INTRODUCTION

Regulation, Change and the Work Environment

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This special issue of Relations industrielles / Industrial Relations presents articles based on original research on fundamental changes to work and work arrangements that undermine workers’ health and safety, exacerbate health inequalities and pose major challenges to those who want to resist a ‘race to the bottom’ in working conditions and imagine and promote regulatory reforms to better protect workers and their health. The papers in this special issue not only make a contribution to knowledge about work intensification and employment precariousness and their impact on health and safety, but also shed light on further challenges presented by the current globalized work environment: the association of precariousness with international, regional and local employment-related mobility, both in developed and developing countries; the commuting difficulties faced by some workers in precarious employment; the non-standard work schedules resulting from work intensification pressures and the consequential health and work family balance difficulties; and the dilution of responsibility for health and safety and for workers’ compensation in international supply chains. One paper illustrates an old but still pervasive challenge: the production of a ‘paradigm of doubt’ which uses and even produces scientific uncertainty to obscure the effects of hazards to workers’ health, thus delaying the prevention and compensation of their negative effects on health.

The articles in this special issue all result from presentations made by their authors at the International Conference on Regulation, Change and the Work Environment¹ that was held in December 2015 at the University of Ottawa. The idea for the conference series that culminated in this conference emerged in discussions with colleagues from Australia, the United Kingdom, Canada and

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France about the importance of ensuring networking opportunities and support for the next generation of scholars committed to the pursuit of research in the field of work environment and regulation in the context of globalization. To this end, a first symposium was hosted by the Cardiff Work Environment Research Centre at Cardiff University in the summer of 2014, where English speaking scholars from the Global North and the Global South, and from a variety of disciplines, met to discuss research on work organization, governance and the regulatory aspects of occupational health and safety and the work environment (Quinlan et al., 2015). The Ottawa conference took a further step in consolidating an international research network in our field, bringing together English speaking participants from Australia, Canada, China, the UK and the USA, on the one hand, and French speaking scholars from Belgium, Canada (Quebec) and France on the other. All of these scholars have been pursuing research on similar issues, addressing occupational health and safety challenges often arising from globalized labour markets that are associated with a rise in precarious employment, an increasingly geographically mobile workforce, and the ‘fissuring’ of the workplace, to borrow the term of David Weil (2014).

The contributions to this issue report on research findings from studies conducted in workplaces and regulatory environments that are quite different from each other, undertaken by scholars from various disciplines, including sociology, law, industrial relations/labour and management studies, communications and ergonomics. Yet the results of these studies, be they from countries with advanced economies, such as Canada, Australia or France, or emerging economies such as China, provide a relatively concordant portrait of the challenges raised by the need for effective regulation of working conditions for the purpose of protecting workers’ health and safety, and ensuring adequate access to healthcare and income support when injuries or illnesses arise because of work.

To facilitate our understanding of the cross-cutting messages of these studies, in this introduction we define key concepts underpinning the conference activities and, by extension, the articles in this issue. We will first consider ‘regulation’ in the field of occupational health and safety, then ‘change’ looking at precarious employment, employment-related geographical mobility and globalization. We will then present highlights from each paper touching on these issues, and, when necessary, place them in their geographical and historical context.

**Regulation**

The regulatory regimes of interest in the conference series and in this issue focus on occupational health and safety (OHS) interpreted broadly to include preventive regulatory approaches to ensure protection from workplace hazards and injury, protection of workers’ health, both physical and mental, and decent
working conditions so as to promote worker health and decrease the risk of injury. The concept of OHS also includes the recognition of the right to economic support in case of work injury or illness, referred to as workers’ compensation or social insurance, depending on national regulatory environments.

Since the 1970s, ‘command and control’ style regulation for the prevention of injury (where compliance with detailed legal standards is monitored and enforced by state inspectorates) has come under the scrutiny of policy makers in OHS regulation, most famously in the influential Robens Report of 1972 (Browne, 1973). The weaknesses of the command and control approach to OHS regulation include failure to encourage innovative OHS solutions, gaps in the ad hoc coverage of detailed rules, inadequate enforcement and lack of third party involvement, and, in particular, worker representation and participation (Walters et al., 2011). Further challenges have arisen in the past 30 years with the erosion of ‘standard employment’ (ongoing full-time employment) and increasing vertical disintegration of work relationships as work has been outsourced through a range of contracting arrangements, resulting in a greater incidence of precarious work, and increasing levels of geographical mobility, as workers travel greater distances to and from work, between jobs, and as part of work.

Some regulators have responded to these challenges with more ‘responsive’ and ‘reflexive’ approaches, including, in some instances, broadening the scope and reach of OHS legal standards, taking more nuanced approaches to monitoring and enforcement, and harnessing and facilitating the interplay between state and non-state institutions and actors (including, in OHS, greater worker participation in implementing OHS Standards) (Johnstone, 2011; Johnstone and Stewart, 2015; Laflamme, 2015). At the same time, non-state actors have developed regulatory measures, like codes of conduct, to seek to influence the way firms approach OHS and other concerns. This, again, focuses attention on the interplay between public and private forms of regulation, and answers brought forward by states and workplace parties can vary considerably between different national, economic, social and cultural contexts. Yet, as the papers in this issue demonstrate, these ‘better practice’ approaches to OHS regulation have not been taken up fully, or even partially, in many countries.

Workers’ compensation is one of the oldest social insurance systems, dating back to the 19th century in Europe. Its regulation is based on broadly common models in most countries, where employers assume the cost of premiums to ensure some form of access to health care and economic support for their employees in case of work-related injury or disease (Ison, 1998; Lippel, 2012). There are some universal characteristics to these systems: coverage is provided regardless of the fault of the worker or the employer, benefits are generally lower than those that could be obtained through lawsuits in the civil courts, and claims are
adjudicated outside the traditional judicial forum. Other characteristics vary between jurisdictions. For example, employers receive protection from lawsuits, brought by their workers or their next of kin, seeking damages for the injury attributable to the employer’s negligence, in some countries, but not in others; coverage for all employees is provided in some countries, while others exclude those holding casual employment. Some regimes provide the self-employed with coverage automatically, while in others they are excluded from the purview of the regime or are offered the option of purchasing coverage. In the advanced economies, the cost of workers’ compensation and social security, and more broadly ‘payroll taxes’, is said to be a driver of precarious employment, whereby client employers are encouraged to outsource production to sub-contractors or temporary employment agencies, so as to externalize the costs of providing benefits to those doing the work (Lippel and Laflamme, 2011; MacEachen et al., 2012; Underhill and Quinlan, 2011).

**Change**

The changing challenges for regulators and in relation to worker voice are associated with multiple paradigms that have marked changing labour markets in recent decades, two of which we will describe here: precarious employment and employment-related geographical mobility (E-RGM). The papers in this special issue suggest that these changes in work organization (resulting in its intensification, requiring workers to do more in less time and extensification, requiring workers to invest longer hours to earn their living) and forms of employment seem generally to be driven by a principle of flexibility favouring employers (in work schedules, in forms of employment, in geographical location of work, etc.), with largely negative consequences for workers’ health and safety (Askenazi et al., 2006; Hu et al., 2016; Quinlan, 2015; Kivimäki et al., 2015).

**Precarious employment and non-standard work**

There is a wealth of literature on ‘precarious employment’ (Quinlan et al., 2001), and overlapping concepts include non-standard work (Quinlan, 2015; Vosko, 2010), ‘bad jobs’ (as opposed to ‘decent work’) (Di Ruggiero et al., 2015) and job (Cloutier et al., 2011; Eurofound, 2016) and employment insecurity (Lewchuk et al., 2015). All these concepts are important in understanding the OHS challenges associated with changing workplaces.

Michael Quinlan’s report published by the International Labour Office (Quinlan, 2015) provides an overview of OHS challenges in the context of non-standard work arrangements, which include temporary work, triangular employment relations, home-based work, dependent self-employment and subcontracting, and undeclared work. It also provides an analytic framework for understanding
the OHS consequences of precarious work, focusing on economic insecurity and reward pressures, disorganization and regulatory failure.

Epidemiologists have developed measures that attempt to capture parameters of precarious employment (Benach et al., 2014) and worker vulnerability (Smith et al., 2015) so as to develop tools to better promote strategies to prevent occupational injury and illness. Studies have also shown how there can be layers of vulnerability (Sargeant and Tucker, 2009), where, for example, precarious migration status, linguistic challenges, non-standard employment relations and other factors cumulatively contribute to increasing vulnerability. Similarly, layered vulnerabilities may be seen through a gender lens (Cox and Lippel, 2008). And, the impacts of outsourcing accompanied by other changes associated with globalization have raised further challenges for worker voice and representation (Walters et al., 2011; Walters and Wadsworth, 2016).

Several of the studies in this issue focus on employment arrangements that fall within the category of precarious employment and non-standard work. Mélanie Lefrançois and colleagues examine the effect of non-standard work scheduling on work-family balance, and, by extension, on workers’ health. Stéphanie Premji’s study on immigrant workers in the Toronto area links characteristics of precarious employment and employment-related geographical mobility, by shedding light on their commuting and employment conditions, and the health impacts of those conditions. Elsa Underhill and Malcolm Rimmer’s study on backpackers in the Australian agricultural industry examines temporary contract labour that is also associated with mobility, given the precarious migration status of those workers.

**Employment-related geographical mobility**

Roseman and colleagues have developed the following definition of E-RGM:

Employment-related geographical mobility entails mobility to and from one’s job, and as part of one’s job. Employment-related geographical mobility ranges across a spectrum from relative immobility (work at home); through extended, daily travel to and from work and within jobs; to regular, more extended absences from home at regional, national, and international scales. This spectrum therefore takes into account not only transnational mobility to and as part of employment, but also similar movement (and lack thereof) between localities, regions, and provinces and states, as well as across other subnational borders. We use the adjective ‘geographical’ to distinguish this form of mobility from the alternative meaning of ‘mobility’ in the social sciences, where it is associated with ‘upward’ or ‘downward’ social and economic movement along the kind of scales (such as class and education) that are used by some theorists (Roseman et al., 2015: 175-176).

Temple Newhook and colleagues (2011) apply this definition in their literature review of the health consequences of E-RGM; however, there are fewer studies that
examine the concept holistically in relation to OHS and regulation (Lippel and Walters, 2014).

There is, however, a plethora of studies on OHS challenges relating to specific categories of the mobile workforce, including a rich literature on temporary foreign workers travelling from countries of the South to countries of the North (Gravel and Premji, 2014; Salami et al., 2016), as well as studies on workers in specific mobile professions such as truck drivers (Mayhew and Quinlan, 2006) or seafarers (Walters and Bailey, 2013).

Several papers in this issue address OHS challenges for mobile workers situated in different locations of the E-RGM spectrum described by Roseman and colleagues. Short term daily commutes are integral to the workdays of the immigrant workers studied by Premji, while, at the opposite end of the spectrum, international temporary migration, studied by Underhill and Rimmer, and internal migration addressed by Li, are intrinsic to the characteristics of workers in those studies. Finally, Desai Shan’s paper sheds light on the effectiveness of workers’ compensation legislation applied to Chinese seafarers. All of these papers contribute to our knowledge of OHS and E-RGM, and allow us to tease out issues specific to mobility and to precarious employment, and in some cases the links between the two.

Globalization: a race to the bottom

All these studies take place in the twenty-first century, where the global marketplace and its associated neo-liberal discourse has had a huge impact on the legitimacy of OHS regulation and on the abilities of workers to mobilize to resist changes that are fundamentally harmful to their health (Baril-Gingras, 2013; Lippel, 2016; Walters et al., 2011).

Sargeant and Tucker (2009) developed a framework for assessing the occupational safety and health vulnerabilities of migrant workers in the context of international migration from countries of the South to the North, an approach that integrates knowledge of precarious employment, migration, linguistic challenges and racism. Lippel and Messing (2013) addressed the issue of gender in relation to the Safety or Profit (Nichols and Walters, 2013) paradigm used to understand holistically the OHS regulatory challenges in the context of globalization. Finally, the co-option of science in the service of business has been studied in relation to its OHS and environmental consequences (Michaels, 2008; Thébaud-Mony, 2014; Messing, 2014, 2016), a process that is all the more effective in the anti-regulatory context associated with neoliberalism (Lippel, 2016).

In this issue, Lefrançois and colleagues provide an eloquent example of gendered consequences of restructuring and just-in-time scheduling practices associated with globalization. Thébaud-Mony looks to the co-option of science
in the legitimation of industrial practices, showing how the knowledge of the 19th and 20th centuries with regard to hazardous mining operations is still being eclipsed.

**Articles in this issue**

Elsa Underhill and Malcolm Rimmer’s article ‘Private Governance, State Regulation and Employment Standards: How Political Factors Shape their Nexus in Australian Horticulture’ addresses regulation, precarious employment and mobility. The article reports on an empirical study of the working conditions of Australian harvest workers, who include a large number of temporary migrants holding working holiday visas. It focuses on the nexus between state regulation (principally under the federal *Fair Work Act 2009* (Cth) and the state-based OHS statutes) and private forms of regulation, principally unsupervised codes of conduct (imposed on supermarkets and on temporary work agencies) in the Australian horticulture industry. Underhill and Rimmer report that industry changes (including product market pressures from supermarkets, and the increasingly vulnerable position of migrant workers) have undercut state regulatory standards. Private regulation has also failed, as the codes of conduct draw their standards from minimum legal employment conditions, and possess loopholes allowing breaches to escape monitoring and redress.

Underhill and Rimmer argue that regulatory reform of the nexus between state and private regulation in the horticulture industry has been frozen by a divided political response. Recent government inquiries found evidence of exploitation, but posed different solutions, varying from stronger state enforcement powers and temporary work agency licensing (advocated by politicians on the left and by unions), to championing of the status quo. Underhill and Rimmer argue that the resulting political stalemate has left both state and private regulation deficient, and harvest workers exposed to exploitative employment conditions.

Mankui Li’s paper examines the evolving regulatory framework governing OHS in China, looking in particular at its effectiveness for the prevention of injury and disease for the internally mobile workforce. Internal migration in China is a relatively recent phenomenon, as workers from the countryside seek employment in urban centres. They have different statuses from their urban counterparts, are more precarious and vulnerable, and Li suggests they are less well served by OHS legislation. He examines this issue using the ILO framework on regulatory effectiveness and Tucker’s conceptual map of OHS citizenship, and concludes that current regulatory protections need to be improved, particularly with regard to migrant workers, in order to ensure full protection of all workers and to promote worker participation in health and safety in China.
Even when the workforce is recruited locally, changing work arrangements often require increased geographical mobility from workers. Precarious workers, for example, face significant issues in getting to and from work, and travelling between multiple jobs. Stéphanie Premji, in the article ‘Precarious Employment and Difficult Daily Commutes’, reports on a qualitative empirical study of how immigrant workers in precarious jobs in non-transient occupations in Toronto, Canada commuted to and from work. The study reveals a reciprocal relationship between precarious employment and commuting difficulties, which included often complex travel to multiple, and sometimes unfamiliar, work locations, heavy reliance on, and the high cost of, public transport, and unsafe travel at night or in isolated locations. It also shows that commuting difficulties cause participants to refuse or quit jobs, including desirable jobs, impeding workers’ engagement in labour market strategies that could improve their employment opportunities or conditions. While all kinds of workers might be subject to the stresses and expense of commuting, Premji shows that low-income immigrant men and women workers involved in precarious work are disproportionately required to absorb an ever-growing share of the costs—measured in time, effort and money—of travelling to and from work, because of the intersection of multiple social disadvantages and associated stresses. These include a mismatch between labour supply and demand in the suburbs at the edge of the city in which immigrants live, and government housing, transport and employment policies that reflect and reinforce dominant structures of power. This spatial patterning of work and workers in Toronto is a result of the growing income gap and the increased polarization among neighbourhoods. The article concludes with policy recommendations for public transportation, employment, housing and child care that can help curtail or alleviate some of the difficulties described.

In a Quebec study, ‘Travailler la nuit pour voir ses enfants, ce n’est pas l’idéal!’ Marge de manœuvre d’agentes et d’agents de nettoyage dans le secteur des transports afin de concilier horaires atypiques et vie familiale’, also looking at some of the consequences of the changes in work environment in the daily lives of workers, even outside of work, Mélanie Lefrançois, Johanne Saint-Charles and Karen Messing explain the gendered consequences of imposed non-standard work schedules on the work-family balance strategies that workers adopt. These kinds of schedules are part of the means used by employers to match the number of workers to the quantity of work to be performed. A growing number of workers are exposed to this approach in a globalized world of employment and experience an intensification of their work, as well as negative health consequences, in particular when non-standard work schedules are coupled with low wages, and low control over working time and over work itself.
Examining the experience of cleaners in the transport industry from a combined ergonomics and communications perspective, Lefrançois and colleagues outline the challenges these workers face in developing individual work-family balance strategies in situations where the operational leeway is very small. They thus uncover the organizational and relational factors that paradoxically bring some of the cleaners to work on the night shift, in order to reconcile their work and family responsibilities. In this constrained situation, support from colleagues, gender relations and seniority all interplay in the individual 'choice' of a work schedule. The article shows the major individual and family consequences of non-standard work schedules and the efforts workers (and in particular single mothers) have to devote to deal with them, always in an imperfect and costly way for their health. It illustrates the consequences of the corporate strategies and the work organization decisions on family interactions. The article explains the challenges this situation poses to the trade union, in search of collective solutions.

Desai Shan's paper reports on a study of workers' compensation processes that apply when Chinese seafarers are either lost at sea or are known to have died in the course of their duties. Seafarers are doubly mobile workers, as they travel from their home countries to the ships they man, and the work itself involves constant mobility, inter-jurisdictional challenges and relative invisibility to regulators. Furthermore, the structure of the industry, that relies on crewing agencies to recruit workers and manage their rights and obligations, implies that they are involved in complex, at least tri-partite employment relationships that are further complicated because of their mobility. Shan's article is based on a qualitative study of families of seafarers from China killed at sea and an analysis of court files related to compensation claims. She has found that when a seafarer dies at sea, his family members in China know little of the circumstances of his death and receive little support in the pursuit of their rights under workers' compensation legislation applicable to the globalized sea-faring industry. In light of her empirical findings, she concludes that jurisdictional ambiguity with regard to maritime workplace accidents, as well as fragmentation of employment relationships, compromise the effectiveness of the social security provisions ostensibly applicable to this globalized and precarious workforce.

Finally, Annie Thébaud-Mony's article, 'Science asservie et invisibilité des cancers professionnels: Études de cas dans le secteur minier en France”, situates a contemporary problem, the influence of industry on the production of scientific studies and its effect on regulation, in its historical context, examining the challenges relating to recognition of the occupational origins of cancers contracted by miners. Basing her study on research by an interdisciplinary team involving scientists from the health sciences and the social sciences, she analyses the production and consequences of what she calls the ‘paradigm of
doubt’, by which the knowledge about hazards—here the health risks posed by the exposure of miners to carcinogenic dust—is constantly challenged, questioned or ignored. Scientific expertise is thus often mobilized in a way that preserves the interests of industrialists and shareholders, slowing down the public decision-making process regarding the protection of workers’ health and the environment. One of the consequences of the ‘false controversies’ that the ‘paradigm of doubt’ creates is the unending requirement of evidence, particularly epidemiological studies, which are costly both in time and resources, focusing on a mono-causal relationship between a contaminant and a disease. This is particularly problematic in the case of exposure to carcinogens, examined by Thébaud-Mony, as illustrated by two case studies of mining sites in the south of France where a team of scientists have helped to demonstrate, against much resistance, workers’ exposure to hazardous substances, in order to support their access to compensation for occupational disease. This analysis reminds us of the complex interactions between those producing scientific knowledge, and the knowledge they produce, on the one hand, and, on the other, of the effects of these interactions on regulatory institutions responsible for recognition of the consequences of working and employment conditions on health.

Conclusion

What lessons can we draw from the inclusion of these studies undertaken through different lenses in our analysis of OHS and regulation? Many are yet to be drawn, but one issue stands out when reading these papers all together: that of the transfer of risk to those least capable of absorbing its consequences. Non-standard employment contracts are known to transfer the risk of ‘down time’ to the precariously-employed workers. Regularly-employed workers are paid whether or not they are with a client, while recruitment through temporary contracts and imposition of just-in-time schedules allows the employer to avoid paying a worker when demand is low, a strategy that allows the employer to remain competitive in a globalized market. The worker assumes the cost that was historically assumed by the employer. Similarly, when workers are continually ‘on the move’ going from one orchard to another, one employer to another, or one contract to another, they are not paid when they are commuting, they are only paid when demand for their services is high. Nor, in many countries, will they be compensated if they are injured during the commute. And in both paradigms, the ability of workers to organize collectively and to resist exploitation is undermined, as is the ability of the regulator to ensure practices are safe. Risks are transferred to individuals, and the ability to respond collectively, be it by organized labour or by the state, is thwarted. These are the challenges to be met by OHS regulation in the 21st century. Some countries have begun to address these challenges,
such as Australia, that has chosen to eliminate the employment relationship as a basis for firms’ OHS statutory duties and obligations\(^2\). Still, there is much more that needs to be done to reconceptualize regulatory protections so as to protect workers’ health in a globalized economy.

**Notes**

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2. In its harmonized occupational health and safety reform, Australia has replaced the traditional approach by creating “a ‘primary’ duty of care imposed not on ‘employers’ but on persons conducting a business or undertaking, and owed to all kinds of workers engaged, directed or influenced by the person conducting the business or undertaking”, and second, by placing “broad duties on all persons conducting a business or undertaking to consult with workers who carry out work for the business or undertaking and who are directly affected by a work health and safety issue , […] to facilitate the election of health and safety representatives representing all workers who carry out work for the business or undertaking.” (Johnstone, 2011: 91).

**References**


Temple Newhook, Julia, Barbara Neis, Lois Jackson, Sharon R. Roseman, Paula Romanow and


