socially embedded knowledge. All inspectors have been trained in order to ensure the inspectors' skills in assessing and evaluating psychosocial risks.

Starheim & Rasmussen (2014), in a study of inspection practices, found that inspectors work with a delicate balance between incentives and controls. The experience of the inspectors is that too much focus on control creates resistance. While a certain level of enforcement is necessary to secure motivation, it is beneficial during the inspection to achieve an acceptance of the problem from those working in the inspected workplaces; otherwise, concrete improvements are likely to be stalled.

This strategy is useful in solving part of the challenge posed by the wicked character of psychosocial risks. The general knowledge of psychosocial risks and the sector is used in combination with evidence from individual experiences to identify the problems, and employees and managers are then asked clarifying questions in order to involve them in acknowledging, assessing, and perhaps even taking steps to resolve the problem. In practice, the inspectors use the general provisions in the legislation as a kind of performance standard. They use the entire body of knowledge derived from different data sources to assess whether the employees are sufficiently protected. However, important constraints still exist. If the inspectors, based on the sum of the evidence collected, conclude that there is a psychosocial work environment problem, they must decide what kind of improvement notice they should issue. The inspectors still lack a detailed specification standard that could allow them to demand, for example, that the employees' workload

must be reduced. The improvement notices thus tend to be relatively vague, requiring, for instance, that the organization formulates an action plan to ensure a better balance between work demands and resources. Another possibility is to order the organization to carry out a questionnaire survey of the employees in order to establish the magnitude of the psychosocial risks in the workplace.

## Management Standards in the UK

The Health and Safety Executive (HSE) in the UK employs a quite different strategy for regulating psychosocial risks. The HSE has acknowledged the fact that it is difficult to obtain support for traditional enforcement of legislation on psychosocial risks. Hence, they have pursued a voluntary strategy. In this connection, the HSE has developed a guidance tool focusing on how work-related stress should be tackled through good management practice (Cousins et al., 2004; Mackay et al., 2004; Mellor et al., 2011). The guidelines are known as the Management Standards Approach, focusing on risk assessment and preventive-organizational level interventions. The standards are voluntary in so far, as it is not obligatory for management to follow them; labor inspectorate might also consider other ways to prevent work-related stress as more suitable. Any alternative, however, still needs to be equivalent, and the standard functions as a 'guaranty' that sufficient measures have been taken. The Management Standards are not intended to be legally enforceable, but only to assist employers in complying with their legal obligations under the law. The basis of the approach is to compare desired states with actual or current states; hence, the approach is aimed at encouraging employers and employees to work together to identify psychosocial risks and adopt solutions to minimize these risks. There are six Management Standards referring to the main psychosocial risks factors in the workplace: job demands, control, social support, relationships at work, role ambiguity, and organizational change. Application of a Management Standard requires a stepwise approach that resembles a traditional risk assessment methodology (Mackay et al., 2004). The Management Standards Approach has been promoted by labor inspectors during their inspections, and they have also offered advice on how to carry out the stepwise approach.

Mellor et al. (2011), researching the implementation and effectiveness of the Management Standards Approach, emphasize that adequate knowledge of risk assessment and work-related stress is required to put such an approach into place. Mellor et al. showed that there was a lack of in-house competence in the companies, as the complexity of managing psychosocial risk factors requires specific knowledge. To our knowledge, there is no evaluation of whether the Management Standards Approach has had a broader impact on psychosocial risks in UK workplaces.

The UK voluntary approach avoids the difficulty of formulating legally binding provisions for psychosocial risks, and it works through inspectors who use their authority to promote the Management Standards. However, it must be expected that the approach will succeed only with those organizations that are already positively disposed toward a strengthened effort, whereas other organizations will probably refrain from using the voluntary guidelines offered by the inspectors. In cases wherein organizations are unwilling to take action on improving their psychosocial work environment, the regulatory system is left without a viable tool for enforcement.



## Strategies for dealing with psychosocial risks through voluntary OHSM system standards

In the private sector, market-based OHSM systems have the same core principles for managing OHS risks as do mandatory systematic OHSM, that is, conducting risk assessments and managing OHS risks in a preventive manner (European Agency for Safety and Health at Work, 2012). Voluntary OHSM systems generally take the form of management standards that specify requirements for certification through third-party external auditing. These standards differ from legally mandatory systematic OHSM, as they tend to be more extensive and formalized in terms of specification requirements for the management procedures. Management standards are sometimes used in combination with legislation (as is the case in Denmark and The Netherlands), and in the most widely applied standard—OHSAS 18001—compliance with national OHS regulation is required.

The OHSAS 18001 standard claims to control all OHS risks (among others, to comply with all legal regulations) and is based on the approach known as Plan-Do-Check-Act (PDCA) (BSI, 2008). The OHSAS 18001 standard understands OHS risks as mono-causal, objectively measurable, and technical (Hohnen et al., 2014). A technical-rational approach to the decision-making process tends to dominate the discourses in voluntary OHSM systems, with similarities to command-control regulation (Frick & Kempa, 2011). However, the OHSAS 18001 standard does not distinguish between different types of OHS risks, and psychosocial risks are barely mentioned. As a consequence, the standard focuses mainly on technical accident risks, to some extent on physical risks, and hardly at all on psychosocial risks (Frick & Kempa, 2011). OHSAS 18001 treats psychosocial risks as tame problems that can be identified and solved in the same mono-causal and rational approach as that used for the technical control of physical risks. The expected new ISO standard 45001 on OHSM systems does not appear to alter this view of psychosocial risks (Committee Draft, ISO 2015).

The assumption of psychosocial risks as tame problems leads to difficulties in addressing psychosocial risk factors at work in certified OHSM systems. Leka et al. (2011) argue that OHSAS 18001 does not explicitly and adequately deal with psychosocial risks. This argument has been expanded at both the theoretical and the empirical levels in a number of studies (Frick & Kempa, 2011; Gallagher & Underhill, 2012; Hohnen & Hasle, 2011). Two new management standards have been published that focus specifically on regulating psychosocial risks, and they are trying to remedy the problem by specifically addressing these risks.

The first standard was launched in 2010 with British Standards ‘Guidance on the management of psychosocial risks at the workplace, PAS 1010’ (Publicly Available Specification). This was followed in 2013 by the National Standard of Canada’s ‘Psychological health and safety in the workplace: Prevention, promotion, and guidance to staged implementation’ (CSA Group & Bureau de normalisation du Quebec). These new standards are compatible with the PDCA approach in OHSAS 18001, but they expand the understanding and management of psychosocial risks. The new standards take into account the different nature of psychosocial risks as compared with most technical OHS risks. Moreover, the standards recognize that psychosocial risks are context-specific, have many causes, and have no quick fix solutions. Finally, the new standards include a more contextual and participative approach than OHSAS 18001. The key principles of

assessing and managing psychosocial risk in the new standards are employee involvement and the integration of employees' expertise as reliable and valid sources of information (BSI Standard Institute, 2011; Hohnen et al., 2014).

These two new voluntary management standards thus try to tackle the shortcomings in OHSAS 18001 by taking into account the specific characteristics of psychosocial risks and their implications for the risk management process. However, while the new standards have certainly helped compensate for the shortcomings in OHSAS 18001, several issues remain. The voluntary standards focus on formalized structures and on the more documented and visible aspects of the psychosocial risk management system. However, a strong emphasis on formalities and documentation does not necessarily ensure proper psychosocial risk management and compliance with the regulatory standards (Bluff & Gunningham, 2004; Hohnen et al., 2014). It should be noted that no empirical research assessments of implementation of the PAS 1010 or the Canadian national standard have yet been published. Hence, while there are prospects that these new OHSM standards will help improve the psychosocial risk management, concrete experience and evaluations are lacking.

### **Audits of OHSM systems with a focus on psychosocial risks**

The OHSM systems audits resemble the enforcement part of public regulation in the certification system. However, the OHSAS 18001 offers little or no guidance on how to carry out audits of psychosocial risks, and the auditors, like government inspectors, are left with a difficult task at the workplace. As a consequence, management of psychosocial risks is generally not included in audits (Gallagher & Underhill, 2012; Hohnen & Hasle, 2011; Jespersen et al., 2016; Robson et al., 2012). The exclusion of psychosocial risks has been related to the way audits of the management system are carried out (Hasle & Zwetsloot, 2011). Audits tend to focus on what is objectively measurable and visible, causing a bias toward safety and traditional OHS risks by which compliance measures can be objectified. Consequently, psychosocial risk factors are neglected (Hohnen & Hasle, 2011; Hohnen et al., 2014).

Audits of psychosocial risk management have recently been investigated in case studies of two Danish municipalities (Hasle et al., 2014). The findings show that the auditing of psychosocial risks was both difficult and complex. When the auditors in the study focused on psychosocial risks, they tended to focus on the most easily identifiable elements, such as formalities and documentation of risk assessments and policies about violence, harassment, and bullying. Much less attention was paid to other prevalent psychosocial risks and related preventive measures. It was therefore difficult for the auditors to issue noncompliance warnings with the standard, and if psychosocial risks were mentioned, it was in the form of nonbinding suggestions for improvements. The study concluded that the available methods were inadequate for auditing OHSM systems targeting psychosocial risks, and that the auditors lacked methods and understandings that could effectively address the psychosocial work environment (Hasle et al., 2014). The importance of qualified audits is further underscored by the fact that the national authorities in Denmark have decided to include the OHSAS 18001 standard in its legislation. Organizations with a certified OHSM system are then exempted from regular authority inspections, and the auditors will therefore



be the only external actor who assess the psychosocial as well as physical work environments (Hohnen & Hasle, 2011).

## Discussion

Since the legislative reforms of the 1970s, numerous attempts have been made to regulate psychosocial risks at the workplace. However, the regulation has not been particularly successful, partly because of the failure to recognize the wicked character of most psychosocial risks. Although these risks can certainly be discussed without invoking the ‘wicked problems’ concept, an approach that recognizes the wicked character of psychosocial risks provides a useful understanding of the complex nature, particularly as pertains to the unclear cause-effect relationship, uncertain solutions, and multiple stakeholders with diverging interests. In the following paragraphs, we discuss the implications of a ‘wicked’ understanding for improving regulation of psychosocial risks. Both government regulators and other actors involved in certification of OHSM systems have partly recognized the challenges posed by psychosocial risks, and a number of recently developed approaches open new possibilities for inspection/auditing of these risks, even if they leave certain issues unresolved. The major challenges for inspection and audits concern the assessment of compliance with OHS regulatory standards, the link between psychosocial risks and employers’ prerogatives, and the particular competences needed for the assessment of psychosocial risks.

### Assessing compliance with OHS regulatory standards

Inspectors and auditors are required to assess compliance with regulatory standards on psychosocial risks at work, and depending on the risk, different types of regulatory standards have been incorporated into the OHS regulation. A command-control approach transformed into specification standards is reserved mainly for regulation of physical and technical risks, whereas the need to regulate psychosocial risks has resulted in the development of softer regulation methods emphasizing process and systems-based standards.

Process and systems-based standards are more open instruments than detailed specification standards. This makes the legislative requirements not only more elastic but also less precise. An inspector or auditor will thus find it more difficult to judge whether requirements are being met and whether employers are complying with the law. Furthermore, systematic processes and system-based standards allow considerable room for interpretation, again making it difficult to determine whether an employer has implemented preventive measures adequately and to specify which improvements are required.

Command-control inspections of specification standards are based on generalized technical, mono-causal expert knowledge, which is difficult to apply to the area of psychosocial risks. Psychosocial risks have characteristics of wicked problems: they reflect competing values, diverse perspectives, and different perceptions and interests among the stakeholders in the workplace; hence, the knowledge base in the area of psychosocial risk assessment is more varied. The inspector or auditor cannot act as the sole expert or arbiter of risk, nor can the inspector/auditor apply generalized technical expert

knowledge to the local and unique arena. The inspector/auditor has to make an assessment on the basis of the reported experiences of employees and managers and then adjudicate their interpretation in cooperation with the workplace stakeholders. Assessment of compliance is therefore developed in the encounter between those having situational knowledge of psychosocial risks and the generalized abstract knowledge of what constitutes psychosocial risks (Bruhn, 2006; Johnstone et al., 2011). In other words, compliance must be developed through explicit use of diverse sources of knowledge: the subjective and contextual knowledge of employees/managers combined with technical expertise and research knowledge of the auditor/inspector (Briner & Rousseau, 2011). Such a nuanced approach requires considerable inspection resources, which will be an important constraint both for inspectors and auditors.

### Employer's prerogative

Workplace inspections also face the challenge of dealing with the employer's interests. As psychosocial risks are closely related to management's strategies and decisions, management may not be so accommodating in having inspectors and auditors interfering with their work organization. British authorities have therefore chosen not to enforce regulation of psychosocial risks, opting for a voluntary approach, while Danish authorities have set strict limitations on those issues that inspectors are allowed to address. Both strategies seem to open some possibilities for more effective knowledge about and control over psychosocial risks, but they also have clear limitations due to the employer's prerogative. The British strategy allows only few possibilities to take measures against unwilling employers, whereas the Danish strategy leaves certain problems—those related to management decisions—out of the picture. Examples of excluded problems are change management and job insecurity.

For auditors of OHSM systems, the system could be made simpler, as it is voluntary for employers to be certified, and the focus is explicitly on the management of psychosocial risks. To date, we have only few empirical studies of auditing practices on this issue, but problems can also be expected. External auditors have a client relationship to the employer, and it is likely that pinpointing problems related to OHSM systems or to management's practices would be cause for concern for both parties. Auditors would be concerned because a critique of management could lead to their losing a paying client, while management would be concerned in so far, as outsiders might be in a position to pinpoint problems related to the quality of their management practice.

### Inspector and auditor competencies

The knowledge base for inspectors and auditors, as indicated earlier, has traditionally been generalized as technical, mono-causal expert knowledge used to assess whether risks are controlled with respect to regulatory standards and management standards. As experts, inspectors and auditors have used their expertise to assess problems that are largely of a tame character and that are directly observable. The wicked character of psychosocial risks changes the required knowledge base. Inspectors and auditors still need to have expert knowledge about psychosocial risks, but additional knowledge is



also necessary. Knowledge about organization and management is needed to a higher degree than is the case for traditional inspections and audits. In addition—and perhaps most important—assessing psychosocial risks requires inspectors and auditors to be able to discover, interpret, and assess the local employees' experience of psychosocial risks, the particular features of work that might constitute a risk in this workplace, and to make a judgment based on workers' personal experiences and attitudes.

## Perspectives

The wicked nature of many psychosocial risks creates major challenges for regulation. In this article, we have focused on enforcement by inspectors and by auditors. The government authorities are pursuing different strategies to meet this challenge, with the UK and Denmark being examples of the differences between a noncompulsory and a more traditional enforcement strategy. Both these strategies show potentials for addressing psychosocial problems, but they each have their limitations, especially those related to the management prerogative. For the OHSM certification systems and particularly for audits, the focus on psychosocial risks is only just emerging. This new focus has resulted in newly established guidelines and standards, but the practical experience is still limited.

How can the understanding of psychosocial risks as wicked problems help in the development of proactive regulatory strategies? Our analysis of the difficulties in addressing psychosocial risk and the character of wicked problems points toward a number of possible solutions:

- The application of traditional prescriptive standards has limited possibilities in case of psychosocial risks. It will rarely be possible to set particular thresholds or other types of prescriptions.
- Efforts should be made to make assessments based on a combination of the generalized knowledge about psychosocial risks together with the contextual experience of employees and management in the concrete workplace.
- The resulting assessment should be compared with the performance standard approach, as inspectors and auditors have to assess whether the employer has protected the employees sufficiently against psychosocial risks.
- There is a need to develop both regulatory instruments and concrete tools in order to support this type of performance standard assessment. It could be provisions on the issues to cover in the assessment, such as change management or job insecurity, and it can involve concrete tools for the assessment, such as the interview guides prepared by the Danish Working Environment Authorities.
- This approach to inspections and audits calls for specific qualifications. Inspectors and auditors need to possess qualifications and knowledge of 1) psychosocial risks, health consequences, and related preventive measures (generalized knowledge base), 2) organization and management, 3) contextual knowledge of the sectors and type of work, and 4) facilitation skills in order to ensure a confident interview situation as well as dialogue about the results of the assessment. As standard prescriptions are not possible, it is crucial that the inspector or auditor is able to develop a shared problem understanding with management and employees. Otherwise, there will be little improvement in the psychosocial work environment in the workplace.

These findings and suggestions may open a space for relevant improvements in the regulation of the psychosocial risks. However, they cannot control nor do they eliminate the wicked character of psychosocial risks. It is therefore necessary to develop still deeper understandings of psychosocial risk, their consequences for health and well-being, and the possibilities for regulation. On the contrary, we also need to accept that psychosocial risks have inherent uncertainties created by the unclear cause-effect relationships, ambiguities, and conflicting interests. Moreover, it is essential to carry out further empirical research that can assess both the relevance of our suggested approach and provide new evidence of the effectiveness of different strategies to address psychosocial risks in the workplace.

## References

- Bluff, E., & Gunningham, N. (2004). Principle, process, performance or what? New approaches to OHS standards setting. In E. Bluff, N. Gunningham, & R. Johnstone (Eds.), *OHS Regulation for a Changing World of Work* (pp. 12–42). Annandale, NSW: The Federation Press.
- Briner, R. B., & Rousseau, D. M. (2011). Evidence-based I – O psychology: not there yet but now a little nearer? *Industrial and Organizational Psychology*, 4(1), 76–82. doi: <http://doi.org/10.1111/j.1754-9434.2010.01301.x>.
- Bruhn, A. (2006). The inspector's dilemma under regulated self-regulation, *Policy and Practice in Health and Safety*, 4(2), 3–23.
- Bruhn, A., & Frick, K. (2011a). Why it was so difficult to develop new methods to inspect work organization and psychosocial risks in Sweden, *Safety Science*, 49(4), 575–581. doi: <http://doi.org/10.1016/j.ssci.2010.07.011>.
- BSI. (2008). *Occupational Health and Safety Management Systems* (Vol. OHSAS 1800). British Standards Institution, Dansk Standard.
- Cousins, R., Mackay, C., Clarke, S. D., Kelly, P., Kelly, P., & McCaig, R. H. (2004). 'Management Standards' and work-related stress in the UK: Practical development, *Work & Stress*, 18(2), 113–136. Retrieved from file://p/Litteratur/Refman/Refman79.pdf
- Cox, A., O'Regan, S., Denvir, A., Broughton, A., Pearmain, D., Tyers, C., & Hillage, J. (2008). *What Works in Delivering Improved Health and Safety Outcomes?* Brighton: University of Sussex.
- Cox, T. (2000). *Research on Work-related Stress: Safety And Health*. Luxembourg: Office for Official Publications of the European Communities. doi: <http://doi.org/http://europa.eu.int>
- Dorman, P. (2000). If safety pays, why don't employers invest in it? In K. Frick, P. L. Jensen, M. Quinlan, & T. Wilthagen (Eds.), *Systematic Occupational Health and Safety Management* (pp. 351–365). Oxford: Elsevier Science.
- Eurofound, E.-O. and. (2014). *Psychosocial Risks in Europe: Prevalence and strategies for prevention*. Luxembourg: Publications Office of the European Union. doi: <http://doi.org/10.2806/70971>.
- European Agency for Safety and Health at Work. (2012). *Management of Psychosocial Risks at Work: An Analysis of the Findings of the European Survey*. Luxembourg: Publications Office of the European Union. doi: <http://doi.org/10.2802/92077>.
- European Risk Observatory Report. (2007). *Expert Forecast on Emerging Psychosocial Risks*. Luxembourg: Office for Official Publications of the European Communities. doi: <http://doi.org/ISSN 1830-5946>.
- Frick, K. (2004). Organizational development for occupational health and safety management. In L. Bluff, N. Gunningham, & R. Johnstone (Eds.), *OHS Regulation for a Changing World of Work* (pp. 43–67). Annandale, NSW: Federation Press.



- Frick, K., & Kempa, V. (2011). *Occupational Health & Safety Management System: When are They Good for Your Health?* Brussels. Retrieved from doi: <http://www.etui.org/Publications2/Reports/Occupational-Health-Safety-Management-Systems-When-are-they-good-for-your-health>
- Frick, K., & Wren, J. (2000). Reviewing occupational safety and health management. In K. Frick, P. L. Jensen, & T. Wilthagen (Eds.), *Systematic Occupational Health and Safety Management* (pp. 17–42). Oxford: Pergamon.
- Gallagher, C., & Underhill, E. (2012). Managing work health and safety: recent developments and future directions, *Asia Pacific Journal of Human Resources*, 50(2), 227–244. doi: <http://doi.org/10.1111/j.1744-7941.2011.00014.x>.
- Goh, J., Pfeffer, J., & Zenios, S. a. (2015). The relationship between workplace stressors and mortality and health costs in the United States, *Management Science*, 62(2) 608–628. doi: <http://doi.org/10.1287/mnsc.2014.2115>.
- Gustavsen, B. (1977). A legislative approach to job reform in Norway. *International Labour Review*, 115(3), 263–277.
- Gustavsen, B. (1980). Improving the work environment: a choice of strategy. *International Labour Review*, 119(3), 271–286.
- Hansen, T., Lidsmoes, L. C., Laursen, P., Mathiassen, L., & Al, E. (2015). *Psychosocial Working Environment:- Workplace Inspection of the Psychosocial Working Environment in the Nordic countries*. Copenhagen: Nordic Council of Ministers.
- Hasle, P., Hohnen, P., Jespersen, A. H., & Madsen, C. U. (2014). The psychosocial work environment and certified occupational health and safety management systems in the public sector – experience from two Danish municipalities. In O. Broberg (Ed.), (pp. 859–864). Copenhagen: Human Factors in Organizational Design and Management – XI. Retrieved from doi: <http://proceedings.dtu.dk/fedora/repository/dtu:2511/OBJ/x174.859-864.pdf>.
- Hasle, P., & Petersen, J. (2004). The role of agreements between labour unions and employers in the regulation of the work environment. *Policy and Practice in Health and Safety*, 2(1), 5–22. Retrieved from file://p/Litteratur/Refman/refman87.pdf
- Hasle, P. & Sørensen, O. H. (2011). When health and safety interventions meet real life challenges. *Policy and Practice in Health and Safety*, 9(1), 3–16. Retrieved from refman0927.pdf
- Hasle, P. & Zwetsloot, G. I. J. M. (2011). Editorial: occupational health and safety management systems: issues and challenges, *Safety Science*, 49(7), 961–963. Retrieved from doi: <http://www.sciencedirect.com/science/article/pii/S092575351100066X>.
- Hauke, A., Flintrop, J., Brun, E., & Rugulies, R. (2011). The impact of work-related psychosocial stressors on the onset of musculoskeletal disorders in specific body regions: A review and meta-analysis of 54 longitudinal studies. *Work & Stress*, 25(3), 243–256. Retrieved from doi: <http://www.tandfonline.com/doi/abs/10.1080/02678373.2011.614069>.
- Head, B. W. (2008). Wicked problems in public policy. *Public Policy*, 3(2), 101–118.
- Head, B. W., & Alford, J. (2013). Wicked problems: implications for public policy and management, *Administration and Society*, 1–29. doi: <http://doi.org/10.1177/0095399713481601>.
- Hohnen, P., & Hasle, P. (2011). Making work environment auditable - A ‘critical case’ study of certified occupational health and safety management systems in Denmark, *Safety Science*, 49(7), 1022–1029.
- Hohnen, P., Hasle, P., Jespersen, A. H., & Madsen, C. U. (2014). Hard work in soft regulation. A discussion of the social mechanisms in OHS management standards and possible dilemmas in the regulation of psychosocial work environment. *Nordic Journal of Working Life Studies*, 4(3), 13–30. Retrieved from refman1437
- ISO/CD 45001.2., 2015. Occupational Health and Safety Management Systems - Requirements with Guidance for Use. Committee Draft.

- Jespersen, A. H., Hohnen, P. & Hasle, P. (2016). Internal audits of psychosocial risks at workplaces with certified OHS management systems. *Safety Science*, 84, 201–209. doi: <http://doi.org/10.1016/j.ssci.2015.12.013>.
- Johnstone, R., Quinlan, M., & McNamara, M. (2011). OHS inspectors and psychosocial risk factors: Evidence from Australia. *Safety Science*, 49(4), 547–557. Retrieved from WOS:000288975900002
- Jordana, J., & Levi-Faur, D. (2004). The politics of regulation in the age of governance. In J. Jordana & D. Levi-Faur (Eds.), *The Politics of Regulation – Institutions and Regulatory Reforms for the Age of Governance* (pp. 1–28). Cheltenham UK: Edgar Elgar Publishing Ltd.
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24(2), 285–308.
- Karasek, R. A., & Theorell, T. (1990). *Healthy work, stress, productivity, and the reconstruction of working life*. New York: Basic Books.
- Kompier, M., Gier, E. De, Smulders, P., & Draaisma, D. (1994). Regulations, policies and practices concerning work stress in five European countries. *Work & Stress*, 8(4), 296–318. doi: <http://doi.org/10.1080/02678379408256538>.
- Leka, S., & Cox, T. (2010). Psychosocial Risk Management at the Workplace Level. In S. Leka & J. Houdmont (Eds.), *Occupational Health Psychology* (pp. 124–156). Wiley-Blackwell.
- Leka, S., Cox, T., & Zwetsloot, G. (2008). The European Framework for Psychosocial Risk Management (PRIMA-EF). In S. Leka & T. Cox (Eds.), *Policy* (pp. 1–16). Nottingham: Institute of Work, Health and Organizations, University of Nottingham.
- Leka, S., Jain, A., Widerszal-Bazyl, M., Zolnierczyk-Zreda, D., & Zwetsloot, G. I. J. M. (2011). Developing a standard for psychosocial risk management: PAS 1010. *Safety Science*, 49(7), 1047–1057. Retrieved from doi: <http://www.sciencedirect.com/science/article/pii/S0925753511000269>.
- Leka, S., Jain, A., Zwetsloot, G., & Cox, T. (2010). Policy-level interventions and work-related psychosocial risk management in the European Union. *Work & Stress*, 24(3), 298–307. doi: <http://doi.org/10.1080/02678373.2010.519918>.
- Leka, S., Van Wassenhove, W., & Jain, A. (2015). Is psychosocial risk prevention possible? Deconstructing common presumptions. *Safety Science*, 71, 61–67. doi: <http://doi.org/10.1016/j.ssci.2014.03.014>.
- Lippel, K., & Quinlan, M. (2011). Regulation of psychosocial risk factors at work: An international overview. *Safety Science*, 49(4), 543–546. doi: <http://doi.org/10.1016/j.ssci.2010.09.015>.
- Mackay, C., Cousins, R., Kelly, C., Lee, S., & McCaig, R. H. (2004). ‘Management Standards’ and work-related stress in the UK: Policy background and science. *Work & Stress*, 18(2), 91–112. Retrieved from file://p/Litteratur/Refman/refman80.pdf
- Mellor, N., Mackay, C., Packham, C., Jones, R., Palferman, D., Webster, S., & Kelly, P. (2011). [‘]Management Standards’ and work-related stress in Great Britain: Progress on their implementation. *Safety Science*, 49(7), 1040–1046. Retrieved from doi: <http://www.sciencedirect.com/science/article/pii/S092575351100018X>.
- Moncada, S., Llorens, C., Moreno, N., Rodrigo, F., & Landsbergis, P. (2011). CC.OO. (‘Comisiones Obreras’) - ISTAS (Union Institute of Work, Environment and Health) participatory action plan for a healthier work organization: A case study. *Safety Science*, 49(4), 591–598. doi: <http://doi.org/10.1016/j.ssci.2010.03.014>.
- Nichols, T., & Tucker, E. (2000). OHS Management Systems in the UK and Ontario, Canada: a Political Economy Perspective. In K. Frick, P. L. Jensen, M. Quinlan, & T. Wilthagen (Eds.), *Systematic Occupational Health and Safety Management* (pp. 285–310). Pergamon, Elsevier Science.



- Quinlan, M., Mayhew, C., & Bohle, P. (2001). The global expansion of precarious employment, work disorganization, and consequences for occupational health: Placing the debate in a comparative historical context. *International Journal of Health Services*, 31(3), 507–536. Retrieved from ISI:000170743900005
- Rasmussen, M. B., Hansen, T., & Nielsen, K. T. (2011). New tools and strategies for the inspection of the psychosocial working environment: The experience of the Danish Working Environment Authority. *Safety Science*, 49(4), 565–574. Retrieved from WOS:000288975900004
- Rick, J., & Briner, R. B. (2000). Psychosocial risk assessment: problems and prospects. *Occupational Medicine (Oxford, England)*, 50(5), 310–314.
- Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a General Theory of Planning, 4(December 1969), 155–169.
- Robson, L. S., Macdonald, S., Gray, G. C., Van Eerd, D. L., & Bigelow, P. L. (2012). A descriptive study of the OHS management auditing methods used by public sector organizations conducting audits of workplaces: Implications for audit reliability and validity. *Safety Science*, 50(2), 181–189. Retrieved from refman1111
- Senge, P. (1990). *The fifth dimension. The art and practice of the learning organization*. New York: Doubleday/Currency.
- Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, 1(1), 27–41.
- Standard Institute, B. (2011). Guidance on the management of psychosocial risks at the workplace, PAS 1010 (Publicly Available Specification). British Standard Institution.
- Starheim, L., & Rasmussen, M. B. (2014). Labour inspection strategies addressing the psychosocial work environment. *Policy and Practice in Health and Safety*, 12(1), 53–70.
- Walters, D. (2011). Worker representation and psycho-social risks: A problematic relationship? *Psychosocial Hazards in the Workplace: Challenges for Regulators, Labour Inspectors and Worker Representatives*, 49(4), 599–606. doi: <http://doi.org/http://dx.doi.org.zorac.aub.aau.dk/10.1016/j.ssci.2010.09.008>.
- Walters, D., Johnstone, R., Frick, K., Quinlan, M., Baril-Gingras, G., & Thébaud-Mony, A. (2011). *Regulating Workplace Risks: A Comparative Study of Inspection Regimes in Times of Change*. Edward Elgar, London.
- Weber, E. P., & Khademian, A. M. (2008). Wicked Problems, Knowledge Challenges, and Collaborative Capacity Builders in Network Settings. *Public Administration Review*, 68(2), 334–349. doi: <http://doi.org/10.1111/j.1540-6210.2007.00866.x>.
- Wilthagen, T. (1994). Reflexive Rationality in the Regulation of Occupational Safety and Health. In R. Rogowski & T. Wilthagen (Eds.), *Reflexive Labour Law - Studies in Industrial Relations and Employments Regulation* (pp. 345–376). Deventer: Kluwer Law and Taxation Publishers.

## End Note

- <sup>1</sup> The term ‘standard’ is a wide-ranging concept that includes several different types of standards. In this article, those standards related to legislation and enforcement are called ‘legislative standards’ and standards related to voluntary management standards, certification, and audits are called ‘management standards.’