

national research centre for

OHS regulation



Working Paper 16

Flexible Work and Organisational Arrangements - Regulatory Problems and Responses

July 2003

Professor Michael Quinlan

Professor, School of Industrial Relations and Organisational Behaviour, University of New South Wales

This paper was first presented at the conference *Australian OHS Regulation for the 21st Century*, National Research Centre for Occupational Health and Safety Regulation & National Occupational Health and Safety Commission, Gold Coast, July 20-22, 2003.



Flexible Work and Organisational Arrangements - Regulatory Problems and Responses

Michael Quinlan

ABSTRACT

The past 25 years have witnessed substantial changes in work organisation in Australia and most if not all other industrialised countries. Notable amongst these changes has been an expansion in part-time and fixed term or temporary employment (and a corresponding decline in permanent full-time jobs especially for males) a growth in home-based and telework as well as multiple jobholding. The proportion of workforce employed in small business has risen and there have changes in the industry and occupation distribution of self-employed workers. The growth of flexible work arrangements is a consequence of organisational changes including increased use of outsourcing/elaborate supply chains, repeated rounds of downsizing/restructuring by large public and private sector employers, privatization and management techniques such as labour leasing, franchising, lean production or business process re-engineering.

There is now a substantial body of international research indicating that in many instances flexible work arrangements such as temporary and home-based work, the use of subcontractors/outsourcing and increased job insecurity resulting from downsizing are associated with inferior outcomes in terms of worker safety, health and well-being. It is also becoming increasingly clear that a number of the work arrangements and organisational changes just described pose a significant problems for OHS regulators and those administering workers compensation/rehabilitation regimes. Government agencies in Australia and overseas are beginning to respond to these problems (in some cases with the active co-operation of industry bodies, employers and unions).

This paper is concerned to identify the nature of the problems that flexible work and the organisational changes referred to can pose for OHS regulation as well as assessing the responses being implemented to address them. It will also try to indicate where more strategic responses can be developed in the future.

INTRODUCTION: THE GROWTH OF FLEXIBLE WORK ARRANGEMENTS AND MOUNTING EVIDENCE ON THEIR OHS EFFECTS

One of the most significant changes affecting work globally over the past 20 years has been the growth (both in absolute and relative terms) of more flexible or less secure forms of work arrangements, now typically labeled precarious employment (a French-derived term) or contingent work (which originated in the USA). While, there is ongoing debate about what constitutes contingent work or precarious employment – or rather definitional boundaries for inclusion or exclusion (for a discussion see Quinlan and Bohle, forthcoming) – there is wide consensus about the inclusion of some categories of work. These include self-employed subcontractors (including many mobile or home-based workers), temporary (including on-call), leased (or labour hire) or short-term fixed contract workers. More problematic inclusions are micro-small business workers (though many of these are subcontractors) and part-time workers (at least those with permanent positions). While the terms precarious employment and contingent work are often used interchangeably (and indeed there is considerable overlap) the former term has a somewhat wider coverage. However, even precarious employment fails to take full account of the changes that are occurring. The changes in work organisation and labour markets are not confined to the growth of jobs that are formally short-term or insecure. The growth has seen a commensurate decline in the proportion of workers holding permanent/tenured full-time positions (Ferrie, 1999:59) while repeated rounds of downsizing by large public and private workers (and associated changes in industrial relations

regimes within at least some countries) have meant that even workers holding nominally permanent jobs are experiencing job insecurity.

Leaving the last point aside for the moment, the growth of precarious forms of employment has been charted by a series of both official and academic surveys in Europe, North America and Australasia (see for example De Grip, A., Hoevenberg, J. & Williams, E., 1997; US Bureau of Labor Statistics, 1995; Burgess, J. and de Ruyter, A. 2000). Figures combining available data on various categories of contingent work in particular countries illustrate the magnitude of change. In Australia, those holding a casual or temporary job and non-employees (self-employed, subcontractors, etc) constituted less than 30% of the workforce in 1982 but approximately 40% in 1999 (Burgess, J. and de Ruyter, A., 2000:252). If permanent part-time workers are added, the figure rises to 48%. Similar significant shifts have been identified in some EU countries, Canada (see Lowe, G., 2001) and the USA (where around 30% of the workforce hold part-time, temporary, on-call, day hire or short term contract positions or are self-employed. Hipple, S. 2001).

While truly comparable global data is often difficult to compile or missing entirely (as with regard to home-based work), and the patterns of employment shifts has varied between countries, the general thrust of the evidence has been consistent and unambiguous, with a relative decline in permanent full-time work and an associated increase in more temporary and insecure work arrangements. For example, combining a study by Campbell and Burgess (2001) with unpublished OECD statistics indicates that the average proportion of the workforce in temporary employment across Australia and 14 EU countries grew from 9.57% in 1983 to 13.75% in 1999, an overall increase of 43.68% in 16 years (Quinlan and Bohle, forthcoming).

While the shift to flexible work arrangements and rounds of organisational restructuring has been promoted as a critical vehicle to enhancing productivity to meet global competition, and to a lesser extent achieving 'win-win' gains to employers and employees there is mounting evidence that these changes are having serious adverse effects on worker health, safety and wellbeing. Studies of the health and safety effects of job insecurity and contingent work arrangements can be identified as early as the 1960s but there has been a rapid escalation of published research since the mid 1990s, mirroring growing concern at the expansion of these work arrangements. The first review of this research (Quinlan et al 2001a&b) sought to identify all studies that measured OHS amongst contingent workers or the effects of job insecurity on worker health and wellbeing. It was based on a search of relevant journals along with more selective searching of books, research monographs and government reports (where this involved detailed scientific analysis). The review, covering more than 90 studies (mostly undertaken in Europe, North America and Australasia though with some studies from Asia, Africa and South America), found a clear adverse association between precarious employment and OHS, with over 80% of studies finding these work arrangements were associated with inferior OHS outcomes. Later and more specialised reviews of available research on the OHS effects of job insecurity and the safety effects of contingent work largely served to confirm the initial findings.

Since this time we have been able to more than double the number of studies in our database (covering the period 1966-2002), in part reflecting both studies missed from the initial review and also studies published after the first review was completed. Of these 188 studies 53 were undertaken in the USA, 25 in the UK, 21 in Sweden, 19 in Australia, 18 in Canada, 16 in Finland, 12 in France, 5 in Germany, 5 in Denmark, 4 in Brazil, two each in Norway, the EU, Spain and South Africa, and one study each in Belgium, Ireland, China, Poland, Egypt, Japan, Netherlands, Switzerland and Zimbabwe. Along with population-based studies, there were a number of industry specific studies, including 38 covering manufacturing, 29 in healthcare, 23 in the public sector, 10 each in financial/personal services and construction, 9 in transport, 7 in retail/hospitality, 5 in post/telecommunications/media, 4 in mining/oil, 2 in power generation, and 1 in maritime/fishing.

The reviewed studies used a range of methodologies and OHS indices. Thirty-nine used secondary data analysis, 62 were longitudinal studies, 75 were cross sectional surveys, 9 were qualitative case studies and a further 9 used some other method. The range of OHS indices used by these studies included injury rates, blood pressure, self-reported injury and health (such as the General Health Questionnaire or GHQ), sickness absence, knowledge/compliance with OHS law & policies. Grouping these indices it was found that 57 used objective health measures, 105 used subjective health measures, 17 measured sickness absence (using either or subjective measures), 14 measured legal knowledge/compliance and 10 measured organisational policies/training. The total just given exceed 188 as some studies covered more than one country or used multiple categories, methods or indices

Of the 188 studies examined 29 were deemed to be indeterminate because they lacked a control or benchmark or the results were too ambiguous to interpret. Of the remainder (159) 141 or 88.6% of determinate studies (& 77.9% of all studies) linked precarious employment to inferior OHS outcomes in terms of higher injury rates, hazard exposures, disease and work-related stress. Turn specifically to the latter, it can be noted that 74 of 188 studies used some indicator of work-related stress (such as the GHQ). Four of these 74 studied were deemed indeterminate. Of the remaining 70, 63 (or 90% of determinate studies and 85% of all studies) linked precarious employment to worse stress outcomes.

As in previous reviews, studies were broken down according to the particular type of precarious employment they examined (some studies examined several categories simultaneously) as well as the more generalized notion of job insecurity. The review identified 96 studies of downsizing/job insecurity. Of these 81 found adverse OHS effects, 8 had nil/positive results and 9 were indeterminate. In relation to outsourcing and home-based work the review identified 36 studies. Of these 27 studies found adverse OHS outcomes while the remaining 9 were indeterminate. Of the 36 studies of temporary or leased workers included in the review 19 found adverse OHS outcomes, 6 were nil/positive and 11 were deemed indeterminate. The review included 16 studies of small business (mainly micro small business) and of these 8 found adverse OHS outcomes while the remaining 8 were indeterminate.

The review separated out telecall centre and teleworkers not because they represent a distinct category of contingent work but because they represent a relatively new and significant area of employment often associated with contingent work arrangements (most notably temporary employees and home-based subcontract workers). Only five studies measuring OHS amongst telework/telecall workers could be identified and all but one were indeterminate because the lack of a control group (the exception did identify significantly inferior health outcomes for telecall workers compared to those completing the same tasks in a more conventional work setting).

The review also included studies measuring OHS outcomes amongst permanent part-time workers, although whether these workers could be categorized as precarious or contingent is questionable. In the end the review identified 10 studies all but one of which found OHS outcomes that were nil/positive in comparison to control groups of permanent part-time workers. Hence, this was the only category of workers in the review where the findings did not match those of the overall results.

In sum, the updated review served to reinforce the results of earlier reviews. While this was a narrative rather than meta review and no attempt was made to exclude methodologically weaker studies the vast majority of those studies reviewed were substantial pieces of scholarship published in leading international journals. The research database does help to identify areas of relative neglect. More research is needed on the service sector (eg hospitality, telecall centres); outsourcing/home-based work (especially health effects and hazard exposures), temporary work,

leased labour, micro small business, part-time work, multiple jobholding and the safety (as opposed to health effects) of downsizing. There is also a need to explore the relationship between contingent work and gender, work/life balance and shiftwork/long hours. Further, we also need research on the wider social implications of precarious employment for cost externalities, regulatory frameworks and occupational health management systems. Finally, it should be recognised that the growth of precarious employment poses some major challenges to conventional data sources and research methods. The rapid job churning associated with temporary employment in some industries (like hospitality, road transport or food processing) will make cohort studies virtually impossible, make epidemiological studies very difficult and is likely to render official data sources (like workers' compensation claims, death certificates and like) less accurate. Control groups may be difficult to establish where, for example, an industry is largely casualised and permanent workers undertake different tasks. Not least, in some industries the intense competition between different categories of workers (such as employee and subcontract truck drivers) will tend diminish OHS outcomes overall, thereby partly obscuring the effects that are due to changes in work arrangements (indeed understating such effects).

Notwithstanding these caveats, it must now be accepted that is a large and compelling body of evidence that a number of pervasive flexible work arrangements pose a serious threat to the maintenance of existing standards of OHS. It should be noted that such an overwhelming result is unusual for a large review of scientific research. It also important to note that methodology, indices or country where the research was undertaken exerted no discernible influence on these results. This suggests that regulatory and other institutional differences as well existing policy responses are exerting a minimal effect on these outcomes – an observation with significant policy implications. The remainder of this paper will consider the regulatory challenges posed by these work arrangements and the attempt by government agencies and others to meet these challenges.

THE OHS REGULATORY CHALLENGES POSED BY FLEXIBLE WORK ARRANGEMENTS

A small number of the studies reviewed above as well as other literature identified significant OHS regulatory issues in relation to precarious employment, notably lower knowledge of or compliance with legislative requirements amongst subcontractors, temporary workers and those engaging them and less willingness to raise OHS issues or access entitlements (like workers' compensation) amongst contingent workers (see for example Aronsson, 1999; Johnstone et al 2001; Walters, 2001). The problems have also been raised in a number of reports prepared for government agencies in Europe, North America and Australasia, though often at a generic level or in connection to only one aspect of contingent work such as temporary employment or telework (see for example Pennings et al, 1996; Synthesis Report, 1997; EFILWC, 1997; WCB of BC, 1997; and European Agency for Safety and Health at Work 2002). In 2001 I was commissioned the WorkCover Authority of New South Wales to prepare a report (forthcoming) on the regulatory challenges – both with regard to prevention and workers compensation/rehabilitation posed by changing work arrangements and assess the strategic solutions being developed to address these. The project covered all state, territory and federal government OHS jurisdictions (not just New South Wales), and received the active cooperation of all relevant government agencies. As part of this process I met with 10 of the 12 tripartite industry reference groups (IRG's) established in New South Wales, conducted both focus group and individual interviews (using a semi-structured questionnaire) with 63 regulatory staff (both policy and operational) in 9 of the 10 jurisdictions and 40 senior employer/industry and union representatives. I also conducted a relatively exhaustive search of relevant government material (legislation/regulations, codes, guidance material, information bulletins, internal and public reports, prosecution reports and workers compensation claims data pertaining to several jurisdictions over the past five years). This information was augmented by a more selective collection of employer/industry association and union material and workplace visits.

I also obtained and perused a number of reports on the issue prepared by or for government agencies in Europe, Canada, the USA and New Zealand.

The evidence collected by this project indicated that precarious employment and job insecurity were creating serious problems for existing OHS regulatory regimes in Australia. Unlike many other countries (apart from Canada) Australian OHS and workers compensation legislation is largely state/province based. However, like Canada, the United Kingdom and many other European countries the legislative framework uses a mixture of process and prescriptive standards based on general duty provisions that set broad behavioural standards for an array of parties (employers, workers, contractors, designers, manufacturers, suppliers and others). Effectively, the general duties require employers to undertake risk assessment (like the EU this is specifically mandated in NSW), to maintain a safe system of work (including adequate plant and equipment, training of workers and work organisation), and to take adequate consideration of any major change in work process (and this could include downsizing). Further, like the EU and Norway the legislation mandates worker involvement in OHS through elected employee health and safety representatives or HSRs (there are well over 50,000 of these in Australia at present) and joint worker/employer OHS committees at the workplace. In short, OHS legislation in Australia is broadly similar to that found in a number of industrialised countries, including a recent focus on promoting systematic OHS management.

While flexible work arrangements and organisational restructuring can have important effects on workers' compensation and associated legislation attention here will be largely confined to OHS preventative legislation. Turning to this legislation and policies and enforcement practices associated with it a number of points can be made.

General Duty Provisions: The Fractured Web De facto and Dejure

The general duty provisions in Australia OHS statutes establish a hierarchy of responsibility (as between the principal and a subcontractor) as well as a web of multiple or shared responsibilities (as in the case of labour leasing firm and its host and on multi-employer worksites). While this would seem well-suited to meeting the challenges posed by changing work arrangements (and indeed it is certainly superior to a legislative framework that fails to recognise or address these complexities) the evidence uncovered in the course of research indicated that the growth of precarious employment was associated with a fracturing of statutory responsibilities (at least in the eyes of those being regulated) that was undermining the effective implementation of the legislation.

Subcontracting (especially multi-tiered or pyramid subcontracting), labour leasing and much home-based work (where self-employment or subcontracting is entailed) introduce third parties into the work arrangement as opposed to the relatively simple and direct employer/employee relationship that have been the overwhelming focus of OHS regulatory regimes in the past. In two jurisdictions design flaws in the legislative duties limited coverage of certain subcontracting arrangements (on relating to work undertaken by subcontractors outside the employers place of work and another limited the capacity to pursue legislative responsibility more than one step in the subcontracting chain) though other jurisdictions have used deeming and other special provisions to clarify legislative coverage. However, even where changes to work organisation have not exposed gaps in statutory coverage, the introduction of third parties creates more complicated and potentially attenuated webs of legal responsibility that place heavier logistical demands on the inspectorate. For example, monitoring to see if there is an integrated OHS management system becomes more difficult on multi-employer sites or those making extensive use of subcontractors or home-based workers and there is a commensurately greater risk of instances of 'paper compliance' escaping undetected. Further, conducting workplace inspections is nothing short of a logistical nightmare in the case of mobile workers, literally thousands of home-based workers and temporary workplaces (like a telecall centre established for a marketing campaign that may last only a few months).

Finally, where a breach is detected or serious incident occurs the inspectorate can face greater difficulty in identifying the parties to prosecute (such as the principal contractor) and their legal status (especially where the 'corporate veil' of shelf companies is used) or the precise employment status of the worker (and this may have implications for the relevant provision to be used in legal proceedings). Further, the existence of third parties make determining the share of responsibility and who to pursue in legal proceedings (more than one party can be prosecuted) more time-consuming.

It should be noted here, that as in the USA, specialist advice has been provided to some employers by legal firms and others about how to configure their organisation or their workforce in order to minimize their 'exposure' to a raft of statutory requirements (relating to taxation and industrial relations as well as OHS and workers compensation). For example, in one case a taxi firm configured itself as a trust and its workers as beneficiaries of that trust. While this represents an extreme case it highlights the element of calculated regulatory evasion that is at least a partial contributor to the growth of precarious employment. Even where there has been no calculated regulatory evasion growth of these work arrangements increases the potential risk of ignorance or misunderstandings in terms of meeting legislative requirements.

Regulators expressed concern that employers often presumed outsourcing an activity or leasing a worker diminished their responsibility (it doesn't) and that short-term nature of temporary employment affected their attitudes to the need to provide adequate induction and training or to ensure these workers were represented by HSRs or on workplace committees).

Organisational restructuring, including downsizing and sales/mergers, are a common practice often entailing significant changes to work processes or requiring a reassessment of OHS management systems. However, again while the need to manage changes in work processes is clearly covered by the general duties in OHS legislation available evidence indicates that even many large employers are unaware of this, fail to see the connection or attach a low priority to it. In trying to explain this, a number of regulatory staff interviewed referred to the low priority accorded to OHS in business decision-making.

Its probably because its one of the last things they (ie management) think of when they make these arrangements. They cut a business deal because its good for business and all this appendage stuff like occupational health and safety, workers' compensation claims and liability (they) don't really think about that. We've had a lot of mergers and sales...and I've got a case going at this very moment where a self-insurer in this state has unilaterally changed its arrangements for the management of plant. Deliberately didn't speak to us because they didn't want us to say "you need to be careful". They've made it (the decision) on the basis of the bottom line dollar decision and they reckon they'll just deal with us at a later time. So when these business deals are done I don't think they spend enough time talking to their risk management people. But I don't think in most cases it's calculated. They think of it as detail.

Codes, Regulations and Guidance Material

Codes, regulations and guidance material play a critical role in fleshing out their responsibilities of various parties under OHS legislation and providing indications as to how they can comply. Again, in the past such materials were largely produced with employers and employees in mind, providing limited reference to other duty holders (such as designers and suppliers) of complications that might arise where organisations restructured or subcontractors and other categories of contingent workers were used.

Agencies are moving to meet this deficiency, originally on a largely ad hoc basis and in the last few years more systematically (including exchanging ideas and borrowing models from each other allowing a more effective use of resources). Nonetheless the survey of agency materials undertaken in 2001/2002 revealed major gaps in regulations, codes and guides/information to parties in terms of clarifying responsibilities in relation particular work arrangements or categories of workers. This applied both to generic and industry specific guidance material. For example, no Australian agency had produced guidance material on downsizing/restructuring. Regulators interviewed acknowledged such changes could clearly fall with the meaning of major changes to work processes (under the general duty provisions), that in general employers failed to consult workers adequately and they were aware of instances where changes led to a serious deterioration in OHS. As in the USA staffing levels are being included as a risk factor in some guidance material on occupational violence but this is limit of activity thus far. Only one jurisdiction (Victoria) has produced generic information to advise employers of their responsibilities in relation to temporary workers. The production of generic material on home-based work is also exceptional. Recent initiatives meant the situation was somewhat better in relation to subcontracting, labour leasing (labour hire) and telecall center work. Relatively detailed guidance material has been produced in relation to specific industries and sectors (such as government and more notably construction). Reference to temporary and leased workers can also be increasingly found in industry-specific documentation (like hospitality and agriculture) or at-risk categories of workers (notably young workers, seasonal harvest workers and immigrant workers). As in a number of EU countries, Canada and the USA, young workers and small business have received considerably increased attention from inspectorates (though most of the guidance material still fails to identify the concentration of young workers in temporary jobs or the fact that many small businesses are subcontractors).

Changes in work arrangements can weaken guidance material in more subtle ways. By altering the array of hazards or level of risk changing work arrangements may be weakening the value of existing guidance material, codes and regulations. For example, a number of flexible employment arrangements are associated with changes to working time that may have critical relevance for existing exposure limits. Exposure limits for hazardous substances such as noise, toxic chemicals and the like in Australia (as in many other countries) have been largely derived from standards termed threshold limit values (TLVs) developed by the American Conference of Government Hygienists (ACGIH). TLVs are usually expressed in two forms – a maximum exposure limit (beyond which no worker is meant to be exposed to for however a short a period) and a long-term time-weighted exposure limit (usually calculated on the basis of daily eight-hour shift with a corresponding 16 hour period of non-exposure). Any change to work timing or shift arrangements that increases the period of exposure (as with the introduction of 12-hour shifts) or the cumulative period without breaks (as in the case of nine days ‘on’ and four days ‘off’) may effectively make the standard 8-hour based limit invalid and requiring a recalibration that may be substantial (with regard to noise see NIOSH, 1996). It is not means clear that OHS agencies have made this point sufficiently to employers or amended their documentation and inspectoral practices accordingly. At the same time, it needs to be recognised that agencies would face significant difficulties monitoring exposure where hours and shifts are irregular as is often the case with casual employment, subcontractors, leased workers and other work arrangements (like part-time work). Multiple jobholding (found not only amongst casual workers, subcontractors, leased and home-based workers but also full-time workers) presents an additional complication for agencies – and one largely unanticipated by regulatory regimes. This issue is not confined to Australia. In her study of the French nuclear industry Thebaud Mony (2000) found subcontractors received 80% of the total workforce radiation exposure and that outsourcing had significant implications for both the identification of hazard exposures, management responses and deficiencies in regulatory responses.

What is needed is a comprehensive array of both generic guidance material and more detailed industry/sector specific guides (that take account of the particular configuration of work

arrangements in that industry). Examination of OHS agency websites in the USA, Canada and the UK indicated these gaps in guidance material were by no means confined to Australia. In the European Union producing directive on temporary workers and attempts at uniform regulation of the working hours of self-employed truck drivers has not proved to be a simple process. Similar delays may accompany efforts to develop directives on other issues like downsizing, subcontractors and telework.

The Weakening of Worker Involvement

Mechanisms promoting worker involvement are a vital element in post-Robens OHS legislation, providing avenues for participatory and inclusive problem solving, feedback loops in and independent vetting of OHS management systems, and better safeguarding the interests of those most directly affected by the failure to manage OHS effectively. At workplace level the main mechanisms for this in Australian OHS laws are provisions relating to workplace health and safety committees and employee health and safety representatives (HSRs). By and large, these mechanisms were designed prior to significant changes in work arrangements being recognised (the changes were occurring) and where union density and their capacity to provide logistical support was considerably stronger than it is today in Australia and a number of other countries.

With some notable exceptions (such as the NSW Risk Assessment Regulation 2001) existing laws and guidance material on worker involvement largely presume a permanent work arrangement between employer and employees and as such take little or no account of the presence of subcontractors, leased or temporary workers. The laws only refer to employees or are worded in ways that provide scope for ambiguity (for example failing to specify when subcontractors should be included in workplace health and safety committees). In jurisdictions like Victoria with provisions deeming subcontractors or their employees as employees of the principal employer it might be presumed that this means they are entitled to be involved in committees and other participatory mechanisms. However, in at least some (like South Australia) if not all of these jurisdictions this is not actually the case because courts have interpreted deeming as only applying to the general duty provisions (I wish to acknowledge Richard Johnstone for alerting me to this).

Further, there has been a failure to recognise that workplace size thresholds for establishing a committee or the appointment of a HSR (both de facto and de jure) represent a more critical limitation on worker involvement as downsizing, outsourcing and other practices reduce the number of workers in particular workplaces. These shifts have been compounded by declines in union density (as unions provide critical logistical support to HSRs) while also making it more difficult for unions to maintain a presence in existing workplaces (something exacerbated by changes to federal industrial relations legislation since 1996).

Perhaps equally important there appears to have little systematic monitoring or enforcement of compliance with regulatory requirements in relation to worker involvement. Regulators recognised the problems posed by extensive use of subcontractors (as have some employers) in terms of obtaining representative input on committees from workers and examples were also cited where temporary workers were grossly under-represented on committees (there are clear logistical incentives for this situation to arise). Available evidence suggests, the problems precarious employment poses for worker representation under existing OHS regulatory regimes just described are by no means confined to Australia. These problems pose a potentially serious limitation for systematic OHS management currently being promoted in industrialised countries because it weakens if not eliminates independent vetting (beyond that carried out by inspectors) and feedback loops (Saksvik and Quinlan, 2003). Organisational restructuring (including movements of key personnel) may have much the same effect on information flows and feedback loops as the Longford incident clearly illustrated.

In the light of the latter point a critical question is the extent the presence of large proportion of contingent workers may discourage the establishment of a workplace OHS committee even where OHS legislation formally mandates their establishment. Although there is no systematic research into this Australian Workplace Industrial Relations Survey (AWIRS) data for 1995 provides some indirect evidence of the impact of contingent work arrangements on participatory mechanisms. This revealed that 47% of workplaces with between 0 and 25% part-timers had joint consultative committees (including workplace OHS committees) compared to just 30% of workplaces where more than 25% of the workforce was part-time (Markey et al, 2001).

Compliance Strategies, Monitoring and Enforcement

One immediate problem posed by some changes in work arrangements (most notably the growth of home-based work and smaller, remote or transient workplaces) is that they add to the inspectorate's difficulty in identifying/locating and monitoring workplaces (for an earlier reference to this problem see Legislative Council Standing Committee on Law and Justice Inquiry into Workplace Safety 1998). Government OHS agency staff interviewed repeatedly referred to the matter. For example, a senior officer in one jurisdiction referred to the large number of informal home-based workplaces that could not be located let alone inspected and were therefore effectively beyond the scope of OHS legislative. While informal home-based work is by no means a new phenomenon there can be little doubt it has grown as part of the general increase in outsourcing, small business and home-based work.

The problem of locating workplaces has been arguably exacerbated by the progressive move to dispense with workplace registration requirements in most jurisdictions. An exception, Queensland has retained workplace registration and charges a fee for registration based on the number of *employees at the workplace*. However, as employers have made increasing use of subcontractors or workers at *other* workplaces to undertake tasks for them this has diminished the level of fees chargeable (as the funds recovered go to consolidated revenue rather the Division of Workplace Health and Safety this loss does not directly affect the Division's funding but does affect the overall revenue base of the government). Queensland was not the only jurisdiction to see the move away from compulsory workplace registration as a problem in the light of the growth of contingent work arrangements. Indeed, staff in a majority of jurisdictions raised it as a problem.

Quite apart from the question of locating workplaces there is the issue of undertaking adequate inspection activities. The proliferation of home workplaces and other small work-sites creates a logistical nightmare for inspectors (quite independent of any rules governing entry into homes being used as workplaces). The sheer number and transient nature of some these workplaces is quite beyond the resources of most inspectorates even in terms of a selective sampling of home-based workplaces (other than perhaps those where a number of workers are being employed). Referring to some of these problems, a regulatory officer (from one of the smaller jurisdictions) observed:

...piecework stuff is harder to pick up...you don't even know where they are and they are unlikely to be knocking on the door to say they don't think their working in a good OHS environment because they tend to be more desperate about just having some work.

The growth of flexible work arrangements has compounded demands on inspectors already under challenge to adapt to the move away from prescriptive OHS standards to process and performance standards in OHS legislation over the past 20 years. Senior regulatory agency staff in a number of jurisdictions expressed the view that inspectors lacked the training and confidence to deal with them, especially older inspectors with a predominantly trade background. The regulatory policy adviser in one jurisdiction observed:

The aspect that has come through to us recently has been the fact that inspectors don't feel confident to deal with issues relating to things like stress or issues relating to things like home-based work. All these new concepts and all this stuff to do with subcontracting and contracting, when you look at the age profile of the people we've got in the inspectorate, for instance, they're used to the olden days...they inspected for certain specific regs, they went out with their rule book.

In addition to the issue of inspectoral understanding and confidence there is also problem in relation to sheer complexity. Increased use of subcontractors, multi-employer worksites, identifying who is the employer and the like are rendering inspectoral investigations and prosecutions of specific incidents increasingly complex. Representatives from one jurisdiction (Queensland) referred to the inordinate amount of time spent on company searches in order to identify the employer and such problems are extremely unlikely to be confined to this jurisdiction. Another jurisdiction (Tasmania) referred to not-unrelated problems connected to the transmission of business or business succession in subcontracting arrangements in some industries. Regulatory staff made reference to the contract cleaning industry where they believed the turnover of contracts (and engagement of new staff) was used to avoid accumulated industrial entitlements (like long service leave), with the new successful bidder often involving key principles from the previous contractor. Though this is primarily an issue of securing industrial relations entitlements (and such practices are not new, having been identified more than 20 years ago), practices that are conducive to increased workforce volatility can have adverse effects in terms of OHS and access to workers' compensation. One effect directly relevant to OHS (and workers' compensation too) is the problem of phoenix companies who past record of OHS breaches (a critical factor in the determination of penalties by courts) is effectively disguised by the legal reconfiguration of a new corporate entity. In some industries, such as construction, this practice has been seen as a serious problem (for evidence of such a case entailing the death of a 17 year old building worker brought before Cole Royal Commission see *CCH Latest OHS Headlines* 7 June 2002).

Notwithstanding the logistical problems already identified, OHS agencies in Australia have increasingly sought to target and publicize their prosecutions in ways that would both clarify legal obligations and have a deterrent effect. With regard to subcontracting and leased workers in particular, this activity appears to have had some effect (in terms of awareness raising and the activities of individual employers and industry associations). For example, there are a growing number of cases where both the leasing firm and the host employer have been fined substantial sums as a result of serious incidents. At the same time, this has raised questions about whether large labour-leasing firms can actually undertake adequate risk assessment for the diverse and shifting array of workers they provide. Further, rapid turnover amongst small leasing firms and contractors in some industries considerably weakens the 'learning' effect of these prosecutions. In an admittedly extreme case, a new and small leasing firm managed to help 'kill' the first worker it supplied. While both it and host employer were prosecuted and the former went out of business numerous others will take its place entering the industry equally ignorant of their OHS responsibilities.

In some areas, such as downsizing, prosecutions are virtually unknown because it has been put in the 'too hard' basket in terms of proving a case (although prosecutions may be launched using other grounds). Some targeted and publicized prosecutions are beginning to occur in relation to directly engaged temporary workers (ie as distinct from leased workers discussed above), especially younger workers, and with regard to homecare workers and telecall centers. But, by and large home-based work has not been the subject of active enforcement. Overall, enforcement is even patchier in terms of coverage than the production of codes and guidance material. Again, from what could be deduced from an internet-based search of agency and related web sites the situation appears to be similar in Europe and North America.

Finally, it should be noted that in recent years Australian agencies, like their overseas counterparts have increasingly promoted (both by mandate and persuasion) systematic OHS management whereby employers are encouraged to establish proactive and risk-assessment-based internal responsibility regimes to manage their OHS. As discussed elsewhere (Quinlan and Mayhew, 2000: 197), the growth of contingent and insecure work may be antithetical to this approach because:

- it reduces the number of workers in large organisations where this approach is most applicable;
- increases the number of workers in isolated and inadequately planned work settings;
- makes it more difficult to address insidious health risks such as hazardous substances;
- creates enclaves of workers in organisations whose incorporation into OHSM is problematic;
- encourages intense competition amongst workers and employers that may make systems less attractive; and
- weakens the level and quality of worker input into systems, especially vetting and feedback.

While there is evidence of systematic approaches being implemented in small business or in industries with extensive subcontracting (Saksvik and Quinlan, 2003) these appear to be as yet exceptional cases. Agencies may adopt a two system approach (see Gunningham and Johnstone, 1999) to address this but as yet few agencies have followed this path.

Relationships to other legislation

Beyond the issues just identified brief reference should be made to particular issues that arise as a result of the relationship of job security and contingent work to other legislation.

First, inconsistencies in key definitions ('worker', 'employee', 'subcontractor', 'volunteer' and 'family helper') and coverage provisions under OHS, workers compensation, industrial relations and even taxation legislation have contributed to confusion of the responsibilities and entitlements under the former. This links to an earlier point made in relation to business law, the corporate veil and the 'finessing' of legal categories to shift costs or avoid regulatory requirements (for a recent examination of some of these issues see Owens 2002 and Stewart, 2002).

Second, the growth of contingent work arrangements has reduced the coverage (both formal and effective) of workers compensation regimes. Regulators interviewed readily acknowledged this problem (see also Quinlan and Mayhew, 1999). Aside from the cost shifting implications (to social security and Medicare) it means that workers compensation claims - the major source of occupational injury and illness data in Australia including the National Data Set (NDS) is becoming an increasingly partial and potentially unreliable source upon which to base preventative activities. This applies not only to industries where subcontracting is widespread (such as trucking, taxis, home-based work and contract cleaning) but also where extensive use is made of leased workers or temporary workers. Leaving aside attempts to expand workers compensation coverage, OHS agencies have used a range of additional data sources including targeted industry/workplace audits and hospital admission records (specially adapted). An option to further enhance this is discussed below.

RECENT REGULATORY RESPONSES

Government agencies responsible for OHS have responded to most apparent of the challenges just identified in a number of ways. In general, the response of Australian government agencies appears broadly similar to initiatives in other countries although the nature of regulatory regime in particular

countries as well as other institutional factors (such as the relationship between the social partners) has clearly influenced the character of responses.

With regard to prevention a major response by OHS agencies has been to start devising or revising codes and guidance material. New generic or industry specific guidance material on subcontracting, labour leasing, telecall centers and (to a lesser extent) temporary workers and home-based work have been developed over the decade (especially the last five years) and existing material has been revised to make reference to these arrangements. Virtually every Australian agency has also embarked on a major initiative in relation to small business and young workers in recent years, and with regard to the latter the importance of work arrangements has been increasingly recognised. In launching an employment rights/OHS guide for young workers jointly developed by WorkCover NSW and the NSW Department of Industrial Relations and to be distributed via schools, TAFE colleges, etc Special Minister for State and Minister for Industrial Relations, John Della Bosca, observed (*CCH OHS Alert*, 22 August 2002):

We've seen great changes in the Australian workplace in recent years – new industries, the expansion of casual employment, new work practices and relationships. These changes impact most strongly on young people, and make it more important than ever for those starting work to bring with them a solid understanding of what their rights are, and how to protect them.

The guidance material just referred to has been developed and distributed in a variety of formats (documentary, electronic and campaign-based), utilizing the knowledge of key parties and involving networking with comparable agencies (including those in other countries). While it gives increasing recognition to psychosocial and work organisation issues in most cases the guidance provided is still informed by an only limited understanding of the key risk factors associated with these work arrangements. Further, some areas like downsizing/job insecurity and multiple jobholding are yet to be addressed in any meaningful way.

In some industries such as construction and road transport particular packages have been developed to improve OHS management including setting minimum standards of risk assessment and work planning for subcontractors and small operators, with the active collaboration of industry and unions. Examples include the small building safe work plan initiative in Queensland and the MOU/Subbiepak initiative in NSW. These have enjoyed a measure of success, in part due to the support of the social partners, and in part due to the regulatory impetus of enforcement incentives. Several of these initiatives involve a multi-agency/multiple regulatory approach (covering OHS, industrial relations and workers' compensation) and inter-jurisdictional cooperation, a notable example being recent measures to improved OHS amongst seasonal agricultural workers working a succession of jobs on the east coast 'harvest trail' stretching from Queensland through NSW to Victoria and South Australia.

More generally, agencies are seeking to implement new codes or highlight legislative responsibilities in the context of altered work arrangements. Methods include a mixture of targeted low-level monitoring and enforcement campaigns (involving successive ratcheting up of penalties in the case of non-compliance) and a small number of highly publicized 'big-ticket' prosecutions designed to send a message to key parties (such as host employers and labour leasing firms). With regard to subcontracting and labour leasing (and registered training organisations) in particular there is now a extensive body of prosecutions enunciating the responsibilities of various parties. In the last two years agencies have used targeted and publicized prosecutions to highlight employer responsibilities in relation to direct hire temporary workers, especially where inexperienced young workers are involved. As far as I am aware there have been no prosecutions directly arising out of changes to work processes associated with downsizing and restructuring. The recent small number

of cases where staffing levels and workload issues received consideration (generally in relation to instances of occupational violence) could provide the basis for a move in this direction.

Although agencies became increasingly dependent on workers compensation claims data to shape prevention programs in the 1980s (reflecting in part the trend to put workers compensation and prevention within the same department if not agency) agencies are now making more use of compliance audits to detect problems. Several are also using hospital-based data to supplement information on categories of work where workers' compensation claims are seen to be less reliable (such as construction and road transport). As Pascal Paoli's paper indicates, in the European Union a large survey (over 20,000 respondents) conducted every five years provides valuable information on work intensity, bullying/harassment and a wide range of issues poorly tracked in official OHS outcome statistics (for recent survey results see Paoli and Merllie, 2001). This survey is well attuned to changes in work arrangements and deserves serious consideration in the Australian context (advantages include the ability to benchmark results against other countries using a comparable base and to track changes over time).

Moves are under way by several jurisdictions to address defects in the legislation relating to subcontracting arrangements and other issues like those relating to worker involvement are starting to be examined. Unions have pressed for the introduction of roving safety representatives, along the lines of the Swedish system (see Frick and Walters, 1998) and currently being given a limited trial in the UK, to provide worker representation in smaller workplaces and where subcontractors are involved. This proposal has not received a positive response thus far. Overall, agencies are shying away from legislative change, in part because they do not view major change to the existing framework as essential and in part because the existing political climate in Australia (as in many other countries) is extremely hostile to additional regulatory controls that interfere with business and markets.

It is fair to say that the existing legislative framework provides opportunities for OHS inspectorates to address overlapping webs of contractual obligations that are yet to be fully exploited (the laws of several jurisdictions provide a particular opportunity here in relation to franchise arrangements, Johnstone, 1999). State and federal governments could also take more action to impose and enforce minimum standards in their tender requirements but like the USA (where last minute efforts by the Clinton administration to beef up implementation of the federal Fair Labour Standards Act have been stymied. Johnstone et al, 2001) but this option has been little exercised. This highlights the dominance of neo-liberal discourse in policy-settings and the problem OHS agencies can have when called on to rectify problems that arguably originate in the policies adopted by government and other agencies (for example hospitals outsourcing the supply of sheets etc from the lowest cost supplier irrespective of their OHS and employment practices).

In terms of more innovative and potentially path-breaking responses, it is worth briefly identifying developments affecting the clothing and road transport industry. The clothing industry strategy is examined in another paper at this conference my comments here are brief. After much community pressure the NSW government responded to the risks to and exploitation of home-based clothing workers (who far outnumber factory based workers) by introducing an integrated legislative and policy package. The 'Behind the Label' strategy addressed the problems posed by an elaborate supply chain of multi-tiered subcontracting where the party exerting most influence (the fashion retailer) was remote from those actually fulfilling the tasks (the outworker) and the intermediary steps afforded ample opportunity for evading wages, hours, OHS and workers compensation legislation. The government used the Industrial Relations (Ethical Clothing Trades) Act to develop a regulatory framework that effectively integrated industrial relations, OHS and workers compensation laws. It established a multi-agency approach to mutually assured standards, with contractual tracking mechanisms and workplace/worker registration (to track the flow of work and

conditions of employment), and using the technique of rebuttable presumption (with regard to disputed wages and workers compensation claims). The aim was to ensure that the top of the supply (mostly fashion houses and retailers) could not escape their legislative responsibilities. To further strengthen this process the package guaranteed union access to information and a role in enforcement as well community involvement. This reform has since been adopted or is under active consideration by other jurisdictions (for an examination see Nossar et al 2003). A similar reform package to deal with OHS in long haul trucking (entailing a multi-signatory and traceable 'safe driving plan' and the establishment of a minimum 'safety' rate covering self-employed drivers) is currently under consideration.

While it is too early to make definitive judgments about their effectiveness, the importance of these strategies is that address the root source of OHS risks in these industries (long hours, low pay and regulatory evasion associated with multi-tiered subcontracting and top-of-the-supply-chain pressure) and combat the techniques of regulatory evasion in a situation where enforcement would otherwise be a logistical nightmare (ie tens of thousands of isolated and, in the case of trucking especially, mobile workers). In so doing, the regulatory strategies have bridged the historical divides between industrial relations, OHS and workers' compensation law that characterize most industrialised countries. While clothing and trucking may be regarded as extreme cases the latter in particular is a pivotal industry and, at the very least, these developments may provide a model for other industries experiencing similar problems (such as construction, couriers and some other service activities) if not more generally.

Finally, a number of initiatives of workers compensation agencies are having positive effects on prevention (including discouraging evasive practices) deserve mention. These include the establishment of a separate raft of premiums for the labour hire industry (thereby minimising opportunistic cost shifting) and the use of advanced data mining and workplace auditing techniques to identify and combat evasion or underpayment of compensation premiums. Other examples include increasing information provision to vulnerable and at risk workers as well as establishing legal chains of responsibility to negate the use of multi-tiered subcontracting to avoid workers compensation premium liability. Finally, but not least there is growing inter-agency collaboration (both inter- and intra-jurisdiction) to develop more strategic responses to areas of mutual concern with regard to work arrangements.

In general, agency responses to the challenges posed by changing work arrangements are, in the main, logical and practical. Some measures are genuinely innovative. Looking Australia-wide it can be argued that existing response are far from comprehensive, with omissions both in terms of regulations, codes and guidance material and implementation practices. Many interventions do not get at the root cause of the problems they seek to address and cannot address some aspects (such as the difficulty of identifying disease in industries where there is considerable job churning). To be fair, a number of very positive developments need to be acknowledged in terms of moving to a more comprehensive and strategic response. First, the various OHS agencies established a national labour market change network (including NOHSC), which met in 2001 to both evaluate the extent of the problem and to develop a planned response, with individual agencies agreeing to take the running on a number of issues (such as developing guidance material on labour hire and call centres). In Victoria the OHS agency has initiated detailed research into the labour hire industry while NSW completed a taskforce inquiry into the issue several years ago (New South Wales Labour Hire Task Force 2001).

Second, the project which forms the basis for much of the information in this paper was commissioned by WorkCover NSW to provide insights into both the OHS and workers compensation issues arising from labour market change and evaluate the array of remedies that

might be used to address problems. This project received the fullest cooperation of every Australian jurisdiction. In keeping with its objectives WorkCover has prepared a matrix of responses to better address the challenges posed by flexible work arrangements.

Further, it needs to be recognised that OHS agencies are being asked to resolve a range of problems, some of which are the direct product of government policies or the failure of policy and protection in other areas. In general flexible work arrangements have been introduced and promoted without any attempt to assess their broader social policy and health effects. As some considerable externalities are revealed a small number of government bodies, such as OHS agencies, are being asked to remedy the defects. Whether more fundamental questions such as the appropriate mix of different types of work arrangement to maximise community productivity and welfare need to be considered is largely ignored.

Home-based work, telework, mobile/transient work and even downsizing constitute a logistical nightmare in terms of inspectoral resources. To be anywhere near effective at a broad level using these methods would require more resources than most agencies could even dream of having at their disposal. Further, with several notable exceptions, the responses are confined, failing to appreciate increasingly important interconnections between laws regulating business/commerce/trade, industrial relations and workers compensation as well as OHS. So long as laws permit the 'corporate veil' and other evasive devices, OHS regulators will have increasing difficulty meeting the challenge of altered work arrangements. The weakening of unions and collective negotiation (a trend in many industrialised countries) and other statutory protections is undermining the effectiveness of OHS regimes. In some instances OHS regulators are being asked to resolve issues (such as the OHS risks associated with excessive working hours or low pay) because neo-liberal policy has caused industrial relations to vacate the field. Unions provide logistical support to participatory processes and protection for workers to speak out on OHS more generally. The weakness if not complete absence of unions exacerbates the vulnerability of the precariously employed and, of course, it is the growth of these very work arrangements has contributed to union decline.

There are some promising options, such as the explicit regulation of supply chains using contract-tracking mechanisms, licensing/registration, guaranteed union and community vetting, and integrated multi-agency enforcement regimes. Regulators today are slowly rediscovering the importance of workplace registration/licensing that was so crucial to their counterparts 100 years ago in dealing with work arrangements then. It is no small irony that some of these work arrangements are similar (such as home-based pieceworkers and temporary workers) to those found today notwithstanding the rhetoric of the new economy (Quinlan et al 2001a). Minimizing the entitlement gap between permanent and temporary workers (a regulatory strategy pioneered by France) represents another more broad ranging option that afford immediate protection while also possibly discouraging the use of such arrangements. The effectiveness of this strategy relies on ensuring that the formal legal entitlements of temporary workers are actually realized and in practice this has proved problematic. Evidence from a number of countries suggests the entitlement gap between contingent and non-contingent is wider in practice than formal statutory entitlements would suggest (Quinlan, 1999) and thus more effective enforcements measures would seem a pre-requisite for this approach. At the same time, effective long-term solutions will require extending these devices in conjunction with other measures. As this paper has tried to indicate, the existing regime for protecting employment standards, including OHS, may need to be reconfigured at both national and international level (given international supply chains, the capacity to move even some services 'offshore' and competitive trade pressures). This is likely to require a more integrated approach rather than policy initiatives within each of the formally separated regulatory spheres of industrial relations, OHS and workers compensation. The minimum standards net may also have to be extended to take more explicit consideration of practices that promote job insecurity and other

risks, such as downsizing and to extend worker rights to collective representation. With regard to the latter, the Swedish system of roving or regional health and safety representatives deserves wider consideration as an option worth emulating.

Further, the de facto subordination of social protection to business, commerce and trade regulation and standards that has come about through the pursuit of neo-liberal policies by industrialised countries needs to be questioned. A number of these laws and policies are not simply inconsistent with the establishment of effective protection (for example, by pre-empting the establishment of minimum payments to some categories of workers), but provide taxation and other incentives to use categories of work arrangement that evade, bypass or weaken regulatory protections. These policies have developed in the context where, effectively, neither individual organisations nor policymakers have factored in any recognition of the externalities associated with such arrangements (of which OHS is only one).

It is essential that the nature and quality of jobs becomes a central issue of national and multinational policy development, not an afterthought. A recent assessment by Gallie (2003) found that the Scandinavian focus on quality of working life had achieved tangible outcomes. The Quality of Work debate within the European Union is especially important in terms of extending a policy agenda where an integrated strategy to promote productive, satisfying and healthier jobs can be developed, including informed assessment of the impact of different types of flexible work arrangements. Promoted by countries under a series of presidencies (beginning with Sweden) a conference in Brussels in 2001 provided ample evidence that such an approach was both needed and practical. The Foundation for Improving Living and Working conditions produced a series of work quality indicators (including occupational health and safety) that took account of changing work arrangements and could be meaningfully applied by EU members (as the Finnish presentation to Brussels demonstrated). The quality of work debate in Europe recognises that only when the promotion of higher quality work becomes a critical policy objective of governments can we expect to see dramatic and sustained improvements in OHS. Unfortunately this development has not proceeded as far might have been hoped in the last two years. Speaking from an Australian perspective, I hope this process regains momentum and other countries like my own will look to engaging this agenda. Only by such an approach can we hope to achieve long-term developments in the nature of work where the interests of all groups have had input and the full costs and benefits of various types of work arrangement can be properly appraised.

CONCLUSION

As the review of international research demonstrates, there is now substantial if not compelling evidence that at least some flexible work arrangements and organisational restructuring/job insecurity pose a serious threat to the maintenance of OHS standards. The risks associated with these work arrangements represent a particularly difficult challenge for regulatory agencies. They require a more explicit recognition of work organisation issues than inspectorates have been accustomed to, they are logistically demanding and they entail a weakening (if not outright evasion) of the statutory frameworks upon which existing regimes are based. Australian evidence shows, government agencies responsible for prevention (and workers compensation/rehabilitation too for that matter) are responding with an array of measures. Many of these are valuable and a few (like regional safety and health representatives and the multi-agency and integrated regulatory response to home-based clothing workers and truck-drivers are genuinely innovative. As yet, most governments and inspectorates in Australia have yet to devise a comprehensive or strategic response, although several, especially NSW, are rapidly moving in this direction. There is an urgent need to develop responses that negate the capacity to evade existing standards, and that ensures effective protection of the rights of contingent workers. This will entail moving beyond the regulatory spheres of OHS and workers compensation to entering the domains of business and

taxation law, industrial relations and labour market law and policy at the national level as well as creating a close nexus between minimum labour standards and trade policy at the international level. Finally, more than simply looking to protection like their counterparts in Europe governments in Australia will need to engage more proactively in shaping the types of jobs they wish their citizens to have now and in the future.

REFERENCES

- Aronsson, G. (1999)., Contingent Workers and Health and Safety, *Work, Employment and Society*, 15(3) 439-460.
- Bohle, P., Quinlan, M. & Mayhew, C. (2001). 'The Health and Safety Effects of Job Insecurity: An Evaluation of the Evidence' *Economic and Labour Relations Review*, 12(1) 32-60.
- Bureau of Labor Statistics (1995a). *New Data on Contingent and Alternate Employment*, Report 900, US Department of Labor, Washington DC.
- Bureau of Labor Statistics (1995b). *New Survey Reports on Wages and Benefits for Temporary Help Service Workers*, US Department of Labor, Washington DC.
- Burgess, J. & de Ruyter, A. (2000). 'Declining Job Quality in Australia: Another Hidden Cost of Unemployment', *Economic and Labour Relations Review*, 11(2), 246-269.
- Burke, R. and Greenglass, E. (1999), 'Work-Family Conflict, Spouse Support, and Nursing Staff Well-Being During Organizational Restructuring', *Journal of Occupational Health Psychology*, 4(4): 327-336.
- Butler, R., Park, Y. and Zaidman, B. (1998), 'Analyzing the impact of contingent work on workers' compensation', *Employee Benefits Practices Quarterly* 4:1-20.
- Campbell, I. & Burgess, J. (2001). 'Casual Employment in Australia and Temporary Employment in Europe: Developing a Cross National Comparison', *Work, Employment and Society*, 15(1), 171-184.
- CCH Latest OHS Headlines* 7 June 2002
- CCH OHS Alert*, 22 August 2002
- Claussen, B., Bjorndal, A. and Hjort, P. (1993)., 'Health and re-employment in a two year follow-up of long term unemployed', *Journal of Epidemiology and Public Health*, 47: 14-18.
- De Grip, A., Hoevenberg, J. & Williams, E. (1997). 'Atypical employment in the European Union', *International Labour Review*, 136(1), 49-71.
- EFILWC, (1997)., *The Social Implications of Telework*, European Foundation for the Improvement of Living and Working Conditions, Dublin.
- EFILWC, (2001), *For a better quality of work: European Union Presidency Conference, Brussels 20-21 September 2001 Summary*, European Foundation for the Improvement of Living and Working Conditions, Dublin.
- European Agency for Safety and Health at Work (2002), *Research on Work and Health: Research on changing world of work – working paper*, Bilbao.
- Ferrie, J. (1999), 'Health consequences of job insecurity' in J. Ferrie, M. Marmot, and E. Ziglio (eds)., *Labour market changes and job insecurity: a challenge for social welfare and health promotion*, WHO Regional Publications, European Series No.81.
- Frick, K. and Walters, D. (1998), 'Worker representation on health and safety in small enterprises: Lessons for a Swedish approach', *International Labour Review*, 137(3): 367-389.
- Gallie, D. (2003), 'The quality of working life: Is Scandinavia different?', *European Sociological Review*, 19(1): 61-79.
- Gunningham, N. and Johnstone, R. (1999), *Regulating Workplace Safety: Systems and Sanctions*. Oxford University Press, Oxford.
- Hipple, S. (2001). 'Contingent work in the late-1990s', *Monthly Labor Review*, 124(3), 3-27.

- Johnstone, R. (1999), 'Paradigm Crossed? The Statutory Occupational Health and Safety Obligations of the Business Undertaking', *Australian Journal of Labour Law* 12:73-112.
- Johnstone, R., Mayhew, C. and Quinlan, M. (2001). "Outsourcing Risk? The regulation of OHS where contractors are employed" *Comparative Labor Law and Policy Journal* 22(2&3): 351-93.
- Legislative Council Standing Committee on Law and Justice, (1998)., *Final Report of Inquiry into Workplace Safety*, Parliament of NSW, Sydney.
- Lowe, G. (2001). *The Quality of Work: A People-Centred Agenda*, Oxford University Press, Don Mills ON.
- Markey, R., Hodgkinson, A. Kowalczyk, J. and Pomfret, S. (2001), 'Gender, Casualisation and Employee Participation in the Workplace', paper to IIRA 6th European Congress, Oslo.
- Neuman, J. and Baron, R. (1998), 'Workplace violence and workplace aggression: Evidence concerning specific forms, potential causes and preferred targets', *Journal of Management*, 24(3): 391-419.
- New South Wales Labour Hire Task Force (2001), *Final Report*, Department of Industrial Relations, Sydney.
- NIOSH, (1996), *Criteria for a Recommended Standard: Occupational Noise Exposure – Revised Criteria*, US Department of Health and Human Services, Cincinnati.
- Nossar, I., Johnstone, R. and Quinlan, M. (2003) 'Regulating supply-chains to address the occupational health and safety problems associated with precarious employment: The case of home-based clothing workers in Australia', submitted to journal.
- Owens, R. (2002), 'Decent Work for the Contingent Workforce in the New Economy', *Australian Journal of Labour Law*, 15(3): 209-34.
- Paoli, P. and Merllie, D. (2001), *Third European survey on working conditions 2000*, European Foundation for the Improvement of Living and Working Conditions, Dublin.
- Pennings, F., van Rijs, A., Jacobs, A. and de Vries, H. (1996), *Telework in the Netherlands: labour law, social security and occupational health and safety aspects*, Hugo Sinzheimer Institute, Amsterdam, 69-105.
- Quinlan, M. (1999), 'The Implications of Labour Market Restructuring in Industrialised Societies for Occupational Health and Safety', *Economic and Industrial Democracy* 20(3): 427-60.
- Quinlan, M. (2001). *Report of Inquiry into Safety in the Long Haul Trucking Industry*, Motor Accidents Authority of New South Wales, Sydney. Available at <http://www.maa.nsw.gov.au/roadsafety36reports.htm>
- Quinlan, M. (forthcoming). *Developing strategies to address OHS and workers' compensation responsibilities arising from changing employment relationships*, Research project commissioned by the WorkCover Authority of New South Wales, Sydney.
- Quinlan, M. & Mayhew, C. (1999)., 'Precarious Employment and Workers' Compensation', *International Journal of Law and Psychiatry*, 22(5&6) 491-520.
- Quinlan, M. & Mayhew, C. (2000). 'Precarious Employment, Work Re-Organisation and the Fracturing of OHS Management' in K. Frick, Jensen, P., Quinlan, M. & Wilthagen, T. eds. *Systematic Occupational Health and Safety Management: Perspectives on an International Development*, Pergamon, Oxford, 175-198.
- Quinlan, M., Mayhew, C. & Bohle, P. (2001)., 'The Global Expansion of Precarious Employment, Work Disorganisation, and Consequences for Occupational Health: A Review of Recent Research', *International Journal of Health Services*, 31(2), 335-414.

- Quinlan, M., Mayhew, C. & Bohle, P. (2001a) "The Global Expansion of Precarious Employment, Work Disorganisation and Occupational Health: Placing the Debate in a Comparative Historical Context", *International Journal of Health Services*, 31(3):507-536.
- Quinlan, M & Bohle, P (in press) "Contingent work and safety" in Barling, J. & Frone, M. *The Psychology of Workplace Safety*, American Psychological Association.
- Saksvik, P. and Quinlan, M. (2003), "Regulating Systematic Occupational Health and Safety Management: Comparing the Norwegian and Australian Experience", *Relations Industrielles*, 58(1):81-107, 2003.
- Shannon, H., Woodward, C., Cunningham, C., McIntosh, J., Lendrum, B., Brown, J. and Rosenbloom, D., (2001), 'Change in General Health and Musculoskeletal Outcomes in the Workforce of a Hospital Undergoing Rapid Change: A Longitudinal Study', *Journal of Occupational Health Psychology*, 6(1): 3-14.
- Shannon, H. and Lowe, G. (2002), 'How Many Injured Workers Do Not File Claims for Workers' Compensation Benefits?', *American Journal of Industrial Medicine*, 42:467-73.
- Stewart, A. (2002), 'Redefining Employment: Meeting the Challenge of Contract and Agency Labour', *Australian Journal of Labour Law*, 15(3): 235-76.
- Synthesis Report. (1997), *Temporary work, accident prevention and security: social dialogue and training techniques*. Italian Ministry of Labour and Social Insurance, Rome.
- Thebaud-Mony, A. (2000), *L'industrie nucléaire: Sous-traitance et servitude*, INSERM Université Paris-XIII, Bobigny.
- Walters, D. (1997), 'Preventive Services in Occupational Health and Safety in Europe: Developments and Trends in the 1990s', *International Journal of Health Services* 27(2):247-71.
- Walters, D. (2001), *Health and Safety in Small Enterprises: European Strategies for Managing Improvement*, PIE-Peter Lang, Brussels.
- WCB of BC, (1997), *Determining who is a worker under the Workers' Compensation Act: A Briefing Paper*, Workers' Compensation Board of British Columbia report to Royal Commission on Workers' Compensation.