Re-invigorating Industrial Relations as a Field of Study: Changes at Work, Substantive Working Conditions and the Case of OHS

MICHAEL QUINLAN* and PHILIP BOHLE**

Key Words: Industrial relations, occupational health and safety, precarious work, substantive working conditions, discipline/fields of study, inequality at work

Abstract

For over two decades, Industrial Relations (IR) has been under challenge both as an academic field (especially in terms of teaching) and as a term to describe work-related policies. This challenge has coincided with a decline in collective regulation of working conditions, associated efforts to re-orientate both academic and policy discourse, and substantial changes to work organisation. While IR journals continue to flourish, it is not clear to what extent the field has confronted these challenges. In particular, to what extent has the field sought to chart the consequences of these changes for substantive working conditions (SWC)? This paper seeks to answer this question by reviewing 1349 publications in eight major IR journals (2002-2008). This review finds that SWC (such as wages and OHS) were the primary focus of only 20 percent of articles. More detailed analysis revealed systematic analysis of SWC in 23 percent. We argue that in order to renew itself as a discipline and a major contributor to policy debates over work employment, IR must engage more directly with changes in SWC. Substantive working conditions can provide a measure of inequality at work which has consequences not only for workers but the wider community. Our paper points to research in other fields that IR scholars should seek to engage with and to contribute to. Finally, extending on Kelly's (1998) argument relating to IR as the study of injustice at work this paper suggests that IR would be better served if it were to be conceived of as the study of the nature, mechanisms and consequences of equality/inequality at work.

Introduction: The Rise and Demise of Industrial Relations

Industrial relations as a subject has deep historical roots. Taking the most conservative approach of what would now be viewed as industrial relations can be traced back to the gradual emergence of 'free' labour and the modern employment relationship (and laws regulating this) from the late

Acknowledgements: The authors wish to thank Katherine Lippel, Annie Thebaud Mony and Wayne Lewchuk for comments on an earlier draft.

^{*} Prof Michael Quinlan, School of Management (formerly School of Industrial Relations and Organisational Behaviour) and Director, Industrial Relations Research Centre, University of New South Wales; Work and Health ** Prof Philip Bohle, Work and Health Research Team; Ageing, Work and Health Research Unit; Faculty of Health Sciences; The University of Sydney.

Research Group, Faculty of Health Sciences, University of Sydney.

medieval period (Hay & Craven, 2006). The transformation entailed a division of labour and the emergence of journeymen's societies (the first unions) to represent waged craftsmen and subsequently (by the late 17th/early 18th century) other groups of workers were engaging in collective action, most notably merchant seamen. The industrial revolution accelerated the growth of mass wage labour, much of it precariously employed. The centrality of precarious/irregular work to early industrial and regulatory campaigns, such as the anti-sweating leagues, has largely been overlooked in contemporary debates over insecure work (Johnstone et al, 2012). By the late 19th/early 20th century, writers, such as the Sidney and Beatrice Webb (1914), and Commons and Andrews (1916), were documenting the rise of organised labour; the slow, fitful and contested emergence of collective bargaining; and the development of new bodies of regulation (setting minimum labour standards, union recognition/control and collective bargaining, OHS and workers' compensation). These developments and some of those who wrote about it (like the Webbs) were to become a central part of lexicon of IR literature.

Yet, it was not until the 1940s that IR emerged as a distinct field of academic teaching/research and a term widely used in policy circles, and even then it began as a distinctly Anglo-centric development in the USA, UK, Canada, Australia and New Zealand. It was no accident that the emergence of IR coincided with the consolidation of unions and collectivist regimes for regulating work, the introduction of the welfare state, and the post-war Keynesian policy accord, marked by rising living standards, sustained full-employment and where secure jobs appeared to have become the norm. Organised labour and the institutional mechanisms for determining working conditions that recognised competing interest groups were seen to be an important and permanent feature of modern society – something requiring training for the emerging group of professionals in the field (such as IR managers, arbitrators, consultants and government policy advisors) as well as being a topic warranting deeper knowledge and worthy of research. Unlike other terms that preceded it (like personnel management) or followed (human resource management [HRM], employee relations and workplace relations) IR was both an explicitly pluralist term and one that did not entail a focus on management, individual employees or the workplace. Though IR did not ignore individual worker behaviour, its primary focus was on collective relationships arising from work and how these operated at workplace, industry/sector and the broader society. The term also did not affront the International Labour Organisation's (ILO) 1944 declaration that labour was not a commodity (unlike HRM where labour is termed a human resource).

The subject began to be taught in universities, often initially within economics departments or to a lesser extent in law schools. Individual subjects expanded to clusters of subjects drawing on a range of other disciplines (psychology, economics, law and sociology) and, ultimately, grew into separate departments teaching stand-alone undergraduate and postgraduate programs. The growth in teaching activity was mirrored by a growth in IR research and publication. The first IR journal (*Industrial and Labor Relations Review* in the USA) was launched in the late 1940s and over the next four decades further journals were established (sometimes more than one) in the five countries already mentioned as well as several other European countries (like Sweden). The growth of postgraduate research programs entrenched IR's emergence as a distinct academic field and contributed to a steady growth of journal and monograph publications. The primary subject of these publications included collective bargaining, strikes and industrial conflict,

mediation and arbitration (private and public), training/skills, labour markets, unions, management and employer associations and changes to regulation.

Yet, even as IR continued to grow and consolidate in the 1970s the context that had facilitated it begun to come under sustained attack, most notably the abandonment of Keynesianism and its replacement by a neoliberal policy agenda (privatisation, outsourcing, competitive tendering and de-collectivist shifts in labour laws), the re-emergence of pervasive precarious employment, and increasingly aggressive anti- union tactics by elements of capital. A parallel shift took place in academia with the decline of Keynesian and institutional economics and economic history, the rise of business schools and MBA programs espousing an individualised approach to workers, and the emergence of new fields, notably HRM, which focused on how to 'manage' labour within a particular enterprise or workplace. From the 1990s onwards especially, the number of IR subjects, programmes and departments/schools declined, often being re-badged or subsumed into HRM programs and departments/schools of management (or more euphemistic titles like organisation). Advertised posts in IR became rare as did postgraduate research programs explicitly labelled as IR. Journals have continued to publish (though several have changed their name to remove IR from the title) but the nature of authorship, topic and quality has undergone change (see Jarley, Chandler & Faulk, 2001).

That the field of IR faces major challenges, if not a crisis, is hardly a revelation (though seldom placed in the historical context just described). The issue has been the subject of ongoing debate since the 1990s. The purpose of this paper is not re-visit or engage in these debates. Rather, the aim is to point to limitations in current IR research and to argue that a refocusing of attention offers prospects for the discipline to re-assert its importance as a domain of intellectual endeavour and as a contributor to policy development.

Calls to refocus the research agenda in IR are not new. For some time, they have appeared in reviews of the research literature undertaking by leading IR scholars. For example, Kochan (1980) pointed to several gaps requiring attention, including occupational health and safety (OHS) and quality of working life, although his analysis was largely framed within the context of collective negotiations. For much of its history, the bulk of IR research has concerned collective negotiation and associated legislative frameworks, union and employer characteristics and behaviour, and various manifestations of collective action (Purcell, 1993; Strauss & Feuille, 1978).

It is important to acknowledge that the subject of published IR research has changed over time. Over the past decade, there has been renewed interest in minimum labour standards (see Bennett, 1994; Weil, 2005; 2011; Adams, 2011; Goodwin & Maconachie, 2007; Gellatly et al., 2011; Cockfield, Buttigieg, Jerrard & Rainnie, 2011; Quinlan & Sheldon, 2011), both those that are essentially procedural (such as the right to organise and bargain) and those that concern substantive working conditions (such as minimum wages, maximum hours, job security and OHS). This interest was stimulated by the evident consequences of changes in labour management practices and work arrangements plus changes to IR laws (and manipulation of business law via the corporate veil to sidestep statutory entitlements) and neo-liberal policies promoting 'market-driven' de-regulation and competition at the national and international level.

Researchers in labour law and IR have identified formal gaps (such as the lack of minimum wage or maximum hour standards for subcontractors) and inconsistencies (such as the protection accorded workers doing identical tasks) in existing labour, OHS and workers' compensation laws, as well as problems in compliance and enforcement (Befort, 2003; Burgess & Baird, 2003; Finkin & Jacoby, 2001; Johnstone, Mayhew & Quinlan, 2001; Rodriguez-Pinero Royo, 2001; Vigneau, 2001). Other researchers have investigated the implications of downsizing and job insecurity and the growth of contingent work for union representation, collective bargaining, labour regulation, management practices and substantive working conditions (Hayakawa & Simard, 2001; Hipple, 2001; Houseman, 2001; Kunda, Barkley & Evan, 2002; Lautsch, 2003; Stone, 2004; Sverke, 2003; Underhill & Kelly, 1993). A few studies provide detailed accounts of how specific changes have affected working conditions in particular industries, such as Belzer's (2000) examination of deregulation in the US trucking industry and studies of engineered standards in the US and Australian warehousing industries by Wright and Lund (1996; 1998).

However, as the next section will demonstrate, notwithstanding these trends, comparatively little attention is still being paid to substantive working conditions, including actual wage rates/earnings, working hours, job security, work intensity, OHS risks, and minimum labour standards or their enforcement.

The question can be asked as to why, even if this is the case, this is a matter for concern? The answer to this question is that substantive working conditions provide a basis for measuring the consequences of the substantial changes to work organisation and institutional arrangements that have occurred over the past three decades – the very changes that have arguably underpinned the challenge to IR as a field. They can provide a measure of why collectivist mechanisms provide for better social outcomes and are, therefore, worth defending or reinstituting.

Indeed, there is already a large body of evidence pertaining to impact of changes to work organisation on one substantive working condition, namely occupational health and safety (OHS). Over the past 20 years, literally hundreds of studies have examined the OHS effects of downsizing/job insecurity, outsourcing/subcontracting and the growth of temporary (including seasonal) work arrangements in a large number of countries. A series of meta and narrative reviews of this research (Virtanen et al., 2005; Cheng & Chan, 2008; Quinlan, Mayhew & Bohle, 2001; Quinlan & Bohle, 2008; 2009) have concluded that there is overwhelming evidence these changes to work organisation are associated with a significant deterioration in OHS outcomes (including injury rates, exposure to hazardous substances, disease, mental health and work/family balance). Only a miniscule fraction of this research has been published in or even referred to within IR journals. The value of greater engagement with this research, and the broader implications of giving more attention to substantive working conditions for IR as a field will be discussed in a later section. Before doing this, it is important to establish that there is a gap in this regard. The next section tries to do this by analysing the publications in eight leading IR journals over a five and half year period.

A content analysis of IR journal publications and substantive working conditions

By substantive conditions, we are referring to those conditions of work like wages/earnings, workload/intensity, hours or work, health and safety that directly affect their material conditions of work and life (and that of their families), as distinct from those that are procedural in nature (such as the right to bargain collectively or take industrial action). Both types of conditions are important and, indeed, they interact. However, substantive conditions afford a more readily measurable indicator of inequality at work and its consequences.

To reinforce these broad observations, and to take a closer look at the current focus of IR research, articles published between 2002 and May 2008 in eight leading IR journals were examined. While journals are not the only publication outlet for IR research (other outlets included authored and edited books and monographs) they are arguably primary outlet for most IR researchers (and increasingly so given the emphasis on journal publication in research performance measurement).

The journals included the longest established in the field, with four based in Europe, three in North America and one in Australia. They were reviewed to identify the primary subject matter of each article and to decide whether substantive working conditions were a focal point of analysis. The journals selected were the *British Journal of Industrial Relations*, *Economic and Industrial Democracy*; *European Journal of Industrial Relations*; *Industrial and Labor Relations*; and *Relations Industrial Relations*; *Industrial Relations*; and *Relations Industrielles*. In total, 1349 articles were reviewed and allocated to single subject headings according to the dominant focus of the paper. This was judged a sufficiently representative number of journals, articles and period of coverage for the particular purpose of this paper.

Articles in each of the journals were analysed to identify the primary subject matter and also to decide whether substantive working conditions were a focal point of analysis. In terms of deciding whether an article met the criteria, a relatively low benchmark was set, namely, did 25 percent or more of the paper deal with empirical evidence of substantive working conditions. While this benchmark may seem arbitrary (as many benchmarks are) it was set at a point where articles with any significant degree of attention to substantive conditions would meet the criteria and where it could not be claimed the benchmark had been set so high as to exclude many papers where substantive working conditions were examined.

In short, to ensure a balanced analysis, two measures of substantive working conditions were used, namely the subject matter of the paper and the actual content in terms of empirical data on working conditions (i.e subject and actual content matter) provided a more accurate indication of the extent to which substantive working conditions were being addressed.

	Employer organisation strategies	Union organisation and strategies	Other forms of worker involvement	IR frameworks theories and methods	IR history	Collective negotiation and action	Politics, laws, tribunals and enforcement	Economics, labour markets and work organisation	Gender, foreign workers, minority groups and discriminatio n	Wages, pay systems and pension packages	Hours, work- time and leave arrangement	Work health and safety and work comp	Job insecurity	Quality of work, work/ non work balance (eg childcare)	Job satisfaction, commitment and work intensity
British J of IR	37 19%	37 19%	12 6%	21 11%	0	9 5%	23 12%	10 5%	15 8%	9 5%	5 3%	1 1%	0	6 3%	7 4%
Economic & Industrial Democracy	24 18%	21 16%	30 22%	10 8%	0	5 4%	8	9 7%	6 5%	2 2%	0	5 4%	6 5%	6 5%	2 2%
European J of IR	12 12%)	18 18%	6 6%	10 10%	0	7 7%	29 29%	1 1%	7 7%	4 4%	0	0	6 6%	1 1%	0
Ind. & Labor Relations Review	17 10%	8 5%	3 2%	7 4%	1 1%	4 2%	27 15%	19 11%	21 12%	47 26%	2 1.	10 6%	8 5%	2 1%	3 2%
Industrial Relation	30 14%	29 14%	15 7%	8 4%	1 1%	15 7%	23 11%	16 8%	34 16%	29 14%	1 1%	4 2%	2 1%	6 3%	2 1%
Industrial Relations J	28 14%	35 18%	11 6%	25 13%	0	16 8%	29 15%	13 7%	23 12%	6 3%	3 2%	3 2%	0	3 2%	4 2%
J of IR	29 14%	35 17%	8 4%	19 10%	7 4%	5 3%	41 20%	21 11%	8 4%	8 4%	1 1%	6 3%	3 2%	5 3%	7 4%
Relations Industrielles	25 19%	25 19%	4 3%	3 2%	0	8 6%	17 13%	20 15%	8 6%	3 2%	0	21 16%	1 1%	4 3%	3 2%
Total	202	208	89	103	8	69	197	109	122	108	12	50	26	35	26
Percentage	15%	15%	7%	8%	1%	5%	15%	8%	9%	8%	1%	4%	2%	3%	2%
Substantive studies	12	6	0	1	0	3	32	10	51	84	7	30	21	27	22
Percentage	6%	3%	0	1%	0	4%	16%	9%	43%	78%	58%	60%	81%	82%	79%

Table 1: Frequency (per cent) of articles published in eight key IR journals by main subject and substantive working conditions content 2002-2008

Table 1 presents the results of this review. At one level, the review highlights differences in the focus of particular journals that seem to reflect a combination of editorial policy and location. For example, other forms of worker organisation (such as works councils) are a more prominent topic in Economic and Industrial Democracy and, to a lesser extent, other journals based in Europe. On the other hand, wages are a far more frequent subject in the two US-based journals. At another level, there are also some clear patterns shared by most, if not all, journals. Not surprisingly, studies concerned with the organisation and strategy of employers or unions make up almost a third of all articles. Politics, laws, tribunals and enforcement is the next most common subject area (15 percent of articles). When combined, these three categories account for almost 45 percent of the total. Articles focusing on collective negotiation and action account for just over 5 percent of articles representing almost certainly a decline over the last 30 years. Articles on gender, immigrants and minority groups (the vast majority of which deal with gender) account for over 9 percent undoubtedly an increase over earlier periods. Even including several historical pieces on IR theories and frameworks (usually confined to the last 20-30 years), the number of studies of IR history was very low – suggesting both a lack of long-term historical reflection and a preference for a current policy focus.

Turning to those subject areas that might be deemed to deal with substantive working conditions (the last six columns of Table 1), it can be noted that, in total, they were the focus of only 20 percent of the articles. By far the most popular subject was wages, although the two US journals account for two thirds of these articles. Hours of work at one percent is conspicuous by its infrequency even though it may be seen as one of the most basic of working conditions. Although OHS is the most popular topic after wages, it accounts for only four percent of all publications and one journal, *Relations Industrielles*, accounts for over 40 percent of this.

Articles focusing on substantive working conditions do not always contain relevant empirical evidence. For example, articles on OHS and gender may largely be concerned with describing policies or legislation. On the other hand, articles focusing on employer organisation or legislation might include a body of empirical evidence on substantive working conditions, but not sufficient to categorise them as primarily concerned with this subject. To address this issue, we reviewed articles to identify whether the content included a substantial component (25 percent or more) on substantive working conditions. With some slight variations, the findings tended to reinforce the ranking based on article title. Of 1349 articles, 306 (23 percent) contained what was deemed to be systematic empirical evidence on substantive working conditions.

The last row in Table 1 expresses the raw count as a proportion of the total number of papers published on that subject. Broken down by subject heading, the proportion of studies with evidence on substantive working conditions was employer organisation (six percent), unions (three percent), other forms of worker involvement (zero), IR (one percent), IR history (zero), collective action (four percent), politics and law (16 percent), labour markets (nine percent), gender and minority groups (43 percent), wages (78 percent), hours (58 percent), OHS (60 percent), job insecurity (81 percent), work-life balance (82 percent) and quality of work (79 percent). In short, the second count reinforced the point that the vast majority of articles where the explicit subject was conditions of work (especially wages, hours, job insecurity, OHS and work life balance) contained empirical evidence of SWC, whereas this was comparatively rare in articles where the subject was unions, collective bargaining, employer organisation, labour markets and worker involvement. This finding suggests those writing on

procedural aspects of IR seldom relate this back to SWC in a detailed fashion. While not surprising, perhaps it does suggest a gap in research in terms of relating procedures/processes to actual working conditions.

In sum, despite the shifts described earlier, IR research has provided a limited analysis of the nature and implications of changes in work arrangements that are central to the experience of workers and should be of more interest to the field. Assessing the wider effects and costs of the growth of insecure and contingent work may contribute to a more informed policy debate and reinvigorate IR research. It could also act as a reality check on the amount of attention devoted to some areas of research and debate, such as the attention given to high performance work systems relative to that given to systems based on externalising and intensifying work arrangements. The next section provides an example of what can be learned from evidence pertaining to one specific change in substantive working conditions. It also highlights the benefits of greater engagement with researchers in other disciplines to the field of IR as well the reciprocal contribution IR can make to their endeavours. The argument that IR has suffered (like other fields) from disciplinary silos is not a new one but rather than make a general argument, the next section tries to provide a specific and detailed case.

Why substantive working conditions matter: Changes to work and OHS

While OHS is only one substantive working condition, like earnings and job insecurity it is arguably a critical one for many workers. In terms of scope and severity, even official data (widely recognised as significantly understating the problem, Quinlan, Bohle & Lamm, 2010) suggests poor OHS is something most workers will experience at some point and many far more frequently. For example, every year more than 2000 Australians will die as a direct result of their work, over 300,000 will suffer a serious injury (Quinlan et al., 2010) and a far greater number will be exposed to hazardous substances, suffer a minor injury, work shifts that result in sleep deprivation, or confront poor psychosocial conditions at the work (including overload, bullying and harassment). Even during the 1970s (when strike activity was greater), Australian workers were far more likely to be injured at work than to take part in a strike or other form of collective action.

Like the field of IR itself, OHS draws on research from an array of disciplines, such as medicine and epidemiology, ergonomics, occupational hygiene and safety engineering, OHS research provides insights into substantive working conditions that should be of interest to IR scholars wishing to understand work experiences. It is also an area to which IR specialists may contribute their knowledge of collective behaviour and institutional mechanisms (Sass, 1989).

Over the past three decades, health researchers have become increasingly interested in how the organisation of work affects health outcomes. Prominent in this regard was the demand/control or job strain model developed by psychologist Robert Karasek (1979) whereby imbalances in task demands and control are posited to have significant health effects. The value of the demand/control model was subsequently confirmed by numerous studies by medical and other health researchers using a range of indices. In particular, the combination of excessive task demands and low job control were linked to a range of poor health outcomes, including elevated stress levels, high blood pressure, coronary heart disease and a reduced probability of return to work after injury mental health (see, for example, Krause et al., 2001). An alternative effort/reward imbalance model was developed by

sociologist Johannes Siegrist (1996) for which there is also a supporting body of research by health researchers. This model argues that health will be adversely affected where effort levels outstrip rewards (intrinsic and extrinsic) at work. Both models capture important links between the social organisation of work and worker health (for overviews of the models, see Bosma, Peter, Siegirst & Marmot, 1998; Schnaul, Belkic, Landsbergis & Baker, 2000).

It might be expected that these influential models would attract the interest of IR scholars. Demand/control and effort/reward imbalances should be readily applicable concepts in IR, given its longstanding interest in effort bargaining, organisational justice and citizenship, and work intensification. Indeed, this research appears to provide additional and persuasive evidence to support greater equality and justice at work, including the application of procedural collective mechanisms through which these might be secured. In this regard, it adds to other OHS research on the positive effects of worker involvement, especially representative forms, including or supported by unions (see Frick & Walters, 1998; Litwin, 2000; Suruda, Philips, Lillquist & Sesak, 2003), some of which has found its way into the industrial relation literature (Robinson, 1991; Eaton & Noccerino, 2000; Harcourt & Harcourt, 2000; James & Walters 2002; Walters & Nichols, 2007). However, the Karasek and Siegrist models, and the evidence they have spawned have received little recognition in the IR literature (for an exception, see Wood, 2008).

One example that highlights the potential contribution that IR scholars can make to our understanding of the health effects of contingent work is research by Lewchuk and colleagues (see Clarke, de Wolff, King & Lewchuk, 2007; Lewchuk, Clarke & de Wolff, 2008; 2011). Noting the narrowness of the concept of job strain and job insecurity used by health researchers that took limited account of the role of institutions, labour market structures and career histories, Lewchuk et al., (2008; 2011) developed the concept of employment strain to capture both the effort needed to find and retain work as well as social support networks that moderated these impacts. Another model of how work organisation affects health developed, in part, by IR researchers is the economic/reward pressure, disorganisation and regulatory failure or PDR model (Quinlan & Bohle, 2008; Underhill & Quinlan, 2011). This model argues that economic/financial pressures on workers (including incentive payment pressures), disorganisation like that arising from subcontracting and union absence, in combination with regulatory failure (like gaps in labour standards applying to self-employed workers) compromises health and safety standards (Quinlan, Hampson & Gregson, 2013). With regard to subcontracting these contentions are consistent with earlier work by IR researchers like Rebitzer (1995).

As noted in the first section of this paper, over the past two decades a significant focus of international OHS research has been to assess the health and safety effects of changes to work organisation, including job insecurity, outsourcing/subcontracting and the increased use of temporary workers (including temporary agency workers). This research was a response to recognition of profound changes in work organisation and labour markets corresponding to the rise of neoliberalism. Studies have been undertaken in over 25 countries (mostly in Europe, North America, Australia and developed parts of Asia like Japan, Korea and Japan), covering a wide array of industries (as well as population-based studies), and using a range of methods (longitudinal, case control, survey and official data) and OHS indices (injury rates, disease and hazard exposures, mental health, occupational violence, compliance with rules/laws and knowledge of and influence on OHS).

Other studies examined how changes to work organisation, such as downsizing or outsourcing impacted on public or client safety in particular industries, especially the healthcare and homecare sectors and transport (see Quinlan et al., 2013). For example, lower hospital staffing levels have been linked to increased error and infection rates (Aiken, Clarke, Sloane, Sochalski & Silber, 2002; Andersen et al., 2002; Stegenga, Bell & Matlow, 2002). Another growing body of research points to how these changes to work arrangements have undermined the regulatory regimes designed to protect workers, especially in the context of anti-collectivist changes to IR laws (Johnstone et al., 2001; 2005; 2012; Quinlan & Johnstone, 2009).

From 2001 onward, a series of reviews were undertaken to assess the growing body of international research on the health effects of changes to work organisation, most notably the growth of precarious employment (see for example Virtanen et al., 2004; Cheng & Chan, 2008; Quinlan et al., 2001; Quinlan & Bohle, 2008; 2009). It is worth noting in passing that in fields, such as health sciences, meta reviews are used regularly to assess the state of knowledge in relation to a particular issue. They provide a basis for analysing a body of findings to establish the overall trends; identify methodological issues (for example, those studies whose findings should be given more weight on the basis of methods, data or indices; draw conclusions about the size of particular effects; identify moderating or confounding factors); identify knowledge gaps and point to new directions for future research. Meta reviews are not confined to a narrow set of phenomena and can focus on those, like job insecurity, which are clearly of interest to IR researchers. Meta reviews can also draw on qualitative studies where the methods are explained and rigorous. Further, some reviews sometimes called narrative reviews – can draw on the 'grey literature' and qualitative studies because this helps to identify gaps in research as well as providing clues as causal pathways that are not apparent from a more confined selection of published research.

Unfortunately, meta reviews of published and peer-reviewed research are rarely undertaken in IR (for exceptions see Doucouliagos & Laroche, 2003; Greenberg, Michalopoulos & Robins, 2003), even though the volume of research and shift to using quantitative research methods (Whitfield & Strauss, 2000) makes this more practical than it would have been 25 years ago. Electronic publication, electronic databases and the internet have clearly facilitated global reviews of research publications. Further, it is now more typical for such reviews to be referred to in reports prepared by governments, tribunals and policy-makers, including industrial tribunal judgements and government reports relevant to IR (see, for example, Fooks, Bergman & Rigby, 2007; Secure Employment Test Case (2006) NSWIRComm 38).

Notwithstanding some differences and gaps (for example, there are relatively few studies of the impact of downsizing on injury or of subcontracting on disease), the reviews tended to substantial weight of evidence that downsizing/job outsourcing/subcontracting and temporary work arrangements were associated with significantly inferior OHS outcomes. For example, in a review of 86 studies of downsizing/job insecurity 85 percent of studies found negative OHS outcomes, eight percent found mixed results and seven percent found nil or positive OHS effects. Similarly, a review of 25 outsourcing/subcontracting and homecare/home-based work studies (Quinlan & Bohle, 2008) revealed that 92 percent found adverse OHS outcomes with the remaining eight percent having mixed results (i.e both positive and negative effects). Reviews of research into temporary employment (both directly employed and agency labour) have also found an association with worse OHS, although the findings are not quite as pronounced as those just mentioned (see Virtanen et al., 2005). A number of studies have found the adverse health effects are not confined to precarious workers but extend to non-precarious workers engaged alongside them, competing for the same jobs, or surviving repeated rounds of organisational restructuring (Saksvik & Gustafsson, 2004; Mayhew & Quinlan, 2006).

While a considerable body of this research does not seek to explain the connection between precarious work and poor OHS, a significant number of studies have used the job strain or ERI models and a handful have used the employment strain and PDR model. A number of researchers have sought to establish measurable definitions of precariousness that take account of a raft of working conditions or look at changes in institutional and regulatory infrastructure (Louie et al., 2006; Benavides & Benach, 2011). Further, as indicated above, others like Richard Johnstone et al. (2001; 2005; 2012) and David Weil (2009; 2011) have analysed how the growth of precarious work has unravelled OHS laws and labour standards regimes in terms of both the substance/form of law and the capacity of inspectorates to enforce them.

Evidence of the profound OHS consequences of changes to work has exerted little influence on IR research and scholarship, reflecting the neglect of SWC (see Table 1). There are conspicuous exceptions both in terms of individual researchers (like Lewchuk and Weil), articles and journals (most notably, *Relations Industrielles* and to a lesser extent *Economic and Industrial Democracy*) but they remain exceptional.

Ironically perhaps, IR research has lagged behind trends where OHS has become a more central concern for unions, especially as they seek to deal with significant work reorganisation and reverse declining membership levels, and also as public policy-makers try to address the adverse consequences of these same changes. Examples of this include the primacy of OHS (and public safety) in union campaigns (some successful) for regulating subcontracting/supply chains in road, maritime and air transport and with regard to garment/clothing manufacture (Weil, 2009; Rawling & Kaine, 2012). In California (USA) and Victoria (Australia), nurses unions conducted successful campaigns to mandate nurse/patient ratios to counteract the OHS, public health and quality impacts of downsizing in the 1990s (Clark, Clark, Day & Shea, 2001; Gordon, Buchanan & Bretherton, 2008). Equally, the OHS challenges posed by changes to work organisation, including the growing use of supply chains, and the difficulty of regulatory regimes (including inspectorates) in dealing with these challenges has been the subject of a series of reports commissioned in the European Union, Australia, New Zealand and elsewhere (Goudswaard & de Nanteuil, 2000; Goudswaard, 2002; Bohle, Cooke, Jakubauska, Quinlan & Rafferty, 2008; Cardiff University et al., 2011).

Substantive working conditions, inequality and the future of Industrial Relations

The past four decades have witnessed profound changes in labour markets, particularly in the 'old' industrial countries in Western Europe, North America, Australia and New Zealand. The changing world of work has been marked by a growth of temporary (including agency labour) and part-time employment as well as multiple-jobholding and self-employment (facilitated in part by increased subcontracting). In Australia and Canada, for example, around 40 pe cent of the workforce holds contingent jobs, either through temporary work or self-employment (Felstead & Jewson, 1999; Robertson, 2006; Vosko, 2006). Further, the

growth of precarious work arrangements in combination with repeated rounds of downsizing/restructuring in the public and private sector has led to widespread job insecurity amongst those holding notionally permanent/ongoing jobs. These changes have brought with them substantial changes in working conditions, and an overall increase in inequality at work (Benach et al., 2007). The previous section provided evidence of the magnitude of these effects with regard to but one dimension of working conditions, namely OHS.

Evidence on the adverse health effects of precarious employment and policy debates surrounding this, as well as linking OHS to other working conditions in this regard, raises a number of questions about fractured academic discourse. It is arguable that disciplinary silos have inhibited a more integrated study of inequality at work, especially its consequences for health. Not surprisingly, perhaps, by far the bulk of research on the health effects of precarious employment has been published in health and medical journals with relatively few studies (including Rebitzer, 1995; Park & Butler, 2001) appearing in industrial relations, HRM, sociology, labour law or management journals. Of the fields just mentioned IR is, in our view, best suited to facilitate a more integrated approach to exploring the health and other dimensions of precarious employment. The reasons for this include its interests in public policy; procedures affecting working conditions and job quality; and (unlike HRM with its more micro focus) institutions, collective interests and regulation of work. Engagement with other fields, such as labour law and psychology (especially research on control of working hour relationships) is essential but IR is especially central.

There is a case for stronger engagement between health and IR researchers in terms of better understanding the impact of inequality at work and devising measures to counteract this. In particular, we can identify five justifications for or benefits of greater engagement.

First, health and safety outcomes - like earnings, hours of work, work/life balance and work intensity – are substantive conditions of work and central to workers' experience of work. Substantive conditions are arguably critical to any assessment of inequality at work and have the advantage of being easier to measure and compare than procedural standards. The use of meta reviews – common in the health sciences but comparatively rare in industrial relations – to bring evidence together on substantive working conditions is worthy to note in this regard. Further, OHS, like other substantive working conditions, are important at a policy level. Minimum labour standards (both global and national) are an attempt to set boundaries as to what is socially acceptable in relation to some substantive working conditions, such as minimum wages, hours and OHS. The ILO's Decent Work Agenda is an effort to both globalise and integrate an array of substantive working conditions into the standard setting debate (see also Bachelet, 2011). Research into substantive working conditions can contribute to more informed standard setting and enforcement practices. At another level, it would seem to be difficult to discuss more ambitious policy objective of 'quality work' without reference to substantive working conditions which not only provide floor labour standards but (as with OHS and work/family balance) can also be used as indicators of superior work arrangements (see below).

Second, while there has been a growth of multi-disciplinary research teams and some industrial relations scholars (like David Walters and Wayne Lewchuk) have also published in health and medical journals (and vice versa) most of those researching on the health effects of precarious employment have been trained in medicine, epidemiology, other health sciences or psychology. In general, despite some notable efforts, these researchers lack knowledge of how institutions (including unions) and regulation shapes labour markets – something more

typically found within the fields of industrial relations and labour law scholarship (if anything labour law has engaged more with this area, see Johnstone et al., 2001; 2005; 2012; Lippel, 2006). In short, IR scholars have something to offer in terms of their knowledge of collective behavior and institutional mechanisms (Sass, 1989; Nichols et al., 2007). Further, as the work of Lewchuk et al. (2008) demonstrates IR researchers can also provide insights into how the reshaping of labour markets and work impacts on other working conditions like earnings, hours of work and work intensity as well as institutional effects relating to union presence.

Of course, inter-disciplinary engagement needs to be a two way process. A growing number of health researchers (including psychologists focusing on health) have recognised the need to understand more about labour market structures, work arrangements, labour regulation and other aspects of IR, including lean production (Aronsson, 1999; Landsbergis, Cahill & Schnall,, 1999; Saloniemi, Virtanen & Vahtera, 2004; Berntson, Sverke & Marklund, 2006; Benach et al., 2010). A number, like Aronsson and Virtanen, have published in IR and related journals on work (like Work, Employment and Society). Landsbergis et al. (1999) wrote on the link between the employer strategy of lean production and OHS (for an exceptional piece of parallel research on the same theme involving collaboration between an OHS and IR researcher, see Wright & Lund 1996; 1998). In 2001, a leading epidemiological journal published a glossary of terms concerning unemployment, job insecurity and health because the editors believed it was important for its readership to better understand social factors in health and disease (Bartley & Ferrie, 2001). A report on employment conditions and health inequalities prepared for the World Health Organisation (Benach et al., 2007) drew on IR and labour law literatures, especially in the section dealing with policies. Health scientistdominated research teams have also sought to develop more precise measures of precarious employment (and sub-categories of it) on the basis of labour market characteristics and to link this to broader socio-economic inequalities (see, for example, Louie et al., 2006; Benavides & Benach, 2011). This would seem to provide a useful area for engagement with IR researchers.

One of the critical reasons to build such bridges is that they can facilitate, not simply a better appreciation of the overall effects of workplace change on the health and well-being of workers, but also assist to develop understanding of why and how these effects occur and the interaction with other working conditions such as irregular working hours and earnings (see Aronsson, Dallner, Lindh & Goransson, 2005; Boivin, Tremblay & James, 2007). With its knowledge of institutions and laws regulating work, employer strategies and unions, the field of IR has an important contribution to make here – and some have already pursued this path (see the work of Lewchuk, and Lund and Wright already referred to).

Third, consistent with the last point, we would also suggest industrial relations as a field has something to gain from engaging with health research on work organisation. Notwithstanding some limitations, the job strain and effort/reward imbalance models have provided a substantiated link between work organisation and health outcomes and the notions of job control/demand and effort/reward imbalance would seem to fit neatly within an industrial relations perspective. Siegrist's effort/reward model incorporates both extrinsic and intrinsic rewards and would seem to offer parallels with the notion of effort bargaining familiar to IR scholars. Similarly, serious social debate about worker participation or industrial citizenship has largely evaporated since the 1970s, subsumed by a new authoritarian climate dominated by notions, such as corporate leadership, teamwork, and high-performance work systems. However, the Karasek model provides global evidence that giving workers greater decision-making latitude in their work and moderating the demands made on them (or balancing to

better match the control they exercise) is not simply a desirable social option but a measure that safeguards their health and wellbeing. Further, research into teamwork and high performance work systems is hardly balanced by a similar degree of analysis of the larger number of precarious workers in industries like hospitality or transport, who lack even the most basic decision making latitude in their work. A report on changing work arrangements prepared by the European Agency for Safety and Health at Work observed that there "is a lasting difference in job control: even when we take several other variables into account, workers with a non-permanent contract have less autonomy in their work" (Goudswaard, 2002: 32). Even those who appear to exercise independent control (such as own-account subcontractors), formal legal independence and nominal task control may be insignificant when measured against their limited economic resources and organisational control (Carayon & Zijlstra, 1998).

Fourth, there are policy grounds for a stronger focus on substantive working conditions. Evidence concerning the OHS effects of precarious employment provides further justification for new policy interventions addressing work arrangements. It strengthens criticism of the inequality fostered by these arrangements, in terms of wages for example, emanating from IR research (Bhartia & Katz, 2001). Indeed, it adds a powerful policy leverage point because of the level of concern about health issues in the community. There are also potential policy benefits in using Karasek models etc. to set benchmarks and objectives. For example, decision latitude and demand items could be used to establish exposure benchmarks with regard to psychosocial conditions at work which could, in turn, be used to set minimum labour standards (i.e exposure levels that are not health-damaging) or intervention points for government inspectors as well as tools for identifying superior working conditions. Similarly, measures of financial/economic pressure, disorganisation and regulatory failure could guide interventions or reorganisation of work and associated policies. Consistent with earlier points, the benefits of this approach are likely to extend beyond health. At a broader level, health research pointing to spillover effects between work arrangements and public health, and safety referred to earlier require attention when considering arguments for regulating labour markets or facilitating institutional arrangements, such as collective bargaining that have this effect. Echoing the findings of government inquiries a century ago (Quinlan, 2013a, b) research points to the health damaging effects not only of inequality at the workplace but the location and quality of housing that flow on from this as well as effects on diet and children's education (see Barling & Mendelson, 1999; Muntaner et al., 2011).

Fifth but not least, health research on precarious employment in particular, and social inequality, more generally, provides both evidence and a focus for IR scholars, who are concerned with addressing adverse shifts to work organisation and institutional relationships. For example, in addition to research on health costs of inequality discussed earlier (see, too, Marmot, 1998 for how the social gradient shapes health inequalities), there is research suggesting more equal societies outperform less equal societies in terms of macro-efficiency (Wilkinson & Pickett, 2009). We would argue that IR as a field has much to gain from a stronger focus on inequality and engaging with scholars in other fields researching inequality at work which, as in the case of health research, is highlighting the profound and cascading effects of precarious employment.

Adverse health is but one outcome of inequality at work. Equally, the rise of precarious employment is only one of number of consequences of neoliberalism that impact on work with others, including declining union density and economic/labour market imbalances. In short, the argument for a greater focus on inequality in the field of IR is both timely, and will

have benefits beyond those identified in this chapter. The need for a shift in IR research/scholarship has been debated for some time, and our argument can be seen to parallel Kelly's (1998) contention that IR needs to focus on injustice at work as a pivotal point for understanding collective mobilisation by workers.

We prefer the concept of inequality to injustice because, in our view, inequality is a wider term and arguably underpins injustice. Indeed, as Grayling (2007: 116-117) observes, inequality has long been a defining characteristic of work illustrated by Aelfric's pre-Norman exchange between a master and a ploughman ("Yes it is hard work, because I am not free") through to William Holderby, the first organiser of agricultural labour against landowners; the emergence of journeymen combinations in the 13th century; the Diggers' call for common ownership of land in the 17th century; revolts by and campaigns against slavery in 17th to 19th centuries, the growth of unions; the sabotage of Luddites and Captain Swing in the early 19th century; Chartism and campaigns against child labour and for shorter working hours in the 19th century and the great social reform mobilisation of the late 19th and first half of the 20th century. As Grayling (2007) also argues, these struggles did not occur in isolation. They interacted with, or drew on, gains made in struggles for religious freedom/individual conscience, independent scientific method and inquiry, human rights/dignity and equality over the past five centuries that made the liberal democracies of the modern West. It is not by coincidence that totalitarian societies like Nazi Germany (1933-1945) or China today refuse to tolerate independent unions of workers. It also remains contested ground within liberal democracies as dominant elites (economic and political) seek to retain and extend their wealth and power.

The emergence of collective organisation amongst workers was a response to inequality associated with changes to work organisation, (notably contractual employment and the division of labour), which were cornerstones of modern capitalist societies. It is also worth recalling that a critical set of issues underpinning labour mobilisation in period 1880-1920 in the UK, Australia, New Zealand and elsewhere were substantive working conditions, notably the combination of low wages with long and irregular hours of work (often referred to as sweating), and its association with workplace hazards and cascading effects the resulting inequality on the community. It was also a struggle against precarious employment and, indeed, this very term was repeatedly used in the press, House of Commons debates and extensive government inquiries into working conditions that documented these impacts, such as the House of Lords inquiry into sweating 1889-1890 and UK Commission into Labour 1892-4 (Quinlan, 2012).

As noted in the introduction to this paper, the consolidation of organised labour in rich countries in the 20th century, including growing political influence and legislative changes (labour standards and the welfare state) in combination with Keynesian macroeconomic policies wrought changes to the regulation of work, including collective bargaining, that became the substance of IR research and teaching. Also noted from the mid-1970s onwards, these institutional arrangements came under sustained attack and the field of IR with it. If IR is to survive and flourish as an academic field and important source of public policy, it must accommodate to this challenge and recognise that, in the broader historical context, inequality at work and the struggle for greater equality is what gave rise to IR and should be its focus. Greater attention to changes in substantive working conditions provide a particularly important (though not the only) focal point for IR scholarship – one of both significance in understanding problems at work, but also public policy debates surrounding this – both those

that occur currently and those that should occur (like the pursuit of greater quality and equality at work).

Finally, the term IR itself remains relevant and worthy of use in preference to other terms currently proffered. The term IR is pluralist, collectivist and inter-organisational in connotation whereas the field of HRM is intra-organisationally focused (as do terms like workplace relations) and connotes an explicit and managerialist commodification of work arrangements. Other terms like employee relations or employment relations are also flawed (not all workers are employees, indeed, an increasing number are not).

In sum, we contend that IR should be concerned with studying the outcomes (in all forms), institutions and processes arising from inequality at work.

Conclusion

This paper has illustrated how an examination of the health and safety consequences of a major shift in work arrangements, the growth of contingent and insecure work, provides compelling evidence of the sort of inequalities, and ill-considered policies, that should occupy a more central place in industrial relations, as an academic field and as a contributor to society. Health constitutes an influential policy lever because of the stark nature of the evidence and the tendency of health issues to stimulate action at both the individual and collective levels. However, OHS is only one aspect of substantive working conditions that warrants more attention from IR researchers. Hours of work (and their consequences for work-life balance) and job insecurity, for example, are other potentially critical areas that receive little attention from IR researchers. Further, as we have sought to show, there are already fruitful bodies of research in other fields, which IR scholars can both draw from and contribute to in this regard.

It needs to be reiterated that the argument being mounted here is not simply that IR should give more attention to OHS. Rather, the argument is that the case of OHS provides one example of what is to be gained from giving more attention to substantive working conditions in IR research. More detailed research is required on other substantive conditions like hours of work, work intensity and earnings/payment systems in particular industries and countries. In some of these areas, too, there is a capacity to collaborate with other fields (for example, psychological and medical research into work hour arrangements). Further, periodic meta and narrative reviews are needed to evaluate the evidence to identify global trends and research gaps that need to be filled. In our view, such research will not only enrich the field but also increase the capacity of IR to contribute to important policy debates, including reinforcing the need for procedural justice and collective decision-making at work.

IR should not abandon its focus on collective, institutional and regulatory aspects of work. Rather, both conceptual development and policy impact would be enhanced by exploring how changes to work organisation affect workers and society more generally. Substantive working conditions provide a basis for this focus. Similarly, IR should not ignore procedural labour standards (such as the right to organise and union rights of entry). However, we suggest that if a parallel is drawn with the major wave of labour mobilisation and legislative reform experienced by developed countries a century ago, it should be recalled that a critical focus of these struggles was on substantive working conditions, notably minimum wages, reduced hours of work, protection of the vulnerable and basic safety protections. We consider

that substantive conditions – the manifest outcomes of inequality – then as now provide a powerful justification for legislative and other interventions to secure industrial citizenship.

References

Adams, R. (2011). Collective Bargaining as a Minimum Employment Standard. *Economic and Labour Relations Review*, 22(2): 153-164.

Aiken, L., Clarke, S., Sloane, D., Sochalski, J., & Silber, J. (2002). Hospital nurse staffing and patient mortality, nurse burnout and job dissatisfaction. *Journal of the American Medical Association*, 288(16): 1987-1993.

Andersen, B., Lindemann, R., Bergh, K., Nesheim, B-I., Syversen, G., Solheim, N., & Laugerud, F. (2002). Spread of methicillin-resistant *Staphylococcus aureus* in a neonatal intensive care unit associated with understaffing, overcrowding and mixing of patients. *Journal of Hospital Infection*, 50(1): 18-24.

Aronsson, G. (1999). Contingent workers and health and safety. Work, Employment and Society, 13(3): 439-460.

Aronsson, G., Dallner, M., Lindh, T., & Goransson, S. (2005). Flexible pay but fixed expense: Personal financial strain among on-call employees. *International Journal of Health Services*, 35(3): 499-528.

Bachelet, M. (2011). *Social protection floor for a fair and inclusive globalization*. Report of the Advisory Group Convened by the ILO with the collaboration of the WHO, Geneva.

Barling, J., & Mendelson, M. (1999). Parents' job insecurity affects children's grade performances through the indirect effects of beliefs in an unjust world and negative mood. *Journal of Occupational Health Psychology*, 4(4): 347-355.

Bartley, M., & Ferrie, J. (2001). Glossary: Unemployment, job insecurity and health. *Journal of Epidemiology and Community Health*, 55(11): 776-781.

Befort, S. (2003). Revisiting the black hole of workplace regulation: A historical and comparative perspective of contingent work. *Berkeley Journal of Employment and Labor Law*, 24 (1): 153-178.

Belzer, M. (2000). Sweatshops on Wheels: Winners and Losers in Trucking Deregulation. Oxford: Oxford University Press.

Benach, J. Muntaner, C. and Santana, V. (eds). & Employment Conditions Knowledge Network (EMCONET). (2007). Employment Conditions and Health Inequalities: Final Report to the WHO Commission on Social Determinants of Health (CSDH), Geneva

Benach, J., Muntaner, C., Solar, O., Santana, V., & Quinlan. (2010). *Empleo, Trabajo y Desigualdades en Salud: una vision global.* University of Pompa Fabra

Benavides, F., & Benach, J. (2011). Employment precariousness in Spain: Prevalence, social distribution, and population-attributable risk percent of poor mental health. *International Journal of Health Services*, 41(4): 625-646.

Bennett, L. (1994). *Making Labour Law in Australia: Industrial Relations, Politics and Law.* Sydney: Law Book Co.

Berntson, E., Sverke, M., & Marklund, S. (2006). Predicting perceived employability: Human capital or labour market opportunities? *Economic and Industrial Democracy*, 27(2): 223-244.

Bhartia, R., & Katz, M. (2001). Estimation of health benefits from a local living wage ordinance. *American Journal of Public Health*, 91(9): 1398-1402.

Bohle, P., Cooke, A., Jakubauskas, M., Quinlan, M., & Rafferty, M. (2008). *The Changing World of Work and Emergent Occupational Disease and Injury Risks in New Zealand: A Benchmark Review*. Prepared for National Occupational Health and Safety Advisory Committee (NOHSAC), Report No.10, Wellington.

Boivin, D., Tremblay, G., & James, F. (2007). Working on atypical schedules. *Sleep Medicine*, 8(6): 578-589.

Bosma, H., Peter, R., Siegrist, J., & Marmot, M. (1998). Two alternative job stress models and the risk of coronary heart disease. *American Journal of Public Health*, 88(1): 68-74.

Burgess, J., & Baird, M. (2003). Employment entitlements: Development, access, flexibility and protection. *Australian Bulletin of Labour*, 29(1): 1-13.

Carayon, P., & Zijlstra, F. (1998). Relationship between job control, work pressure and strain: Studies in the USA and the Netherlands. *Work & Stress*, 13(1): 32-48.

Cardiff University et al. (2011). Contract to assess the potential impact of emerging trends and risks on labour inspection methodologies in the domain of occupational health and safety (the NERCLIS* Project). Report prepared for the European Commission, Luxembourg.

Cheng, G., & Chan, D. (2008). Who suffers more from job insecurity? A Meta-analytic review. *Applied Psychology*, 57(2): 272-303.

Clark, P., Clark, D., Day, D., Shea, D. (2001). Healthcare reform and the workplace experience of nurses: Implications for patient care and union organizing. *Industrial and Labor Relations Review*, 55(1): 133-148.

Clarke, M., de Wolff, A. King, A., & Lewchuk, W. (2007). 'This just isn't sustainable': Precarious employment, stress and workers' health. *International Journal of Law and Psychiatry*, 30(4-5): 311-326.

Cockfield, S., Buttigieg, D., Jerrard, M., & Rainnie, A. (2011). Assessing the Impact of Employment Regulation on the Low-Paid in Victoria. *Economic and Labour Relations Review*, 22(2): 131-153.

Commons, J., & Andrews, J. (1916). *Principles of Labour Legislation*. New York: Harper and Bros.

Doucouliagos, C., & Laroche, P. (2003). What do unions do to productivity? A Meta analysis, *Industrial Relations*, 42(4): 650-691.

Eaton, A., & Nocerino, T. (2000). The effectiveness of health and safety committees: Results of a survey of public-sector workplaces. *Industrial Relations*, 39(2): 265-290.

Felstead, A., & Jewson, N. (eds.) (1999). *Global Trends in Flexible Labour*. Basingstoke: Macmillan.

Finkin, M., & Jacoby, S. (2001). An introduction to the regulation of leasing and employment agencies. *Comparative Labor Law and Policy Journal*, 23(1): 1-6.

Fooks, G., Bergman, D., & Rigby, B. (2007). International Comparisons of (a) Techniques Used to Obtain Compliance with Health and Safety Law and Accountability for Administrative and Criminal Offences and (b) Sentences for Criminal Offences. Prepared by Centre for Corporate Accountability for the Health and Safety Executive. Research Report RR607. London: HSE Books. Retrieved from http://www.hse.gov.uk/research/rrhtm/rr607.htm

Frick, K., & Walters, D. (1998). Worker representation on health and safety in small enterprises: Lessons for a Swedish approach. *International Labour Review*, 137(3): 367-389.

Gellatly, M., Grundy, J., Mirchandani, K., Perry, J., Thomas, M., & Vosko, L. (2011). 'Modernising' Employment Standards? Administrative Efficiency and the Production of the Illegitimate Claimant in Ontario, Canada. *Economic and Labour Relations Review*, 22(2): 81-106.

Goodwin, M., & Maconachie, G. (2007). Unpaid entitlement recovery in the federal industrial relations system: Strategy and outcomes 1952-95, *Journal of Industrial Relations*, 49(4): 523-544.

Gordon, S., Buchanan, J. and Bretherton, T. (2008). *Safety in Numbers: Nurse-to-Patient Ratios and the Future of Health Care*. Cornell, Ithica: ILR Press.

Goudswaard, A. (2002). New forms of contractual relationships and the implications for occupational safety and health. European Agency for Safety and Health at Work, Bilbao.

Goudswaard, A., & de Nanteuil, M. (2000). Flexibility and working conditions: The impact of flexibility strategies on conditions of work. European Foundation for the Improvement of Living and Working Conditions, Dublin.

Grayling, A. (2007). Towards the Light: The story of the struggles for liberty and rights that made the modern west. London: Bloomsbury.

Greenberg, D., Michalopoulos, C., & Robins, P. (2003). A Meta-analysis of government sponsored training programs. *Industrial and Labor Relations Review*, 57(1): 31-53.

Harcourt, M., & Harcourt, S. (2000). When can an employee refuse unsafe work and expect to be protected from discipline? Evidence from Canada. *Industrial and Labor Relations Review*, 55(4): 684-703.

Hay, D. and Craven, P. (eds). (2004), *Masters, Servants, and Magistrates in Britain and the Empire*, 1562-1955. Chapple Hill: University of North Carolina Press.

Hayakawa, S., & Simard, F. (2001). Contracting out in Japanese local government: Are unions making a difference? *British Journal of Industrial Relations*, 39(1): 81-95.

Hipple, S. (2001). Contingent work in the late-1990s, Monthly Labor Review, 124(3): 3-27.

Houseman, S. (2001). Why employers use flexible staffing arrangements: Evidence from an establishment survey. *Industrial and Labour Relations Review*, 55(1): 149-170

James, P., & Walters, D. (2002). Worker representation in health and safety: Options for regulatory reform. *Industrial Relations Journal*, 33(2): 141-156.

Jarley, P., Chandler, T., & Faulk, L. (2001). Maintaining a scholarly community: Casual authorship and the state of IR research. *Industrial Relations*, 40(2): 338-343.

Johnstone, R., McCrystal, S., Nossar, I., Quinlan, M., Rawling, M., & Riley. J. (2012). *Beyond Employment: The Legal Regulation of Work Relationships*. Sydney: Federation Press.

Johnstone, R., Mayhew, C., & Quinlan, M. (2001). Outsourcing risk? The regulation of OSH where contractors are employed. *Comparative Labor Law and Policy Journal*, 22(2&3): 351-393.

Johnstone, R., Quinlan, M., & Walters, D. (2005). Statutory occupational health and safety workplace arrangements and the modern labour market. *Journal of Industrial Relations*, 47(1): 93-116.

Karasek, R. (1979). Job demands, job decision latitude, and mental strain: Implications for job re-design. *Administrative Science Quarterly*, 24(2): 285-308.

Karasek, R. (1997). Labour participation and work quality policy: Requirements for an alternative economic future. *Scandinavian Journal of Work Environment and Health*, 23(Supl. 4): 55-65.

Kelly, J. (1998). Rethinking Industrial Relations: Mobilization, Collectivism and Long Waves. London: Routledge

Kochan, T. (1980). Industrial relations research: An agenda for the 1980s. *Monthly Labor Review*, 103(9): 20-25.

Krause, N., Dasinger, L., Deegan, L., Rudolph, L., & Brand, R. (2001). Psychosocial job factors and return-to-work after compensated low back injury: A disability phase-specific analysis. *American Journal of Industrial Medicine*, 40(4): 374-392.

Kunda, G., Barley, S., & Evans, J. (2002). Why do contractors contract? The experience of highly skilled technical professionals in a contingent labour market, *Industrial and Labor Relations Review*. 55 (2): 234-267.

Landsbergis, P., Cahill, J., & Schnall, P. (1999). The impact of lean production and related new systems of work organization on health. *Journal of Occupational Health Psychology*, 4(2): 108-130.

Lautsch, B. (2003). The influence of regular work systems on compensation for contingent workers. *Industrial Relations*, 42(4): 565-588.

Lewchuk, W., Clarke, M., & de Wolff, A. (2008). Working without commitments: precarious employment and health. *Work, Employment & Society*, 22(3): 387-406.

Lewchuk, W., Clarke, M., & de Wolff, A. (2011). Working Without Commitments: Precarious Employment and Health. Montreal: McGill Queens University Press

Lippel, K. (2006). Precarious employment and occupational health and safety regulation in Quebec. In L.F, Vosko. (ed.) *Precarious Employment: Understanding Labour Market Insecurity in Canada*. (pp. 241-255) Montreal: McGill-Queens University Press.

Litwin, A. (2000). *Trade unions and industrial injury in Great Britain, Discussion Paper 468*. London: Centre for Economic Performance, London School of Economics and Political Science. Retrieved from http://eprints.lse.ac.uk/20169/

Louie, A., Ostry, A., Keegal, T., Quinlan, M., Shoveller, J., & LaMontagne, A. (2006). Empirical study of employment arrangements in precariousness in Australia. *Relations Industrielles (Industrial Relations)*, 61(3): 465-489

Marmot, M. (1998). Contribution of psychosocial factors to socioeconomic differences in health. *The Millbank Quarterly*, 76(3): 403-448.

Mayhew, C., & Quinlan, M. (2006). Economic pressure, multi-tiered subcontracting and occupational health and safety in the Australian long haul trucking industry. *Employee Relations*, 28(3): 212-229.

Muntaner, C., Li, Y., Ng, E., Benach, J., & Chung, H. (2011). Work or place? Assessing the concurrent effects of workplace exploitation and area of residence economic inequality on individual health. *International Journal of Health Services*, 41(2): 27-50

Nichols, T., Walters, D.R., & Tasiran, A.C. (2007). Trade Unions, Institutional Mediation and Industrial Safety – Evidence from the UK. *Journal of Industrial Relations*, 49(2): 211-255

Park, Y., & Butler, R. (2001). The safety costs of contingent work: Evidence from Minnesota. *Journal of Labor Research*, 12(4): 831-849.

Purcell, J. (1993). Ideology and the end of institutional industrial relations: Evidence from the UK. *Labour and Industry*, 5(3): 57-74.

Quinlan, M. (2012). The 'pre-invention' of precarious employment: The changing world of work in context. *The Economic and Labour Relations Review*, 23(4): 3-24

Quinlan, M. (2013a). Precarious and Hazardous work: The health and safety of merchant seamen 1815-1935. *Social History*, 38(3):281-307.

Quinlan, M. (2013b). Precarious employment, ill-health and lessons from history: The case of casual (temporary) dock workers 1880-1945. *International Journal of Health Services*, 43(4): 721-744.

Quinlan, M., & Bohle, P. (2008). Under pressure, out of control or home alone? Reviewing research and policy debates on the OHS effects of outsourcing and home-based work. *International Journal of Health Services*, 38(3): 489-525.

Quinlan, M., & Bohle, P. (2009). Over-stretched and unreciprocated commitment: Reviewing research on the OHS effects of downsizing and job insecurity. *International Journal of Health Services*, 39(1): 1-44.

Quinlan, M., Bohle P., & Lamm, F. (2010). *Managing Occupational Health and Safety: A Multidisciplinary Approach*. (3rd ed.). Melbourne: Macmillan

Quinlan, M., Hampson, I., & Gregson, S. (2013). Outsourcing and offshoring aircraft maintenance in the US: Implications for safety. *Safety Science*, 57: 283-292.

Quinlan, M., & Johnstone, R. (2009). The implications of de-collectivist industrial relations laws and associated developments for worker health and safety in Australia, 1996-2007. *Industrial Relations Journal*, 40(5): 426-443

Quinlan, M. Mayhew, C., & Bohle, P. (2001). The global expansion of precarious employment, work disorganisation and occupational health: A review of recent research. *International Journal of Health Services*, 31(2): 335-414.

Quinlan, M., & Sheldon, P. (2011). The enforcement of minimum labour standards in an era of neo-liberal globalisation: An overview. *Economic and Labour Relations Review*, 22(2): 5-32

Rawling M., & Kaine S. (2012). Regulating supply chains to provide a safe rate for road transport workers. *Australian Journal of Labour Law*, 25(3):237-257.

Rebitzer, J. (1995). Job safety and contract workers in the petrochemical industry. *Industrial Relations*, 34(1): 40-57.

Robertson, R. (2006). Employment Arrangements. Improved outreach could help ensure proper worker classification. United States Government Accountability Office (GAO), Washington.

Robinson, J. (1991). *Toil and Toxics: Workplace Struggles and Political Strategies for Occupational Health*. Berkeley, CA: University of California Press.

Rodriguez-Pinero Royo, M. (2001). Temporary work and employment agencies in Spain. *Comparative Labor Law and Policy Journal*, 23(1): 129-172.

Saksvik, P., & Gustafsson, O. (2004). Early retirement from work: A longitudinal study of the impact of organisational change in a public enterprise. *Policy and Practice in Health and Safety*, 2(2): 43-55.

Saloniemi, A., Virtanen, P., & Vahtera, J. (2004). The work environment in fixed-term jobs: Are poor psychosocial conditions inevitable? *Work, employment and society*, 18(1): 193-208.

Sass, R. (1989). The implications of work organisation for occupational health policy: The case of Canada. *International Journal of Health Services*, 19(1): 157-173.

Schnaul, P., Belkic, K., Landsbergis, P. & Baker, D. (eds.) (2000). The Workplace and Cardiovascular Disease, *Occupational Medicine: State of the Art Reviews*, 15(1). Retrieved fromt http://www.workhealth.org/OMSTAR/omoutline.html

Secure Employment Test Case [2006] NSWIRComm 38.

Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, 1(1): 27-41.

Stegenga, J., Bell, E., & Matlow, A. (2002). The role of nurse understaffing in nonsocomial viral gastrointestinal infections on a general pediatrics ward. *Infection Control and Hospital Epidemiology*, 23(3): 133-139.

Stone, K. (2004). From Widgets to Digits: Employment Regulation in the Changing Workplace. Cambridge: Cambridge University Press.

Strauss, G., & Feuille, P. (1978). Industrial Relations research: A critical analysis. *Industrial Relations*, 17(3): 259-277.

Suruda, A., Philips, P., Lillquist, D., & Sesak, R. (2003). Fatal injuries to teenage construction workers in the US, *American Journal of Industrial Medicine*, 44(5): 510-514.

Sverke, M. (2003). Uncertain employment relations and union membership in Europe. *Economic and Industrial Democracy*, 24(2): 139-312.

Underhill, E., & Kelly, D. (1993). Eliminating traditional employment: Troubleshooters available in the building and meat industries. *Journal of Industrial Relations*, 35(3): 398-424.

Underhill, E., & Quinlan, M. (2011). How precarious employment affects health and safety at work: the case of temporary agency workers. *Relations Industrielles*, 66(3): 397-421.

Vigneau, C. (2001). Temporary agency work in France. *Comparative Labor Law Journal*, 23(1): 45-65.

Virtanen, M., Kivimaki, M., Joensuu, M., Virtanen, P., Elovainio, M., & Vahtera J. (2005). Temporary employment and health: A review. *International Journal of Epidemiology*, 34: 610-622.

Vosko, L. (ed.) (2006). *Precarious Employment: Understanding Labour Market Insecurity in Canada*. Montreal: McGill-Queens University Press.

Walters, D., & Nichols, T. (2007). *Worker Representation and Workplace Health and Safety*. Basingstoke: Palgrave Macmillan

Webb, S., & Webb, B. (1914). *Industrial Democracy*. London: Longmans, Green & Co.

Weil, D. (2005). Public enforcement/private monitoring: Evaluating a new approach to regulating the minimum wage. *Industrial and Labor Relations Review*, 58(2): 238-257.

Weil, D. (2009). Rethinking the regulation of vulnerable work in the USA: a sector based approach. *Journal of Industrial Relations*, 51: 411-430

Weil, D. (2011). Enforcing labour standards in the fissured workplace: The US experience. *Economic and Labour Relations Review*, 22(2): 33-54.

Whitfield, K. & Strauss, G. (2000). Methods matter: Changes in Industrial Relations research and their implications. *British Journal of Industrial Relations*, 38(1): 141-151.

Wilkinson, R., & Pickett, K. (2009). The Spirit Level: why more equal societies almost always do better. London: Allen Lane

Wood, S. (2008). Job characteristics, employee voice and well-being in Britain. *Industrial Relations Journal*, 39(2): 153-168.

Wright, C., & Lund, J. (1996). Best-practice Taylorism: "Yankee Speed-Up" in Australian grocery distribution. *Journal of Industrial Relations*, 38(2): 196-212.

Wright, C., & Lund, J. (1998). "Under the clock": Trade union responses to computerised control in US and Australian grocery warehousing. *New Technology, Work and Employment*, 13(1): 3-15.