

**THE IMPLICATIONS OF LABOUR MARKET
RESTRUCTURING IN INDUSTRIALISED SOCIETIES
FOR OCCUPATIONAL HEALTH AND SAFETY**

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THE IMPLICATIONS OF LABOUR MARKET RESTRUCTURING IN INDUSTRIALISED SOCIETIES FOR OCCUPATIONAL HEALTH AND SAFETY

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INTRODUCTION

Significant changes to employment structures within industrialised countries over the past 20 years are likely to have profound ramifications for occupational health and safety (OHS). There has been some awareness that changes in the level of employment within particular industries over time, notably the decline in employment within heavy manufacturing, might have beneficial effects in terms of reducing the number of workers exposed to long standing hazards. There have also been suggestions that the aging of the population will lead to a more experienced and safer workforce. However, there has been little systematic investigation of how changing employment patterns are impacting on OHS and how different labour market trends are intersecting. This paper examines a number of these trends and then looks at the available evidence on their implications for OHS. It is argued that changing labour market structures is often associated with forms of work organisation which are more hazardous. The growth of contingent forms of work also makes measuring the incidence of injury and disease more difficult and requires an urgent rethinking of regulatory strategies. The next section of the paper maps the changes in labour market structures while the following sections examine the OHS implications of these changes.

RESTRUCTURING THE LABOUR MARKET AND RESTRUCTURING THE WORKPLACE

Over the past 20 years the workplace and labour markets of industrialised societies have undergone profound change. Some of these changes are the culmination of trends underway throughout the postwar period while others are more recent. Since even more recent changes have occurred in a gradual but cumulative manner there has been no crisis or dramatic shift to draw the attention of policy-makers and researchers. Further, what attention has been given

them has tended to focus on one or two trends in isolation, thereby losing sight of critical interconnections and combinant effects.

Overall, these changes amount to a significant growth in fractured, volatile and contingent forms of employment and an associated shift in forms of work organisation. The changes which are about to be described have been experienced by almost all industrialised countries although there are sometimes wide variations in the degree to which countries have experienced a specific shift, say for example a growth in part-time employment.

Decline in Permanent Full-Time Employment and Growth in Casual/Temporary and Part-Time Employment

One of the most significant changes to occur over the past two decades has been the decline in permanent full-time jobs and the growth of part-time, casual/temporary employment. Table 1 provides a summary of some of these changes in the UK in the decade from 1984. As can be seen, while the pattern has varied across industries, there has been an overall decline in permanent full-time employment and an increase in temporary and self-employed workers.

Table 1: United Kingdom - Incidence of part-time, temporary and self-employment by industry, 1984-1995

	Percentage of employment ¹ in the industry that is:							
	Full-time permanent employees		Part-time permanent employees		Temporary employees (full-time or part-time)		Self-employed (part-time or full-time)	
	1984	1995	1984	1995	1984	1995	1984	1995
Agriculture, fishing etc	37	34	6	7	5	4	51	55
Energy and water supply	93	85	3	3	4	10	1	2
Mineral extraction etc.	91	87	4	4	3	5	2	4
Metal goods, engineering, vehicles etc.	91	86	4	4	2	5	3	5
Other manufacturing	79	79	11	9	4	5	6	7
Construction	62	47	4	3	5	5	30	45
Distribution, hotels and catering, repairs	48	47	27	33	7	6	17	14
Transport and communications	84	75	4	7	2	5	9	13
Banking, finance, insurance etc.	72	67	12	11	4	7	12	15
Other services	61	57	26	26	7	10	6	8
All industries:	67	62	16	18	5	7	11	13
Number ('000s)	15,890	15,719	3,772	4,669	1,236	1,798	2,694	3,355
Change 1984-1995	-171		+897		+562		+861	

¹ Excluding participants in government work-related training programmes.

Row totals may not add up to 100% because of rounding

Source: UK Labour Force Survey Cited in Health and Safety Commission, (1996:15)

In order to better understanding of these shifts, including the underlying reasons and the different experiences of particular countries, it is advantageous to look at a number of specific trends in turn.

Decline in Permanent Full-Time Employment and Labour Shedding

Since the early 1980s if not before one of the most significant changes in the labour market within many industrialised societies has been a decline in the proportion of permanent full-time employment. As Stanworth and Stanworth (1997:43-4) observe macro-statistics indicate a steady decline in the proportion of workers in full-time permanent employment and this decline has been linked to changes to employers' labour use strategies, giving rise to debates over the 'flexible firm'. In the decade to February 1997 Australia Bureau of Statistics data indicated that the number of men working in full-time jobs had declined from 70.4% to 67.7% (during the same period the number of women holding full-time jobs remained steady at 32% despite a significant expansion in the female workforce). In the USA almost 80% of those who worked at some point during 1995 were employed full-time, a share which has been trending down since the 1960s due to a decline in full-time employed males while the proportion of females with full-time work has remained stagnant. A considerable gap remains. Just over 86% of males had held full-time jobs compared to only 70.3% of women. Women remained less likely to have worked year-round in either a full-time or part-time capacity (67.6% compared with 76% for males) although the gap had narrowed (Bureau of Labor Statistics, 1996).

The decline in full-time permanent jobs has also affected Japan. So-called lifetime employment - always restricted to males in large corporations and underpinned by an extensive subcontracting system of small businesses employing women, older workers and casual labourers - has weakened over the last decade, in tandem with an increase in part-time work (Takahishi, 1997:55-66 and Chalmers, 1989). By 1993 average job tenure for males in Japan was comparable to a number of EU members (notably Germany) while the average job tenure of Japanese women was below most EU countries (a notable exception being the UK) but still higher than the US (Takahishi, 1997:60). Takahishi noted that job changes, job transfers and pressured early retirement had become the norm for lifetime employees over 50 years of age. Workers without lifetime jobs enjoyed little regulatory protection and Takahishi argued there was need for regulatory limits on employers ability to reduce hours, especially in smaller firms and to '...protect women, older workers and young workers who are at greatest

risk' (1997:55). As in other countries, a number of Japanese studies like Takahishi's point to the critical role of corporate employment practices in driving significant labour market changes.

Takhishi's reference to average job tenure raises another aspect of the shift away from permanent employment which is not fully captured by the rather crude permanent/temporary divide. This is that the growth of greater insecurity and volatility within the job market which means that even some jobs that look permanent may vanish overnight. Some labour economists have promoted the concept of precariousness to describe jobs combining low pay with high levels of insecurity (Campbell and Burgess, 1997:29). In the USA the median job tenure of males with their current employer declined in almost all age cohorts during the period 1983 to 1996 but the impact on the overall median (4.1 years) was masked by ageing of the workforce (there is a positive association between tenure and age). The significant growth of female labour force participation had little effect on job tenure for women. Between 1983 and 1996 overall median job tenure increased slightly from 3.1 to 3.2 years and the increase was entirely due to a growth in tenure for women aged 35 to 54 years (median tenure declining for all other age groups). This growth was entirely due In particular industries the decline was pronounced, with median tenure for workers in motor vehicles and equipment falling from 13 years in 1983 to 7.8 years in February 1996 (Bureau of Labor Statistics, 1997a).

The decline in full-time employment and job tenure is due, at least in part, to labour shedding, including mass lay-offs, plant closures and outsourcing (which can also be used to shut down entire plants) by large corporations and state agencies, with the US auto industry being a case in point. In the USA Bureau of Labor Statistics (BLS) data reveal a high and ongoing level of mass lay-offs and worker displacement in the 1990s which cannot be ascribed to seasonal or business cycle factors. Between April 1995 and September 1996 the Bureau recorded a total of 7,893 mass lay-offs (or an average of 1,331 per quarter) lasting more than 30 days and involving 1.56 million workers. In the July/September 1996 quarter slack work, contract re-organisation, contract completion and worksite closure accounted for 63% of lay-off events while seasonal work accounted for 27%. Manufacturing accounted for 41% of all lay-off events. The report also noted downsizing following reorganisation and budget cuts in secondary schools (BLS, 1997b). Plant closures can entail regional and international shifts in operations which undermine regulatory controls and union organisation. A recent report on

sudden plant closures in Canada, Mexico and the USA Secretariat of the Commission for Labor Cooperation (1997) reported that of 319 US National Labor Relations Board decisions in relation to actual or threatened plant closures between 1990 and 1995, 275 involved union organising campaigns and 283 involved employer violations. Even if weakening union influence is not a prime aim of plant closures, its effects are unequivocal.

The BLS has also sought to measure worker displacement more generally. Between January 1993 and December 1995 it found that a total of 4.2 million workers were displaced from jobs they had held for at least three years (1.833 million as a result of plant closures). This figure was only slightly lower than that for the preceding two years even though the earlier period included a major recession (1990-91). The greatest level of displacement occurred in manufacturing (29%). Of the 2.7 million displaced workers who found alternative employment by February 1996 about a third suffered a loss of earnings of 20% or more and 500,000 were not able to secure full-time jobs. Further, the survey found that women and older men were significantly less likely to be re-employed (Bureau of Labor Statistics, 1996).

In the United Kingdom major reorganisation, outsourcing and privatisation in the public sector during the 1980s have been associated with a significant decline in total public sector employment which fell by 1.3 million to 5.2 million in the decade to 1995 (Hughes, 1996:373). There is also evidence of an increasing level of redundancies across the economy (discounting peaks during the 1991-2 recession) with total redundancies rising from 144,000 in 1989 to 220,000 in 1995 (Potter, 1996:42). In the USA downsizing under the auspices of the Federal Workforce Restructuring Act resulted in a decline of non-Postal executive branch civilian employment of 230,500 (or 10.5% of the total) between January 1993 and March 1996 (US GAO, 1996:4). Reductions in public sector employment have also occurred at state and local level. In Australia and Canada too, there is evidence of significant reductions in public sector employment which commencing in the 1980s and intensifying in the early to mid 1990s. Privatisation is often associated with a reduction in staff numbers and significant changes to wages and working conditions.

Finally, while labour shedding by large employers is only one factor in the sustained high levels of employment experienced by most OECD countries over the past 20 years it should be noted that this pool of unemployment increases the vulnerability/reduces the bargaining power of workers in the contingent forms of employment described below. Moreover, the

conjunction of declining opportunities for full-time employment, increased job insecurity and unemployment as well changes to regulatory arrangements (directly or indirectly affecting working hours) helps to explain why the long term decline in average weekly and daily working hours has slowed/stalled in many industrialised countries (and even gone into reverse in some cases). This has occurred partly through formal process such as the increasing use of 12 hour shifts as part of the general expansion in shiftwork (and the elimination of overtime in workplace agreements). In the Australia and the USA for example there has been a significant increase in average (full-time) weekly working hours since the late 1980s combined with high levels of unpaid overtime and moonlighting - the simultaneous holding of several jobs (see DIR, 1997 and Bluestone and Rose, 1997). These changes are likely to have consequences for OHS including the re-emergence of fatigue as an issue and has aroused the concern of the British TUC (1996).

Casual/Temporary Work

Partly associated with the decline of permanent full-time employment there has been a growth of temporary waged work. A recent OECD study (1996 cited in Campbell and Burgess, 1997:6-7) of 18 countries (the 12 pre-1995 EU members plus Finland, Sweden, Australia, Canada, Japan and the USA) using a grab-all category of temporary work (fixed-term contracts, agency labour, casual employment, seasonal work and government employment schemes) revealed a diverse pattern but with significant growth since the early 1980s in four countries (Spain, France, the Netherlands and Australia). In Australia the number of casual employees rose from less than 700,000 (or around 13% of employees) in 1982 to 1.6 million (or around 23.5% of employees in 1995. As of July 1996 the figure had climbed to more than 1.8 million and over 26% of total employees (see Table 2 and Campbell and Burgess, 1997:7). The level of temporary employment exceeded all EU members except Spain (33.7%). Other European countries recording a high level of temporary employment by the mid 1990s - mainly made up fixed term contracts - were Finland (13.5%), Sweden (13.5%), Denmark (12%), France (11%) and the Netherlands (10.9%, Campbell and Burgess, 1997:7-8).

As Burgess and Campbell note (1997:9-10) there are both definitional and comparability problems in the collection of this data which means that the OECD findings must be treated cautiously. However, other data sets and the interest of some government agencies in tracking temporary workers are indicative of its importance. In the USA, for instance, a concept of

contingent employment has been developed to encapsulate various categories of insecure employment. A survey undertaken by the Bureau of Labor Statistics (1995) in February 1995 identified 8.3 million independent contractors, two million employees who worked ‘on call’, 1.2 million employees in temporary help agencies, and 625,000 who worked for contract firms providing the worker’s services to one customer at that customer’s worksite. This gave a total of over 12 million workers or almost 10% of the workforce. The BLS defined about half these workers as contingent but admitted its definitional categories were problematic. The BLS survey found that part-time workers made up a disproportionate share of contingent workers and that two thirds of contingent workers would have preferred a permanent job (Similarly, an Australian study 71% of contractors surveyed would have preferred to work directly for a company, Benson, 1996). This provides further evidence that the expansion of less secure forms of employment is not primarily a consequence of worker choice but of a combination of changed corporate employment practices and labour market conditions.

Table 2 Australia: Casual Employees as a Percentage of Employees by full-time/part-time status, 1984-1996

Year b)	Full-time employees		Part-time employees		Total employees	
	casual '000	casual %	casual '000	casual %	casual '000	casual %
1984	277.5	6.2	570.7	62.4	848.2	15.8
1985	287.6	6.3	599.7	61.9	887.3	16.1
1986	325.7	7.0	653.6	63.7	979.3	17.2
1987	331.0	7.1	733.2	64.4	1064.2	18.3
1988	368.9	7.5	784.0	66.4	1152.9	18.9
1989C	323.6	6.3	887.0	68.5	1210.6	18.6
1990	374.4	7.2	897.4	65.7	1271.8	19.4
1991	336.3	6.8	943.7	67.5	1280.0	20.3
1992	353.5	7.4	1061.5	67.7	1415.0	22.3
1993	404.7	8.4	1030.4	67.2	1435.1	22.7
1994	441.3	9.1	1107.8	67.0	1549.1	23.7
1995	482.7	9.5	1170.6	65.8	1653.3	24.0
1996	559.1	10.8	1282.2	67.5	1841.3	26.1

- a) Wage and salary earners in their main job; the population is persons aged 15 and over (except for 1990, when persons aged 70 and over were excluded)
- b) August figures (except for 1991, when the figures are for July)
- c) the figure for total employees includes 102.200 persons whose full-time and part-time status in their main job could not be determined

Source: Campbell and Burgess (1997:21)

It seems clear that differences in economic structure and regulations governing minimum wages, penalty rates, part-time work and other matters (see Dennard, 1996) influence both the extent and character of temporary work in specific countries. In most EU countries the majority of temporary jobs are full-time while in Australia as of August 1996 67.5% of casual

jobs were part-time. While within the EU temporary employment is found across both the private and public sector in Australia it is heavily concentrated in the private sector (see Table 3 and Campbell and Burgess, 1997:20-1). Especially in the EU, temporary work was concentrated in agriculture, construction and some service industries but in those countries experiencing a significant growth it was spreading to all industry sectors (Campbell and Burgess, 1997:22). A 1989-90 EU survey (cited in Campbell and Burgess, 1997:24) found that larger firms were making increased use of fixed-term contracts although the practice was still used more intensively by small firms. In Australia, casual employees are concentrated in smaller establishments. In 1994 casuals amounted to 38.6% of the workforce in workplaces with fewer than 10 employees and these workplaces employed 43.7% of all casuals (ABS 6325.0.40.001, August 1994 cited in Campbell and Burgess, 1997:24).

Table 3 Australia :Casual Employees and Casual Density by Industry, 1994 - 1996

	Casual employees (‘000)	Casual density (%)		
		1994	1995	1996
	1996	1994	1995	1996
agriculture, forestry, fishing	85.6	47.6	47.9	53.9
mining	10.0	9.3	8.7	11.7
manufacturing	159.4	13.3	14.6	15.0
electricity, gas, water	*4.4			
construction	127.2	30.2	28.7	34.4
wholesale trade	75.8	14.5	15.5	17.1
retail trade	457.2	44.0	44.6	44.4
accommodation, cafes, restaurants	191.2	54.4	53.9	56.0
transport and storage	62.9	16.9	19.7	19.4
communication services	12.8	7.5	9.6	8.4
finance and insurance	23.8	6.8	8.3	7.8
property and business service	198.6	26.9	25.2	29.5
government administration and defence	51.2	8.4	8.4	13.8
education	97.3	15.9	17.0	16.9
health and community services	153.8	21.2	19.3	21.5
cultural and recreation services	72.2	44.2	43.3	46.7
personal and other services	57.8	21.4	21.6	24.6
Total	1841.2	23.7	24.0	26.1

* As this estimate has a relative standard error of greater than 25 per cent care should be exercised when using it.

Source: ABS, *Trade Union Members Australia*, August 1994, Product No. 6325.0.40.001, August 1996, Cat. No. 6325.0; unpublished data from ABS *Weekly Earnings of Employees (Distribution) Australia*, August 1995. Taken from Campbell and Burgess, 1997: 23.

In EU countries there is a significant concentration of younger workers in temporary employment, with over 70% of employed teenagers being found in such jobs in France, Germany and Spain. A similar tendency - though not as marked - is found in Australia where 58.7% of 15-19 year olds held casual jobs in 1994 (Campbell and Burgess, 1997:25). Workers

aged 15 to 24 also constituted a disproportionate number (over 40%) of casual part-time workers, with the majority of these being secondary or tertiary students (Campbell and Burgess, 1997:26). The youth component of casual workers in Australia and some other countries has been increased by backpacker tourists arriving with working visas or working illegally during their stay. In 1994 217,200 international backpackers visited Australia and by 1996-7 the number of working visas issued annually had been increased to 50,000 (Joint Standing Committee on Migration, 1996). Backpackers often seek work in areas like fruit-picking, tourism/hospitality, clerical work, push and motor bike couriers and in factories (with the exception of the last employment regulation and union presence is weak in all these areas). In a recent federal government inquiry a number of submissions noted the tendency of backpackers to be exploited or to work below award rates on a cash-in-the-hand basis which avoided tax and because they had no access to social security benefits (Joint Standing Committee on Migration, 1996:S382,405-410,414-7,449).

In Australia there is a significant gap between the employment protection afforded casual and permanent workers - a gap which has widened as a result of shift away from centrally determined awards to enterprise based agreements. Further, the growth of casual employment has created strategic problems for trade unions and weakened their ability to protect the employment conditions of workers generally, but especially casuals (Campbell, 1996:571-99). As in many other countries, unionisation rates amongst casual workers in Australia are significantly lower than those found amongst workers with permanent jobs (see Table 4).

Table 4 Australia: Unionization Rates: Permanent and Casual Employees by Sex (%). August 1994

	Full time permanent	Part-time permanent	Full-time casual	Part-time casual	All employees
Men	43.2	35.5	15.7	14.1	37.9
Women	38.5	39.8	9.9	15.3	31.3
Persons	41.6	39.1	14.0	14.9	35.0

Source: ABS Trade Union Members Australia, August 1994. Product no. 6325.0.40.001 compiled by Campbell, 1996.

A similar if not more extreme situation in terms of employment conditions applies in the USA although the apparent impact of contingent workers on unionisation varies across industries (Polivka, 1996b:18-9). The 1997 UPS dispute revealed that the company's casual employees were being paid an hourly rate about half that of permanent workers (such explicit discrimination would have been impossible in Australia). Further, a Bureau of Labor

Statistics survey (1995) of temporary help supply firms found that although many offered package benefits (holidays, health insurance etc) few of their employees actually received these benefits because they failed to meet the minimum qualification requirements (in terms of length of service etc) or elected not to participate in insurance plans.

Temporary employment in many EU countries is subject to extensive regulatory protection although these were weakened in a number of instances during the last decade in response to concerns over high unemployment. Some research indicates that these regulations have implied a level of protection that is not achieved in practice. There has also been some debate as to whether temporary jobs have formed a bridge to more permanent work for the unemployed or a trap with the limited evidence available indicating that the bridge scenario has been less applicable in Australia - possibly because the regulatory divide is wider (for a discussion of this research see Campbell and Burgess, 1997:30-35).

Growth in Part-time Work

During the 1980s there was a significant expansion in part-time employment across many OECD countries. Indeed, of these countries only in Canada, Finland, Norway, Sweden and the USA did the growth of full-time jobs go close to matching the growth of part-time work (OECD, 1990:22). Table 5 indicates the level and composition of part-time employment within OECD countries between 1979 and 1990. It can be noted that the proportion of part-time workers exceeded 20% in Australia (by 1996 it had reached 24.1%, Dennis, 1997), Denmark, the Netherlands, New Zealand, Norway, Sweden and the UK (OECD, 1991:46). Women made up over 70% of part-time workers in all countries apart from France, Greece, Ireland, Italy and the USA. In 1995 65.8% of the 1.17 million part-time workers in Australia were casuals. The growth of part-time work has continued. By 1996 there were 20 million part-time workers in the USA (or 18% of the workforce, *Peoples Tribune*, 24(9):1997). Most of the growth in male part-time work has been involuntary (Burgess, 1997:97).

As already hinted at earlier, one aspect to the decline in full-time employment and growth of part-time work has been a transformation of the youth labour market which has been occurring over the past 20 to 25 years in many OECD countries. Campbell and Burgess (1997:27) observe:

'The youth labour market appears increasingly split between a shrinking sector of full-time permanent jobs and a rapidly growing sector of part-time casual jobs The

incidence of casual employment - almost entirely part-time - amongst young workers increased very sharply between 1984 and 1994: from 29.8 to 58.7% for the 15 to 19 year group and from 14 to 26.1% for the 20 to 24 year group'.

Table 5 OECD Countries: Size and Composition of Part-Time Employment 1979-1990

Percentages

	Total employment			Women's share in part-time employment		
	1979	1983	1990	1979	1983	1990
Australia	15.9	17.5	21.3	78.7	78.0	78.1
Austria	7.6	8.4	8.8 ^b	87.8	88.4	88.8 ^b
Belgium	6.0	8.1	10.2 ^b	88.9	84.0	89.6 ^b
Canada	12.5	15.4	15.4	72.1	71.3	71.0
Denmark	22.7	23.8	23.7 ^c	86.9	84.7	79.4 ^c
Finland ^c	6.7	8.3	7.2	74.7	71.7	67.8
France ^e	8.2	9.7	12.0	82.2	84.4	83.1
Germany	11.4	12.6	13.2 ^c	91.6	91.9	90.5 ^c
Greece	--	6.5	5.5 ^c	--	61.2	65.7 ^c
Ireland	5.1	6.6	8.1 ^c	71.2	71.6	68.2 ^c
Italy	5.3	4.6	5.7 ^b	61.4	64.8	64.7 ^b
Japan	15.4	16.2	17.6 ^b	70.1	72.9	73.0 ^b
Luxembourg	5.8	6.3	6.5 ^c	87.5	88.9	80.0 ^c
Netherlands	16.6	21.4	33.2	76.4	77.3	70.4
New Zealand	13.9	15.3	20.1	77.7	79.8	76.1
Norway	25.3	29.0	26.6	83.0	83.7	81.8
Portugal	7.8	--	5.9 ^b	80.4	--	69.8 ^b
Spain	--	--	4.8 ^b	--	--	77.2 ^b
Sweden	23.6	24.8	23.2	87.5	86.6	83.7
United Kingdom	16.4	19.4	21.8 ^b	92.8	89.8	87.0 ^b
United States	16.4	18.4	16.9	68.0	66.8	67.6

a) For sources and definitions, see Annex 1.B *OECD Employment Outlook 1989* and Annex 1.C *OECD Employment Outlook 1990*, except as indicated below for the Netherlands

b) Data are for 1989

c) Data are for 1988

d) Break in series in 1985

e) The 1990 data for male employment include conscripts, contrary to the situation for earlier years

This change has been brought about by a combination of an increase in the period spent in education, a change in job types and qualifications (including credentialling) and changes in the employment practices of especially large organisations in particular industries. The 1995 BLS survey found that more than half contingent workers in the USA were employed in

service industries (compared with a third of non-contingent workers), with construction being another major employer of contingent labour. About half contingent workers were female. Contingent workers were twice as likely to be young (compared with non-contingent workers) and those aged 16 to 24 years were likely to be enrolled in school (Bureau of Labor Statistics, 1995a and Polivka, 1996b). Contingent workers tended to earn less than their non-contingent counterparts (Hipple and Stewart, 1996a:22) and the BLS survey indicated they were far less likely to have health insurance cover of any description (something with obvious OHS ramifications).

The foregoing can be illustrated by reference to two industries. First, in retailing, large retailers have replaced full-time employees in supermarkets and even department stores with young casual part-timers - a process accelerated in some instances by the extension of trading hours. Second, the labour needs of, often rapidly expanding, fast food chains (including franchises) like McDonalds, Pizza Hut etc have been overwhelmingly met by school and university students, employed on a casual and part-time basis. In both Australia and Europe women and younger workers predominate in part-time casual employment (Campbell and Burgess, 1997:28).

Research in Europe and Australia (see Maier, 1994 and others cited in Campbell and Burgess, 1997:36-9) indicates that, like casual employment, part-time employment is associated with a lower level of protection in terms of social security (health and unemployment insurance, pension and maternity entitlements etc) and employment regulation (leave and promotion entitlements, unfair dismissal protection). The resulting gap does vary considerably between countries, with Maier, 1994, 174,176) arguing it is widest in two countries, the Netherlands and the UK, where the most precarious segment of short-term part-time workers is most significant (ie over 40% of part-time workers). In practice, formal differentiation in regulations (due to threshold requirements in terms of hours etc) understates the gap because many part-time workers are either unaware or in no position to secure the rights they may be nominally entitled to.

2.2 Outsourcing, Franchising and the Growth of Self-Employment

Subcontracting or outsourcing of tasks is not a new phenomenon with industrialised societies (during the 19th century it was extensive in some areas of manufacturing and remained important in some industries like road transport and building). However, a major management shift towards this practice originated in the 1970s, gaining momentum in the last 10-15 years.

In the US, a study found of the 428 fastest growing companies, 83% outsourced - a jump from 64% just three years before (*Peoples Tribune*, 24(9):1997). Outsourcing has become a major tool by which corporations have sought to bypass regulatory controls and achieve greater flexibility in their employment practices (See for example Harrison and Kelley, 1996. A similar point can be made in relation to franchising. See Bennett, 1994).

Outsourcing has become an industry (if you doubt this trying keying this term into you internet search engine) occupying a key role in government policies in many countries, being a major technique advocated by international and local management consultants and developing its own specialists and newsletters. The current wave of interest in outsourcing may be seen as just another management fad, like downsizing and indeed the two processes often go hand in hand because outsourcing is one method large organisations have reduced the scope of their activities and workforce. However, despite a growing awareness of problems associated with the practice, there is little sign that the outsourcing trend is abating. Outsourcing must be seen as one of a number of developments (others including franchising and supplier networks) associated with a rapid rise in inter-organisational complexity since the 1980s (the challenges such complexities pose for management control in a range of areas are only starting to be explored. See Ring and Van de Ven, 1992, 1994).

In Australia a number of studies have charted the growth of outsourcing and identified management expectations of further increasing their use of subcontractors (see Wooden and VandenHeuvel, 1996:172-3). One survey of public and private sector enterprises employing more than 100 employees found that 90.4% had made use of contractors in the past year (as compared to 81.8% five years earlier) and these workers accounted for 10.3% of total employment within the sample. Self-employed contractors were present in 69.8% of the workplaces surveyed, employees of contract firms in 58.9% and 57.6% reported using agency workers (Wooden and VandenHeuvel, 1996:170-1). Their study indicated that growth was occurring across a wide range of industries, and with minor variations (such as a greater reliance on self-employed operators in construction, road transport, property and business services) applied to all three types of subcontractor just mentioned (Wooden and VandenHeuvel, 1996:173-7). Importantly, most contracts were of short duration (36.9% for less than 3 months) and only 21% extended beyond a year highlighting the employment insecurity associated with these arrangements. The study found that the organisations surveyed exercised a high degree of control over self-employed contractors in terms of hours

and remuneration but only a minority paid workers' compensation premiums (15.5%) or superannuation contributions to cover these workers (Wooden and VandenHeuvel, 1996:184-5). Most recently, the second Australian Workplace Industrial Relations Survey (AWIRS) found that the number of contractors, agency workers, outworkers and volunteers had increased by almost 40% in last five years and contracting out was more common in the public sector than the private sector (DIR, 1997).

In many countries government statistical agencies have undertaken little research into outsourcing and hence it is difficult to measure its extent. One study undertaken by the Department of Trade and Industry Small Firms Statistics Unit in the UK found a fairly clear pattern of growth across a range of work activities (Table 6). In the USA Abraham and Taylor (1996) used both BLS data and their own survey to identify a pattern of growth which varied between industries/activities and was driven to varying degrees by a combination of savings in terms of employee wages and benefits derived from using contractors, volatility in output demand, and the provision of specialised skills by the outside contractor. Both variations, it can be noted in passing, may well effect the OHS implications of outsourcing within a particular industry or activity.

Table 6 Percentage of establishments with 25 or more employees using sub-contractors, Great Britain

Type of work subcontracted	Establishment used sub-contractors		Change in use of sub-contractors between 1983 and 1987		
	1983	1987	More	Same	Less
None		26			
Cleaning	32	42	12	82	5
Maintenance	49	52	22	72	6
Catering	9	12	24	66	11
Security	12	21	16	75	9
Transportation	32	34	36	53	11
Manufacturing	14	15	36	45	19
Other	11	14	50	45	5

Note: This is the most up to date information available at the time of going to print

Source: UK Labour Force Survey. Cited in Health and Safety Commission, the Health and Safe Safety Commission, (1996:16)

Available evidence, such as a recent survey of Australian business (see Table 7), found that as might be expected outsourcing is much more pronounced amongst larger firms.

Table 7 Australia: Contracting out by firm size, 1994-95

Size of firm (employment)	Number of firms which undertake		Proportion of firms which engage in some contracting out	Total number of firms
	No contracting out	Some contracting out		
	No.	No.	%	No.
1-4	228,899	9,909	4.1	242,863
5-9	81,449	3,815	4.4	86,940
10-19	33,926	1,981	5.4	36,612
20-49	14,982	1,492	8.9	16,778
50-99	4,645	382	7.2	5,275
100-199	1,734	215	10.3	2,085
200-499	1,063	200	14.6	1,366
500+	485	126	18.6	679
Total	367,183	18,121	4.6	392,598

Source: Industry Commission/Department of Industry, Science and Tourism, 1997:85

The pattern of outsourcing as a strategy for large employers is reinforced when the public sector is considered. In the government sector of a number of countries like Australia, the USA and UK there has been a rapid growth of outsourcing linked to the competitive tendering policies advocated by economic rationalist policy advisors and free-market think-tanks (See, for example, Industry Commission, 1995a). By 1995 it was estimated that the three levels of government in Australia spent almost \$A13 billion annually on outsourcing (excluding construction, Industry Commission, 1995a:58-9). In one state, Victoria, a law now requires all local authorities to put out half their activities to competitive tender. In a second state, Western Australia, the value of public sector contracting out increased by 60% to \$A1,099 million between 1994-5 and 1995-6 (*Contracting & Outsourcing News* July 1997:3). Another study (Vandenheuvel and Wooden, 1995:276-7) has found that the public sector employed over 9% of independent non-farm contractors, with over 80% being dependent on a single agency for employment.

Those undertaking subcontracting tasks can take a variety of forms ranging from self-employed individuals/independent contractors and family groups, homeworkers, partnerships and small firms through to specialist labour hire agencies, some of considerable size and international scope in their operations. As a recent Australian survey indicates the use of different categories of subcontract labour varies across industries (see Table 8). At the same time, this complexity and the fluidity of employment status in some industries (like building and road transport) makes the direct measurement of the extent of outsourced labour difficult. Nevertheless, evidence on the growth of these arrangements is unequivocal.

Table 8 Australia: Contractor activities by type of contractor (all workplaces using contractors)

Activity	Self-employed Contractors (%)	Employees of Contractors (%)	Agency Workers (%)
Engineering/drafting	25.3	20.1	8.8
Accounting services	11.0	8.2	19.6
Computer services	35.7	26.6	10.4
Other professional/business services	28.7	12.7	4.8
Clerical services (e.g., secretary, data entry, receptionist)	5.0	8.2	70.4
Transport services	13.3	11.5	1.2
Equipment/building maintenance	21.7	29.5	2.4
Production/manufacturing	6.0	8.6	15.6
Construction	6.0	16.0	0.8
Cleaning services	17.0	46.3	2.0
Other	15.7	15.2	8.0
(N)	(300)	(244)	(250)

Note: Columns do not sum to 100% since some workplaces used contractors for more than one activity.

Source: Wooden and VandenHeuvel 1996; 181.

Agency Labour

Agency, temporary help supply or labour-hire firms provide temporary workers to clients who are under the direct supervision of the client but are on the payroll of the help supply firm (the latter does not apply in some forms of body-hire). While such operations have existed for many years these firms are clearly one mechanism facilitating the rapid expansion of temporary workers referred to in an earlier subsection. In the USA a survey undertaken by the Bureau of Labor Statistic (1995b) in 1994 found that the number of number of workers employed by temporary help supply firms with 20 or more employees had risen by 350,000 or 43% between 1989 and 1994 - growth that far outstripped the 5% increase in non-farm employment for the economy as a whole. By February 1995 total employment by such agencies reached 1.2 million or 1% of the employed labour force(Bureau of Labor Statistics, 1995a). This growth was associated with the increasing use of such agencies to supply blue collar workers to mainstream manufacturing operations. In 1989 white collar jobs (clerical support etc) accounted for 58% of employment in these firms but by 1994 this had fallen to 30%. The growing importance of supplying blue collar workers for the largest 'temp' agencies was reflected in the average earnings of their employees. The 1994 survey found that the average hourly earnings of 'temps' progressively declined as establishment size increased from \$US9.70 for agencies with fewer than 50 workers to \$US7.27 for those with 2500 or more employees (the average earnings of agencies with more than 250 employees were below

the average for all establishments of \$7.74). Again, this growth must clearly be linked to changed management employment practices, especially by large corporations.

Self-employment

The level of self employment provides another useful if partial indicator of the extent of subcontracting since, with some exceptions (like farming, fishing and some areas of retailing) self-employed workers are often subcontractors (in certain industries this applies to the vast majority of self-employed workers). In 1988 there were 26 million self-employed workers in the EU (or 19% of the workforce. Paoli, 1992:xii). In Australia, from the early 1980s the both number and proportion of self-employed grew rapidly to reach around 16% of the labour force by the mid 1990s (historical differences in agricultural and other primary activities, such as average farm size, probably help explain why the Australian figure was lower than Europe). In Britain the number of self-employed grew from 2.023 million in 1978 to 3.351 million in 1995 or more than 70% while the total workforce remained almost static (25.13 million in 1978 and 25.747 million in 1995) and the number of employees fell by 866,000 (from 22.789 million in 1978 to 21.933 million in 1995. Hughes, 1996:375) In the USA a Bureau of Labor Statistic survey (1995a) undertaken in 1995 identified 8.3 million independent contractors (6.7% of the total employed labour force). Household data indicated that the number of self-employed workers in non-agricultural industries was 9.035 million in October 1996 (with another 1.597 million in agriculture. Bureau of Labor Statistics, 1996c:26).

In addition to aggregate data on the growth of self-employment and subcontracting there is also research on particular industries and activities which clearly identify the corporate underpinnings of this shift, such as Celia and John Stanworth's study (1997:43-55) of the transformation of in-house editors and proof-readers in the UK publishing industry into self-employed 'freelancers'. Bennett (1994:171-7) argues that the growth of the self-employment and subcontracting since the 1970s in the USA, Britain, Australia and elsewhere is at least partly the outcome of a conscious effort by employers to manipulate contractual forms in a way that evades the requirements of collective labour law (in terms of wages, leave entitlements etc) and other forms of regulation (notably workers' compensation). She identifies the central role of court decisions in this process. Recent court decisions in Australia, broadening the defining of independent contractors, such as a High Court case

involving couriers, confirm the trend is continuing (see Lampe, 1997; and Mayhew and Peterson, forthcoming)

British research indicates that the self-employed often differ little from those working as employees in terms of on the job autonomy/economic independence (for Australian research reaching similar conclusions see VandenHeuvel and Wooden, 1995), and that many self-employed workers are relative low paid and have little job security (Eardley, 1996:1-2 and Eardley and Corden, 1996). Indeed, the growth of self-employment has been identified as making a significant contribution to widening income inequality (Jenkins, 1995).

Homework and Telework

Homework is a form of outsourcing which involves both self-employed workers and employees. While homework, and associated use of child labour, is a significant and increasingly recognised feature of specific industries in third world countries (such as carpet-making in Pakistan and India) there is also evidence that it is growing within industrialised countries, both within activities where it was traditionally found, such as garment making, but also in new areas such as clerical services (for a recent global perspective see Boris and Prugl, 1996). One new category of work outside traditional places of employment (mainly at home although it is not restricted to this venue) is that facilitated by the use of telecommunications, known as telework. Ironically, while it has aroused considerable public debate it is one area of externalised employment where growth has been rather modest. A recent study (Pennings et al, 1996:7-8) estimated that there were 75,000 teleworkers in the Netherlands, although it noted the potential for considerable expansion in the future.

In the USA the number of homeworkers fell from 4.7 million in 1960 to 2.2 million in 1980 before rising to 3.4 million in 1990 (Edwards and Field-Hendrey, 1996:26). A recent British survey indicated that the number of homeworkers in that country tripled between 1981 and 1994 to reach 305,000 at the same time as overall employment in manufacturing - which traditionally provided many of these jobs - had shrunk (Felstead, 1996:230). In Britain a significant part of the growth appears to have resulted from its increasing use in new areas. Most notably, the 1994 survey revealed that can be explained in terms of growing use of homework in the area of clerical and secretarial services. Female homeworkers performing these task accounted for 36.9% of the female workforce in this industry and 66.9% of all female homeworkers (Felstead, 1996:235). In the USA, the 1990 population census (Edwards

and Field-Hendrey, 1996:28) revealed that about 8% of homeworkers were engaged in manufacturing and the remainder (over 90%) were providing personal services (22.5% were engaged sales, administrative and clerical support). The pattern appears to be similar in Australia although there has been some growth of homework in the garment industry, directly displacing jobs from factories as a response to cost pressures from retailers and tariff policy changes (see Peck, 1996:163-7; and Mayhew and Quinlan, 1997d). Within the New World countries of North America and Australasia an ethnically diverse array of immigrants (including illegal immigrants) are heavily involved in specific areas of homework, such as garment-making although they are under-represented in most other areas (see Edwards and Field-Hendrey, 1996:29).

Consistent with findings for other countries, the British and US surveys both revealed a strong gender dimension, with middle-aged married women with children constituting the typical homeworker (Felstead, 1996:238 and Edwards and Field-Hendrey, 1996:29). There is also a gender dimension to the employment status of homeworkers. In Britain 70% of male homeworkers being self-employed as opposed to only 41.6% of female homeworkers (for the workforce as a whole 17.7% of males and 7.4% of females were self-employed Felstead, 1996:234). Similarly, the US study found that 59% of home-based workers were female. While 63% of homeworkers were self-employed, men were more likely to be self-employed and their average earners were almost double that of women (average earning of self employed homeworkers was lower for both men and women (Edwards and Field-Hendrey, 1996:32-3). The growth of home-based work (and to a lesser extent the growth of self-employment and small business too) has also seen an associated growth or re-emergence of child-labour within industrialised societies in at least some activities like garment making (involving children of 9 years or younger, Mayhew and Quinlan, 1997d. The practice is far more widespread within some developing countries. See Querenghi, 1996).

The growth of home-based work presents major regulatory difficulties - just as it did 100 years ago when it was a focus for debate over the sweating of labour - because of its invisibility to factory inspectorates and others, widespread illegal practices (now often linked to a combination of exploitation, tax evasion and illegal immigrants in some countries). Many homeworkers operate in cramped conditions in a setting not designed for work, under tight production schedules and at low rates of pay (exacerbated by delayed payment of say two months in the case of garment workers - something designed to maintained their dependency

on a particular ‘middleman’, Mayhew and Quinlan, 1997d). Even where homeworkers are employees, many are paid on a piecework basis which makes the regulation of minimum wages and other conditions difficult (Felstead, 1996 and Boris and Prugl, 1996).

Franchising

Franchising can be seen as both a legally distinct or contractually specific form of outsourcing or devolution where the major operator (franchiser) retains varying elements of financial, product or service control over the franchisee. Again, there are complex overlaps between franchising and other changes in employment structure identified in this paper. Most notably, the growth of franchising has increased opportunities for self-employment and the establishment of small businesses (see Table 9).

Table 9 Australian Business Survey: Franchisees by firm size, 30 June 1995

Size of firm (employment)	Number of firms operating as a franchise	Proportion of firms operating as a franchise	Total number of firms
	No.	%	No.
1-4	4,134	1.7	242,863
5-19	8,477	6.9	123,552
20-99	1,633	7.4	22,053
100+	235	5.7	4,130
Total	14,479	3.7	392,598

Source: Industry Commission/Department of Industry, Science and Tourism, 1997:45

The same survey indicated that franchising was most common in retailing, property and business services (see Table 10)

Table 10 Australian Business Survey: Franchisees by industry, 30 June 1995

Industry	Number of firms operating as a franchise	Proportion of firms operating as a franchise	Total number of firms
	No.	%	No.
Manufacturing	417	1.1	39,437
Wholesale and retail trade	8,250	7.0	118,269
Property and business services	2,611	2.9	90,866
Other	3,203	2.2	144,025
Total all industries	14,479	3.7	392,598

Source: Industry Commission/Department of Industry, Science and Tourism, 1997:45

Although the evidence is very fragmentary, it seems clear that the extent of franchising has grown rapidly in many industrialised countries over the past 10-15 years. In McDonalds, for example, in 1990 the company had 12000 stores across 53 countries in 1990 and 18,000

stores across 82 countries just five years later. As Bennett (1994:177-81) has observed, franchising is a commercial and legal arrangement which has the capacity to evade regulatory requirements, including those pertaining to employment. In the retail sector, for example, Bennett (1994:178) argues that the spread of franchising will compound existing problems of minimum wage enforcement, low pay and conditions and low union density. By splintering employment units, franchising makes union organisation more difficult. This is the case even in large franchise operations which employ a workforce largely composed of temporary workers - a situation exacerbated in some instances by active central management opposition to unions. While we have come across instances in the building industry where franchisers used their controls over franchisees to implement superior quality and OHS outcomes (see Mayhew and Quinlan, 1997c) such cases appear to be exceptional. In most cases, OHS is conspicuously absent from the franchising equation (see fast food case cited below).

The Growth of Small Business and Declining Workplace Size

In a number of countries factors including labour shedding by large employers and the growth of outsourcing has resulted in a growth in the number and employment share of small business (including self-employed/independent operators). In Australia by 1989/90 small business counted for 96% of non agricultural private enterprises, employed 48% of the employed labour force and accounted for a more than proportional share of employment growth (Burgess, 1992:132-3). In 1992 US private sector firms with fewer than 50 employees constituted 95% of enterprises and employed 43% of the private sector workforce (firms with fewer than 20 workers employed 27% of the workforce. Wiatrowski, 1994:30). In Europe, the 1988 Labour Force Survey (see Paoli, 1992:13) indicated that companies with fewer than 50 workers employed over 60% of the total employed labour force (this figure appears to include agricultural activities). A survey undertaken in the UK in 1993 found that firms with fewer than 50 workers employed 44% of the workforce (HSC, 1996:16). In the province of Ontario, Canada firms with fewer than 50 employees increased their share of total employment (on a full-time equivalent basis) from 29% in 1980 to 33% in 1993 (Witmer, 1996:11).

The shift of employment to the small business sector has a number of consequences. First, and most obviously, there is a much higher rate of volatility (formation, sale and closure) amongst small business (Small Business Research Program, 1996:xvi). On average, workers in small business have less job security and on-the-job experience. Hence growth in the small business sector will be associated with increases in insecurity and inexperience within the

workforce. Second, since unionisation rates and effective regulatory coverage are lower in relation to small business the shift means an increasing number of employees are likely to operate in a non-union workplace where regulated standards, if not formally lower (and they may well be in relation to wages and other working conditions depending on the particular regulatory system) will be of less practical effect. A longitudinal survey of 9,000 Australian businesses found that well over 80% of small businesses were union free compared to less than 12.5% of businesses with 500 or more employees (Industry Commission/Department of Industry, Science and Tourism, 1997:64). While awards still dominated employment regulation within large firms - despite the shift to enterprise agreements - individual contracts or agreements were the norm in small business (Small Business Research Program, 1996:xvii). Third, the growth of small business may well have implications for the use of unpaid and child labour with the same survey indicating that 61% of firms employing 5 to 9 employees are family owned (Small Business Research Program, 1996:xvi).

Employment within the small business sector of many countries has a number of other distinguishing characteristics to employment within larger organisations. Small businesses employs proportional more women and part-time workers more women (Small Business Research Program, 1996:xvii).

As noted below, small business and small workplace are not synonymous since many large enterprises can operate a series of small workplaces. A shift in employment to the small business sector would almost certainly also entail a shift to smaller workplaces. However, this may occur in conjunction with a shift in workplace size due to a conjunction of short and longer term shifts. For example, a study by Drago (1997) found a substantial decline (around 40%) in employment per workplace between the 1930s and 1980s in the USA despite an equally significant increase in corporate size, Drago argued that splintering workers into smaller workplaces has enabled management to use collective job insecurity to secure co-operation.

The Gender Dimension of Labour Market Changes

Reference has already been made to gender-differentiation labour market changes. Since the end of World War Two one of the most profound changes within the labour markets of industrialised countries has been a growth in the labour force participation rate of women, matched in part by a decline in the labour force participation rate of males (due to the

withdrawal of older males and changes in the youth labour market). As a result, in Australia like other OECD countries, the proportion of females to total employees has risen. In Australia's case it rose from 39.5% in 1984 to 44.7% by 1996 (in the decade to February 1997 the female workforce participation rate grew from 63% to 70%). Unlike most EU countries, the female component of casual employment fell during the same period (from 64.2% to 55%) due to the more rapid growth of male casual employment in Australia (See Table 11, McRae, 1995:20 and Campbell and Burgess, 1997:26). Nevertheless, like the EU a large gender gap remains in terms of casual employment. Further, in Australia and other OECD countries, the tendency for women to be concentrated in part-time jobs is even more pronounced with regard to casual part-time work (with males constituting over 70% of full-time casuals, Campbell and Burgess, 1997:25).

Table 11 Australia: Casual Employees as Percentage of Total Employees by Gender

Year b)	Male		Female	
	casual '000	casual %	casual '000	casual %
1984	303.5	9.4	544.8	25.7
1985	308.9	9.4	578.3	26.1
1986	na	na	na	na
1987	389.5	11.5	674.7	27.9
1988	415.7	11.7	737.2	28.8
1989 c)	455.9	12.2	754.7	27.3
1990	476.1	12.7	795.6	28.2
1991	479.0	13.5	801.0	29.0
1992	550.4	15.6	864.6	30.9
1993	578.0	16.4	857.1	30.6
1994	655.1	18.1	894.0	30.8
1995	698.1	18.5	955.2	30.8
1996	829.0	21.2	1012.3	32.0

- a) wage and salary earners in their main job; the population is persons aged 15 and over (except for 1990, when persons aged 70 and over were excluded)
- b) August figures (except for 1991, when the figures are for July)
- c) the 1989 figure for total employees includes 102,200 persons whose full-time and part-time status in their main job could not be determined

Source: Compiled from ABS figures by Campbell and Burgess (1997:27).

In a number of EU countries (including Belgium, the Netherlands and the UK) part-time jobs constituted much of the growth of female employment during the 1980s but this was not the case in some other countries, perhaps due to institutional factors such as EEO laws and the availability of child-care (see Table 12). Similarly, in Australia part-time jobs have dominated female employment growth over the last decade.

Table 12 European Union: Women's employment and part-time employment, 1983-89

	Increase in women's employment between 1983 and 1989			Share of part-time working in the increase in women's employment	Women's share in part-time working	
	Total	Contribution of Part-time	Full-time		1983	1989
Belgium	12.6	8.4	4.3	66.2	84.0	89.6
Denmark	10.1	0.5	9.7	4.5	84.7	78.0
Germany	6.8	2.8	4.0	40.8	91.9	89.6
Spain	n/a	n/a	n/a	n/a	n/a	77.2
Ireland	5.0	2.0	2.9	41.2	71.6	73.2
Italy	7.7	2.4	5.3	31.0	64.8	64.7
Netherlands	36.3	32.0	4.3	88.1	77.3	70.2
United Kingdom	20.2	10.3	10.0	50.7	89.8	87.0

Source: McCrae 1995, p.20.

As already indicated in earlier sections, there is also a gender dimension to the employment of independent contractors. This is illustrated by a recent Australian survey of contractor employment (see Table 13).

Table 13 Australia: Female contractors by contractor type (% of workplaces using each type of contractor)

Proportion Female	Self-Employed Contractors (%)	Employees of Contractors (%)	Agency Workers (%)
Nil	62.6	42.3	17.1
1% to 25%	11.5	19.9	8.5
26% to 50%	19.1	22.4	12.8
51% to 75%	2.6	7.3	11.4
76% to 99%	0.9	1.4	5.7
100%	3.2	6.6	44.5

Source: Wooden and VandenHeuvel (1996) p.172.

In concluding this subsection several observations can be made. First, despite the general expansion of contingent forms of employment over the past two decades women make up the majority of contingent workers and will continue to do so into the foreseeable future. Second, since OHS research and regulation has tended to ignore contingent forms of employment it has a hidden but significant gender bias.

Drawing the Strands of Changes to Labour Markets and Work Organisation Together

Table 14 attempts to summarise the labour market changes just described.

Table 14 Labour Market and Workplace Restructuring Trends within Industrialised Societies

<i>Long Term Trends (ie 20 years or longer)</i>	
•	growth in female workforce participation rate
•	growth in youth labour force participation rate (due to students undertaking part-time work)
•	increasing use of shift/night work arrangements
•	increasingly rapid changes to production processes and the proliferation of new chemicals in industry
•	ageing of population and labour force
•	decline in male workforce participation rate
<i>More Recent Trends (ie pronounced within last 10-15 years)</i>	
•	growth of outsourcing, downsizing and work re-structuring amongst large organisations
•	growth of employment share of small business and franchise arrangements
•	growth of self employment, casual, part-time and other contingent work forms
•	repeated phases of management restructuring, privatisation and corporatisation (and increased use of fad-driven products from management consultants)
•	decline in employed proportion of the workforce
•	decline in proportion of employees employed on permanent full-time basis
•	decline in average job tenure

Most of the trends identified in Table 14 are well-known and some have been the subject of detailed research. However, there has been less appreciation that many of these changes are linked. It has been argued that some changes in labour market structures have resulted from shifting employment practices of large private and public sector employers. However, while this might be seen as supporting Atkinson's 'flexible firm' hypothesis on the expansion of non-standard work, as others have noted (see Burgess, 1997) this model is too simplistic to provide a credible explanation of the complex shifts underway.

A number of links have already been identified in this paper but some of these are worth highlighting. For example, downsizing by large organisations is clearly a factor in both the growth of outsourcing and small business. It has also been associated with reduced job tenure and the increased of casual or contingent workers (assisted by an increasing use of part-time young workers in industries like retailing, tourism and hospitality). As, will be shown later, there also tie ups between these changes and lean production. One implication of this is that some changes in labour market structure have originated in or have been accentuated by

changes to the work organisation and employment practices of large corporations. Further, to the extent that the growth in small business is driven by downsizing/outsourcing by larger firms predicated on cost-saving, the growth in employment within small business cannot be more than a partially offsetting (unless large numbers are employed inefficiently and at very much lower wages, conditions). In other words, the hope amongst some policy-makers that small business will provide a new engine for employment growth (and thereby displace employment losses in large organisations) is at least partly based on a failure to understand why some of this growth is occurring.

Moreover, there appears to be little appreciation of the effects these changes could have in combination on employment practices, individual work histories, regulatory institutions and attitudes amongst workers. More specifically, there is little appreciation that these changes are likely to have profound implications for occupational health. The last two points may be illustrated with several examples. First, since the health impact of shiftwork increases with age, the expansion of shiftwork in the context of an aging workforce means that adverse health effects will multiply for both individuals and the community at large (Dawson, 1996). Second, the growth of casualised employment and reduction in job tenure will lead to more complicated and volatile work histories that will make it more difficult to identify the health impacts of exposure to hazardous substances (themselves undergoing rapid change). Increased labour market volatility will also weaken the link between worker age, on-the-job knowledge and experience. All these factors will tend to offset the benefits that might otherwise be seen to flow from an aging workforce.

The rather fragmented approach to examining these changes are the product of a combination of disciplinary barriers amongst researchers. Tracking labour market changes has largely been undertaken by economist who knew little about work organisation. On the other hand, with some exceptions sociologists and others who were interested in changes in work organisation ignored the labour market side except to make geneflexes to dual labour market theory. Most OHS researchers have little knowledge of either labour markets or work organisation (for an important exception see Nichols' detailed work on the impact of work intensification and changes to labour markets and unionisation within British manufacturing. Summarised in Nichols, 1997). Fragmentation also flowed from the blinkered perspective of policy-makers, something exacerbated by the microscopic vision of economic rationalism which exerted an increasing influence on public policy since the early 1980s. Indeed, the latter have pushed

for a reduction/re-orientation of regulatory controls and increased labour market flexibility which have propagated some of the trends just identified. What we are left with is an information vacuum, but one which is not entirely uncalculated.

In general those scholars researching recent changes in management's labour practices and work re-organisation have focused their attention on the conventional terrain of shifting effort-bargains, payment systems, economic and productivity effects and the shifting locus of union/management power. They have given little attention to the OHS effects, either because they are unaware of this possibility, feel unqualified to introduce it or believe it is somehow tangential. A number of those analysing new Taylorist management systems like 'lean production' and 'engineered standards' have indicated the pressure these systems place on workers both psychologically and physiologically (see for example Parker and Slaughter, 1988 and Berggren, 1993). Berggren, (1993) draws on Richard Wokutch's (1992) exceptional and detailed account of OHS in the Japanese automobile industry to argue that 'lean production' involves an increased risk of manual handling/soft tissue injuries - what he aptly subtitled as 'Working with Pain'. Wright and Lund's (1996:196-212) provide an account of the introduction of 'engineered standards' into Australian warehousing which is not only situated within the context of parallel trends in the USA and Europe but also spends some time discussing the resulting struggle over OHS aspects. Moreover, they also note that the use of casual labour supplied by agency firms is exacerbating these problems. Casuals strive to beat the performance standard in the hope of securing a full-time position or for fear that failure to do so will result in never being recalled to the workplace (Wright and Lund, 1996:209). Thus, this study makes at least a fleeting connection between work reorganisation, OHS and changing labour market structures.

Other studies of large enterprises provide indirect evidence of the impact of changing patterns of labour usage on OHS. For example, a Canadian study of manufacturing establishments in six industries found that companies with older workers, workers with longer seniority and with low turnover tended to have lower lost time workers' compensation claim frequency rates (LTFR). They found that lower LTFR 'were also associated with greater worker participation as well lower expectation that workers simply follow management instructions' (Shannon et al, 1996:267). The converse of this is that high levels of labour volatility and casualised employment, and a weakening of worker unionisation and empowerment which usually flows from this, have worse OHS outcomes.

THE OHS IMPLICATIONS OF LABOUR MARKET RESTRUCTURING

Unfortunately, while many of the labour market changes just described have been occurring for well over a decade there has been comparatively little detailed research into their OHS implications.

The Impact of Outsourcing and Self-employment on OHS

One area that has been the subject of an increasing body of detailed investigation has been the OHS effects of contract labour. While by no means all subcontractors are self-employed the categories do overlap to the point where it is easier to discuss the available evidence within a single subheading.

Official OHS statistics are seldom broken down by employment status and workers' compensation claims data would be of limited use in any case given coverage problems (see below). Nevertheless, there is a growing body of evidence that self-employed workers (also known as independent contractors) are more liable to suffer an injury, disease or fatality at work than their employee counterparts. Since 1992, for example, the US Bureau of Labor Statistics has undertaken an annual census of fatal occupational injuries which have consistently shown that self-employed workers account for 19-20% of fatal injuries even though they represent only around 8% of the employed workforce (see Abraham, Weber and Personick, 1996; Mayhew, Quinlan and Ferris, 1997; BLS, 1996d and 1997c). In other words, self-employed workers are more than twice as likely to suffer a fatal injury at work. A crude ranking of fatalities by occupation also revealed a fairly consistent pattern, headed by truck drivers and with the majority of high-fatality jobs being ones with a disproportionate level of self-employment (in 1996 truck drivers were followed by farmworkers [especially tractor-related], salesworkers [especially homicide], construction labourers, other labourers, military personnel, timber cutters, police, pilots and electricians. BLS, 1997c:5). This evidence is consistent with fatality censuses and other research into work-related deaths carried out in Australia (see Mayhew, Quinlan and Ferris, 1997 and Mayhew and Quinlan, 1997b&c).

Self-employed workers face not only a higher risk of fatal injury at work but also experience a higher incidence of non-fatal injuries and disease. The first European survey of the work environment in 1991-2 (Paoli, 1995) also includes evidence on the OHS problems associated with self-employment. The survey identified independent workers as an at risk group.

Consistent with other evidence cited in this paper, it found that long working hours and task-

based payment systems were a major OHS concern for self-employed workers (Paoli, 1995:51,88). These workers also indicated a lack of support from colleagues or superiors (presumably major contractors) to carry out their tasks (Paoli, 1995:100). A number of other studies have confirmed both that self-employed workers tend to work longer hours, and to identify the acute (such as injuries arising from fatigue-based errors) and chronic (such as degenerative musculoskeletal disorders and prolonged exposure to hazardous substances) OHS injuries and diseases associated with this (see for example, Mayhew, Quinlan and Bennett, 1996 and Mayhew and Quinlan, 1997d).

A study of the Swedish mining industry (Blank et al 1995) indicated contractor workers undertook different task, experienced different working conditions and were involved in more frequent and severe injuries. Consistent with this, a study by Rousseau and Libuser (1997:109-110) found contractor employees accounted for 17% of fatalities in the US mining industry even though they made up only 10% of the total mine workforce (the US Mines Safety and Health Administration has taken to keeping a separate record of contractor injuries). In the USA the OHS risks associated with the shift to subcontracting/outsourcing in the petrochemical industry has been investigated (see Rebitzer, 1995).

Many self-employed subcontractors, such as taxi drivers and clothing outworkers, work in isolation, under a payment by results system and with the illusion of autonomy which leads to an obfuscation of their subordinate economic relationship and encourages an individualisation of work experiences including health and safety risks. A recent study of taxi drivers (see Mayhew in Mayhew and Peterson, forthcoming) found that, as in the USA, what little attention was given to OHS focused on risk-avoidance behaviour in relation to the threat of assault rather than more costly but effective solutions in terms of vehicle design (along the London cabs model) and regulatory intervention.

In Australia the National Occupational Health and Safety Commission has funded research into the OHS consequences of outsourcing in six industries (building, road transport, hospitality, child-care, clothing manufacture, and taxi drivers). These studies (see Mayhew, Quinlan and Bennett, 1996; Mayhew, Quinlan and Ferris, 1997; Mayhew and Quinlan, 1997a,b,c&d; and Mayhew in Mayhew and Peterson, forthcoming) compared OHS outcomes for both outsourced and employed workers to determine the impact of subcontracting. The studies found that, overall, OHS outcomes were worse for self-employed workers, and the

presence of these workers exacerbated OHS risks in the industry. In seeking to explain this, three set of related factors were identified (see Table 15). It was found that economic pressures drove self-employed workers to work excessive hours and cut corners in relation to safety and that their presence contributed to disorganisation at the workplace (for example, contractors may be unfamiliar with safety procedures or the consequences of their actions on other workers at the site). It was also found that regulations and compliance programs often failed to effectively address subcontracting, a situation exacerbated by the tendency of subcontractors to ignore what regulatory controls were in place. In the case of home-based clothing and childcare workers there was no regulation on the workplace (this can also be seen as perhaps the ultimate form of work disorganisation since work is occurring in a venue clearly not designed for that purpose).

Table 15 Risk Factors Associated with Subcontracting/Outsourcing

<i>Economic and Reward Factors</i>	
•	competition/under-bidding of tenders
•	taskwork/payment by results
•	long hours
•	lack of resources (ie like small business)
•	off-loading high risk activities
<i>Disorganisation</i>	
•	ambiguity in rules, work practices and procedures
•	inter-group/inter-worker communication
•	more complicated lines of management control
•	splintering of OHS management system
•	inability of outsourced workers to organise/protect themselves
<i>Increased Likelihood of Regulatory Failure</i>	
•	OHS laws focus on employees in large enterprises
•	OHS agencies fail to develop support materials
•	OHS agencies fail to pursue appropriate compliance strategies
•	Self-employed not covered by labour minimum standards laws
•	Self-employed not covered by workers' compensation

A number of the adverse effects associated with subcontracting will be most pronounced in the case of self-employed workers since they operate - defacto or de jure - in a less regulated context and where, in some industries at least, outright evasion of tax, public safety as well as employment and OHS requirements is normalised (see studies of clothing outworkers and truck-drivers, Mayhew and Quinlan, 1997c&d). In such industries this practices may also spread to employed workers who are in direct competition with self-employed workers. However, the Japanese experience of widespread subcontracting within large scale and capital intensive manufacturing (such as car and steel production) indicates that subcontracting process can, in the absence of effective regulatory controls, lead to employees of subcontractors working longer hours and experiencing markedly inferior working conditions (See for example Yorimitsu, 1980:47-66).

It needs to be recognised that comparing self-employed and employed workers do not capture the full impact of subcontracting because where these categories directly compete for work this competition is likely to adversely effect the employment conditions and OHS of employed workers (a good example of this can be found in the trucking industry. See mayhew and Quinlan, 1997d). It should also be stressed that in some industries employment status is fluid or ambiguous. For example, while outworkers in the clothing industry were regarded as employees following an federal Industrial Relations Commission decision in 1987 in practice they are treated as independent contractors.

The OHS implications of labour shedding by large organisations and an expanding small business sector

The shift in employment from large organisations to small organisations is likely to have twofold consequences for OHS. First, it may have an effect on the health and well-being of employees who remain within large organisations that downsize, delayer etc. Second, the progressive shift of employees to smaller employment units will have such effects as associated with any systemic difference in the incidence, regulation and treatment of OHS that may apply to small business. There is already evidence that such differences exist. The 1991-2 EU work environment survey (Paoli:1995:76) found that work speed, deadlines and repetitive work were more pressing OHS concerns amongst workers in larger companies. On the other hand, the same survey (Paoli:1995:36,40) found that workers in small business were more likely to report painful or tiring postures and the need to lift heavy loads at work. Of course, such general observations may well mask significant inter-industry differences.

Nevertheless, for the purpose of this paper the potential of both changes just identified will be briefly explored.

First, downsizing and reorganisation within large organisations can have a number of adverse implications on working conditions and OHS due to factors such as:

- increased workloads/deadline pressures and other forms of work intensification;
- loss of corporate memory, technical expertise and experienced personnel (note that older workers to take redundancy packages and more able managers may also decide to jump ship. See for example, US GAO 1996:40);
- lowered morale, distraction, insecurity and guilt amongst those surviving bouts of labour shedding;
- workers becoming distracted from immediate job tasks and reduced participation in activities which are deemed non essential to survival, including safety and training;
- problems arising from job transfers or task restructuring where insufficient attention is given to OHS risks (for example, does the employee have the requisite skills for the new role);
- disruption to communication channels due to management reorganisation and breakdown of trust; and
- reduced ability to oversee contractor operations;

In both Australia and the USA it has been found that workers facing imminent redundancy may well decide to exercise rights to workers' compensation claims they have eschewed in the past (for industrial deafness etc).

While a number of these consequences can be avoided by careful planning, there is little evidence that such a process has occurred. Despite rhetoric to the contrary, downsizing has commonly entailed a reduced management emphasis on OHS and staff equity issues. While there has been little systematic research into this aspect there is enough indirect evidence to suggest that the problems just identified warrant careful investigation. An Australian study (McCarthy, Sheehan and Kearns, 1995) found that organisational restructuring was frequently associated with work intensification and coercive management styles which included the bullying of workers that impacted on their health and well-being.

The restructuring (downsizing, privatisation, corporatisation, outsourcing etc) occurring within the public sector of many countries has been associated with significant changes in working conditions. In some countries at least, there is evidence of a parallel increase in some OHS problems. In Australia for example a period of significant downsizing and work reorganisation in the federal public service from the 1980s appears to be associated with a significant increase in successful work-related stress claims from 981 (representing 4.3% of successful claims) in 1989/90 to 1643 (6.9% of successful claims) in 1994/5 (cited in Peterson in Mayhew and Peterson, forthcoming). The link is strengthened by a breakdown of 1993/4 claims by cause (cited by Peterson in Mayhew and Peterson, forthcoming) and which revealed that anxiety arising from organisational change and forced relocation accounted for 28% of successful claims followed by work pressure (24%), interpersonal conflict (24%), verbal or physical abuse - itself something often associated with organisational change (17%) and management processes including performance reviews (7%).

A Norwegian study of a large public company (Saksvik, 1996:55) found that the majority of employees reported a deterioration in their working conditions following reorganisation along with reduced job performance (for other findings on the dubious impact of downsizing/reorganisation on productivity see Cascio, 1994 and US GAO, 1996:40), an increase in health complaints and turnover intentions. However, there was no change in sickness and absenteeism rates, largely due to pressure from management, fellow workers and the fear of losing their job. Those who took sickness absence during this period were an especially vulnerable group with low job satisfaction and significant health problems. Saksvik's study indirectly raises a more general issue, namely the extent to which voluntary absenteeism is used by workers to deal with 'hidden ailments' such as mental illness, stress, alcohol and drug abuse. The impact of work intensification on the incidence of such problems, and what affected workers do when absenteeism is not a viable option (not just due to downsizing but also closer management scrutiny of leave systems) warrants investigation (De Lorenzo, 1997:103-24).

Second, turning to OHS within small business a number of points can be made. As Nichols (1997:161) observes there is considerable debate as to whether there is a high risk of injury and disease in small business or whether medium sized firms have a record inferior to both large and small firms. Nevertheless, both he (1989, 1997) and Tombs (1988) have challenged any presumption that larger workplaces are more hazardous. Both have argued a case that

small firms may be more dangerous in terms of the risk of serious injury, with Nichols (1997:161-9) in particular providing evidence to support his case. Detailed research carried out by the Queensland Division of Workplace Health and Safety found that the OHS record of small firms was in no way superior to large firms. Given that this research - and some other studies for that matter - relied on workers' compensation claims data and there is known bias against injured workers making claims in smaller firms, a better performance record would be expected from smaller firms unless their workplaces were indeed more dangerous. Another problem with any attempt to measure performance is the tendency of researchers to conflate the notions of small business with small workplaces. Small workplaces may be found within medium to large organisations as well small firms and there is also the potential for multi-employer workplaces (especially where subcontracting is involved). Whether devolution by a large employer into small operational units will have much the same effect as a number of unrelated small enterprises will depend on the level of strategic control retained over employment and OHS in the former case. Even so, there can be little doubt that both will tend to fragment the management of OHS.

Irrespective of any debate over OHS statistics, recent research across a number of countries (see Tuskes and Key, 1988; Eakin, 1992; Lamm, 1995; Mayhew in Mayhew and Peterson, forthcoming) has identified a number of common problems in relation to OHS and OHS regulation within small business, including:

- a low level of OHS awareness amongst small business and tendency to 'normalise' risk and to place responsibility with workers themselves;
- a lower level of training of workers in small business;
- a low level of knowledge of OHS regulatory requirements and a low level of both direct (inspectoral) and indirect contact (materials) with OHS agencies. Small business often finds it difficult to comprehend let alone use generic OHS materials;
- the 'top-down' approach used by OHS agencies in conjunction with performance-based OHS legislation is not effective with small business which would prefer, to the extent it accepts intervention at all, a 'bottom-up' and hazard-focused approach;
- a lower level of compliance with OHS standards partly based on ignorance, partly based on failure to see the need for government intervention, and partly based on a calculation of the likelihood of prosecution;

- the absence of a management system or OHS program and a lack of expertise, time, money and logistical resources to devote to OHS generally (let alone the complex demands posed by hazardous substances);
- economic and time pressures in small business discourage attention to OHS; small business operators rely heavily on guesswork in the area of OHS

These characteristics may combine with other labour market factors described in this paper. For example, younger workers are more likely to be found in small workplaces and in casualised industries. This can be a lethal combination. A US study of workplace fatalities amongst young building workers found that fatal injuries were far more likely in small and non-union firms (Suruda and Dean, 1996:58).

There is sufficient evidence pertaining to OHS in small business to indicate that growth in employment within the small business sector warrants serious investigation by policymakers. At the very least, such a development has significant regulatory implications, especially in context where OHS agency resources are stagnant or declining in many countries (Walters, 1997:267). According to Wiatrowski (1994:34) in the USA establishments with 10 or fewer employees are not covered by OHS laws so they are not required to keep records and are not subject to inspections. Even in countries with no formal exemption in practice inspectorates have tended to concentrate on larger workplaces. To cope with an expansion of small workplaces will require additional inspectoral resources. This trend will also reduce the number of workers able to utilize the participatory mechanisms entailed in OHS legislation (see below).

The OHS implications of casualisation and part-time work

The shift to casual and part-time labour could affect OHS in a number of ways. First, such workers are less likely to have received training including training in OHS. In Australia, for example, there is clear evidence of a negative link between reliance on casuals and training expenditure (Denniss, 1997). Further, in the US, Australia and other countries it appears that most skill-related safety training is done informally with employers failing to differentiate initial and routine training. Moreover, a more volatile labour market will diminish the value of what training is already occurring. The 1991-2 EU work environment survey (Paoli:1995:xiv-v) identified lack of training as a major concern for younger workers (along with exposure to hazardous substances, part-time work and time pressures). International

evidence indicates that young workers have an above average risk of suffering injury at work (see *Eurofocus*, 11/97 17-24 March 1997) and it would seem plausible to suggest that their concentration in contingent jobs is one factor in this.

Second, partly as a result of the last point but also because of their more transient employment, temporary workers are more likely to lack job specific knowledge and experience, or to be aware of the OHS consequences of both their behaviour and that of other workers. That is, as with subcontractors, the presence of temporary workers can contribute to disorganisation in the workplace and make the implementation of OHS management systems more difficult. Morale problems can also arise if, as often occurs, temporary workers are assigned to the least desirable jobs or shifts.

Third, the increasing use of temporary workers will require attention and additional resources on the part of OHS agencies to ensure their use is not compromising OHS standards and management have modified their OHS practices. As yet there is little evidence that this is occurring. Where temporary workers are supplied by a labour agency there is a potential for confusion over the respective legal responsibilities of the host firm and the agency even where the relevant OHS legislation specifies that both have a responsibility (see below).

The additional risks associated with casualised employment can be compounded where corporate devolution, outsourcing or franchise arrangements undermine an existing OHS management system or even preclude its development in the first place. Two recent cases illustrate this point.

First, earlier this year a young casual worker working for a multinational franchise fast food chain (producing a flat round product) was given the task of cleaning a cream gun/dispenser without any prior training. He re-assembled the gun incorrectly, resulting in a piece flying up into his face and destroying one of his eyes. The company was fined by the WorkCover authority and the worker returned to his job where he was given the task of cleaning behind the ovens with caustic soda - again without any real training or eye-protection. A splash of soda hit the worker in the eye but fortunately for him it was his (now) glass eye not his one remaining undamaged eye. The WorkCover investigation revealed not only a lack of employee OHS training and an established code of safe operating procedures but - and this is more telling - a complete absence of management training in OHS. In other words, store managers were being recruited and promoted on their sales performance without any

reference to supplying them with the skills necessary to manage OHS. Devolved and franchised operations often entail a diminished level of co-ordination OHS management, partly because any notion of this falls outside the profit centre concept on which these bodies are built. Given that this was a US-based multinational which like other fast food chains has very standardised management operating procedures world-wide it is likely that the problem just identified is not limited to its Australian operations (indeed I know similar problems occur in the USA if not elsewhere).

Second, an illustration of the potentially lethal combination of outsourcing, casual employment and young inexperienced workers can be found a recent case when a Sydney-based slurry and pump manufacturer was fined a total of \$480,000 for a series of incidents where a number of workers, including backpackers supplied to the company by a large agency labour firm, suffered serious injuries to their fingers from contact with saws and sheet rolling machinery. The company had failed to maintain a safe system of work and failed to learn from the incidents (the labour agency firm is currently being prosecuted, *SIA Safety Today*, May 1997:1). Labour-hire firms providing skilled labour like tradesman are more likely to be able to ensure a level of competency with regard to OHS than is the case with those providing unskilled workers, especially when these are young and inexperienced. The contracting process can lead to unanticipated complexities. For example, in another recent case the agency-supplied worker was trained to operate one machine but was then shifted to another machine by the client firm without contacting the agency or undertaking a retraining process.

Finally, the more general implications of a casualised workforce are highlighted by information which came to light in a strike involving the United Parcel Service (UPS) in 1997. With over 200,000 employees in the US alone, UPS is one of the largest employers (and most profitable employers) in the US and the world. Since the mid 1980s the company has increasingly relied on lower paid part-time workers (83% of all new jobs since 1993) who represent 42% of its workforce in 1986 and 60% by 1997 (as opposed to a national average of 18%. International Brotherhood of Teamsters, *Teamsters News Release*, 26 June 1997). This shift is associated with levels of turnover amongst part-time employees which exceeded 400% per annum, with lack of full-time job opportunities being a major factor in this. In 1996 UPS recruited and trained (?) 182,00 employees, only 40,000 of whom were still with the company at the end of the year (*Teamsters News Release*, 26 June 1997). Major issues in the strike

included the company's substantial and increasing use of casual and part-time workers, job security, the lower pay rates and pension entitlements applying to part-time workers, safety and the use of subcontractors. Since 1990 the company had been fined over \$US 3.7million by OSHA for health and safety breaches (the company received 2,786 OSHA citations between 1972 and 1995). On average an employee is killed every month and UPS was pays \$1 million per day in workers' compensation costs. In 1994 the company raised the weight limit on packages from 70 to 150lbs without adequate safety measures. A year later the company was fined \$5000 after a young probationary employee died of heat exhaustion while unloading trucks during one of Chicago's heat waves. The union claimed that in 1996 the company's own figures show that it experienced about 60,000 injuries or the equivalent of 33.8 injuries for every 100 workers which is 2.5 times the transport industry average (itself high by the standards of other industries, *Teamsters News Release*, 23 April 1997). The company has been accused of refusing to invest \$US 55 for articulated mirrors at the rear of trucks unlike its competitors. Significantly, the increasing use of subcontractors and part-time workers is being pursued by UPS management in its international operations, including Italy, Spain and other European countries (*Teamsters News Release*, 22 May 1997).

THE HIDDEN COST OF LABOUR MARKET CHANGES

The OHS impacts of changes just described will often remain hidden. In most countries official OHS statistics are largely based on workers' compensation claims data. If any work-related injury or disease does not result in a compensation claim then, according to official OHS statistics, it did not occur. There are a number of well-known flaws in workers' compensation data which apply to most if not all countries. One flaw is a considerable understatement of occupational disease in compensation claims due to a combination of historical factors (most compensation systems were initially designed with injury rather than disease in mind), problems of clinical diagnosis, limited epidemiological evidence (and court attitudes to this), and the very long gestation period before disease symptoms may become apparent. Another limitation in many countries is that self-employed workers are excluded from compensation coverage. Even where these workers are nominally covered by workers' compensation evidence indicates they will frequently not make claims through ignorance or a fear of losing work. The latter problem also applies to casuals and other contingent workers who are clearly covered by workers' compensation (see James, 1993 and chapters by Mayhew in Mayhew and Peterson, forthcoming). In short, workers' compensation based data seriously understates the overall incidence of disease and injury. Given differences in the use

of contingent workers across different industries and occupations, it cannot be presumed that the level of understatement applies roughly equally across all work-settings.

Even where statistics do include contractors and other contingent workers the impact of their use on OHS may be distorted by recording conventions. For example, a study of the Swedish mining industry (Blank et al, 1995) found that a recent apparent improvement in accident rates was illusory due to the growing use of contractor workers:

'...mining accidents involving contractor workers were not recorded in statistics for the mining industry, but rather in those branches of industry with which their own employer (or "mother" company) are classified...The obtained results suggest that the official statistics do not reflect the risk situation in the branch due to an involvement of contractor workers.' (1995:23)

Finally, workers' compensation claims only represent a fraction of total costs associated with OHS. In Australia (see Foley et al 1995 and Industry Commission, 1995b) and elsewhere it estimated that the total costs of occupational injury and disease (including lost production, social security claims, lost earnings/career potential, agency costs and family/community burdens) is likely to be at least four times (and up to seven times) the costs directly associated with workers' compensation claims.

Overall, the limitations of workers' compensation data in recording injuries/diseases amongst contingent workers will have a number of critical ramifications for OHS policy. First, as the contingent segment of the workforce expands official statistics will become progressively less representative of both broad patterns and more specific industry or intra-sectoral trends in the incidence of occupational illness. Second, as a result workers' compensation data will become a more inaccurate basis for OHS policy development at the level of the firm, industry and economy as a whole. This is especially disturbing given the growing use of risk management/loss control and cost benefit analysis to drive OHS policies at organisational and societal level. These devices are usually underpinned by readily available measures of incidence and costs, most notably workers' compensation claims data.

In an increasing number of countries (such as the USA, Canada and Australia) a regulatory impact assessment based on cost benefit analysis is required before a new OHS standard is introduced. The growth of the contingent component of the workforce will make not only

make such assessments more difficult or inaccurate it will also make it more difficult for the OHS agency to show that the new standard can be effectively implemented as part of that assessment. Finally, a development not unrelated to concerns with loss control has been the merging of prevention and compensation agencies in Australia, Canada and some other countries. This merger not only reinforces the tendency to rely on compensation claims data to drive prevention strategies it also creates a conflict of interest which may inhibit attention to emerging areas of risk (because they represent new sources of claims) and emphasise claims management (especially in relation to growth areas like stress) as distinct from addressing the underlying causes of these problems.

THE IMPLICATIONS OF LABOUR MARKET CHANGES FOR GOVERNMENTS

Prevention

Historically, the OHS regulatory regimes of most industrialised countries have focused on full-time employees in large workplaces. While the OHS laws of most countries purport to cover all workers in practice little compliance activity has been directed to smaller workplaces, subcontractors or more casualised forms of employment. By the late 1980s there was some recognition of changes occurring in business structures and the labour market. Most notably, government agencies in Australia, the USA, Denmark and elsewhere have directed specific attention to the OHS problems of small business. Denmark has taken a rather more strategic approach by incorporating small business within its overall compliance program, rather than simply seeing it as a special case (Jensen, 1996). Agency activities have included the preparation of material specifically designed for small business, targeted awareness campaigns and sponsoring research into OHS problems within small business. Research and experience has indicated that lifting OHS standards in small business require materials and strategies which are quite distinct to those which may be effective in large organisations (see Lamm, 1995 and Mayhew, 1997).

Since the early 1990s the health risks of younger workers have also attracted increased attention, backed in some cases by union initiatives such as the establishment of a Young Worker Hotline by the Labor Council of NSW in May 1997. In March 1997 the UK introduced regulations implementing Articles 6 and 7 of the European Directive on the protection of young people at work (94/33/EC). These regulations required employers to take specific account of young workers lack of experience, awareness and maturity when assessing risks to their health and safety; to use this risk assessment in determining whether a young

worker should be prohibited from certain work; and to inform parents of school-age children of the outcome of the risk assessment and control measures introduced.

There has also been some recognition of the problems associated with contractors, with some agencies (in Australia at least) showing an increased willingness to direct prosecutions in this area and, in rarer instances, producing guidance material for managing contractors. In most countries the definitions of workers and workplace within OHS legislation are sufficiently broad to incorporate subcontractors. In those countries with general duty provisions in their OHS legislation, the risks associated with subcontracting may be covered in a number of ways. For example, under the OHS legislation operating in more Australian jurisdictions the general duty provisions requirement for the maintenance of a safe system of work could be applied to both subcontractors and those employing them (ie failure to manage subcontractors in terms of OHS could be viewed as a failure to maintain a safe system of work even if the work has been outsourced and carried outside the employers premises). A second option is in relation to public safety duty provisions within this legislation. Provisions relating to the health and safety of those other than employees at the worksite could as easily encompass contractors as members of the public visiting a worksite. Finally, in some Australian states OHS legislation contains provisions assigning OHS duties to contractors in specified industries (like construction in Queensland) or provisions which deem employees of subcontractors as employees of the principal employer for the purpose of the Act (as is the case under Victorian legislation). Unfortunately, despite some increase in prosecutions only a very restricted use of has been made of these options (for a discussion of this point in relation to the trucking industry see Mayhew and Quinlan, 1997c). Further, in some countries it appears that the current regulatory apparatus actually discourages major contractors taking on a responsible role because they may avoid legal liability by not assuming this role (for a recent study of the US petrochemical industry which makes this point see Rebitzer, 1995:56).

Governments have also been slow to respond to the growth of home-based work (or more accurately its re-emergence) and telework. There has been little investigation of the OHS problems experienced by these workers and little in the way of dedicated regulation (for a general discussion see de Vries, 1996:69-105). In the Netherlands, the Dutch Working Environment Act provides some coverage for employed but not self-employed teleworkers (de Vries, 1996:91) and it is not clear this means that much even for the former. As noted before, even where home-based workers are nominally employees this may not mean much if

there are no specific regulations and agency activity. The question of how to inspect home-based workplaces remains as much an issue today as it did 100 years ago. In Australia, an industrial award covering OHS aspects of telework by federal public servants was developed in the early 1990s but its impact is likely to be weakened by the shift to a more decentralised industrial relations system (where awards place a less conspicuous role). More recently the German Postal Workers Union concluded an agreement with Deutsch Telekom AG and its mobile phone subsidiary which entails the retention of employee status and a compulsory inspection of the proposed premises (home) to ensure the general requirements for workstations are met (Schroder, 1996:773-6). Though not without importance these collective agreements are unlikely to cover more than the better organised fraction of home-based workers.

Overall, governments and OHS agencies internationally have only recently begun to respond to the challenges posed by changes to labour market structures and work organisation. Even then, the response has been fragmented and in some cases, like Ontario (see Witmer, 1996) the changes have even been used to justify a more de-regulated approach to OHS on the basis that existing regulatory arrangements are being rendered irrelevant. Apart from running directly counter to the evidence presented in this paper, this argument ignores the option of refashioning regulation. In Britain the HSC (1996) recently issued a discussion paper which was one of the first attempts to explicitly consider the OHS regulatory implications of labour market restructuring. The paper noted calls for a reconsideration of laws in the light of the increase of small firms, the self-employed, temporary, part-time and homeworkers. The HSC rejected wholesale exemption of self-employed workers from OHS laws (although specific regulations such as those on Construction, Design and Management introduced in 1995 had this effect by exempting smaller projects, see Mayhew and Quinlan, 1997c).

Neither of the reports just mentioned considered the cost/benefit implications of labour market restructuring. However, a recent report prepared for the Netherlands Ministry of Social Affairs and Employment (van Waarden et al 1997) did just this and while the report contains no detailed calculations it did raise the spectre of a serious deterioration in OHS performance and increased costs if the growth of contingent workers and other changes were not addressed. It is worth considering just a few of these changes and their links to policy development.

Competitive Tendering and Outsourcing within the Public Sector

As already noted, competitive tendering has become an influential policy idea within many industrialised countries. Outsourcing of activities by government agencies can entail a complex array of OHS and public liabilities, as one local government authority highlighted in its submission to a inquiry into public tendering:

'It is difficult to control contractors who elect not to renew their public risk insurance, or do not carry out proper traffic and OHS procedures. Councils can still be left with a hidden responsibility. Where Councils elect to hire equipment intermittently it is likely that the staff the contractor employs may not be adequately trained to work on public roadways where Councils have an implied duty of care. After the accident has occurred, the Council may be left with responsibility because the contractor liquidates' (cited in Industry Commission, 1995a:189).

The Commission recommended these issues could be addressed in pre-qualifications for tenders and tender documentation. It is revealing that the 376 page report (not including appendices) spent just over one page on OHS. In the UK, too, the OHS implications of outsourcing and competitive tendering by government received little recognition with the Deregulation and Contracting Out Bill presented to parliament containing just one clause on OHS regulation (Tombs, 1996:321).

The consequences of these policies are slowly starting to emerge. In Victoria, where competitive tendering is required for at least 50% of local government operations, the OHS agency (WorkCover) was obliged to develop a manual to specifically address poor performance in contractor management by local government (*Occupational Health Newsletter*, 15 May 1997, No.394:2). In his study Britain, Tombs (1996) argues that while the conservative Thatcher government abandoned a direct assault on OHS regulation its pursuit of privatisation/competitive tendering and other de-regulationist policies undermined the ability of the OHS agency to carry out its mandated functions.

Threats to Collaborative and OHS Management Systems Approaches

In the last decade it has been contended that a participatory approach to organisational change is essential to simultaneously achieve improvements in productivity and OHS (for a discussion of this in the European context see Regalia, 1995). While, as Frick (1995, 1996) has observed, arguments about links between profitability and improvements in OHS are

often over-generalised, they still warrant serious consideration. At the same time, it has been increasingly recognised that union presence in the workplace makes both a positive contribution to OHS and is critical to the effective vetting of OHS management/internal control systems which have been developed in a number of countries (Norway, Sweden and Australia) over the past decade.

The growth of contingent forms of employment and smaller and more volatile employment units threaten to undermine policy developments based on building these links by:

- reducing the proportion of workers directly employed by large organisations;
- increasing the number of workers working in isolation or in inadequately planned work-settings and work processes;
- reducing the number of workers covered by mandated participatory mechanisms;
- making it more difficult to address more insidious health risks such as the conscious and accidental transfer of hazardous substances from the workplace to the home, with consequent effects on families (for a recent report on this risk see NIOSH, 1996);
- creating enclaves of contingent workers within large organisations whose incorporation in OHS management/internal control systems will be problematic;
- encouraging competition between different categories of workers which may affect their OHS; and
- weakening union representation and membership.

As Walters (1997:267-8) has observed while the European Framework Directive has had some effect on the provision of preventative services, especially in northern Europe, small and medium sized firms have not been well-served in this regard. The growth in coverage of employees by these services appears to have stalled, if not gone into reverse. Bridging the gap in relation to smaller firms could only be achieved by a commitment of political will and additional economic resources, however, Walters found little evidence of this in the countries he surveyed. Indeed, the general trend was of diminishing public expenditure on OHS (Walters, 1997:266).

Any expansion in contingent employment or employment in smaller workplaces will have other effects on OHS regulation. For example, in many countries, including the UK and Australia, key participatory mechanisms within OHS laws such as the appointment of employee health and safety representatives and establishment of joint workplace committees

either directly specify a minimum workplace size (number of employees) or entail a set of procedures (including the absence of special support provisions) which make it very unlikely that these will develop in small or non-unionised workplaces. Further, subcontractors, casual/temporary and part-time workers are less likely to be involved in participatory structures even when these are in place. A study conducted for the NSW Consultative Committee on Ageing in Australia found that casualisation and uncertainty increased stress levels and inhibited the ability of workers to participate in OHS committees and training (Legge, et al, 1996).

Changes to government policies and regulation in other areas may exacerbate these trends or undermine the effectiveness of regulatory controls. As already noted, the pursuit of economic rationalist programs can undermine the OHS regulatory system. The same applies to mechanisms directly regulating wages and working conditions. In the past, collective labour regimes and union presence established a baseline of minimum wages, maximum hours and other employment conditions that protected (if indirectly) the OHS of workers as well as setting up an institution framework upon which more elaborate, effective and participatory OHS laws could operate. Even countries without participatory mechanisms, there is clear evidence that union presence at the workplace facilitated the raising and resolution of OHS problems by workers (without fear of losing their). There is, indeed, an extensive international literature on the contribution unions make to OHS (for a summary see Quinlan, 1993). Yet, in many countries outside of Scandinavia union density has fallen not only as a consequence of the labour market changes already described, but also due to changes in labour law which have both restricted union rights and established new forms of employment agreements (more localised and enterprise specific bargaining, non-union agreements and individual contracts) which have further weakened the ability of unions to organise and bargain on behalf of workers (see for example Canadian Labour Code Review Taskforce, 1996; Nichols, 1997; and Quinlan, 1996a).

There is evidence in Australia that the decentralisation of industrial relations regulation places has had adverse OHS consequences for many workers, but especially those with little bargaining power - category that includes most in contingent forms of employment. Indeed, enterprise bargaining has been used as a mechanism for work intensification and changes to hours and other conditions with little thought to their OHS consequences (Quinlan, 1996a). In 1994 a federal government survey of 11000 employees covered by enterprise agreements

found that the majority felt that changes introduced through the agreements involved an increase in work effort, a wider range of tasks and more stress. Around 30% of workers believed their job security and family/work trade-offs had deteriorated as opposed to around 12% identifying an improvement (DIR, 1995:376). In 1996 the federal government revised industrial relations to further weaken the role of unions and collective regulation. Since, women are mostly concentrated in jobs with low levels of union organisation and collective regulation they are particularly at risk to the changes just mentioned (see Quinlan, 1996b. For a specific study of the effects of these changes on home and community care workers see Baldock and Mulligan, 1996:69-85). In New Zealand the use of legislation, notably the Employment Contracts Act, to lever greater labour market flexibility has been pursued with even greater vigor.

In concluding this section it is worth observing that the reforms to OHS legislation in many advanced industrialised societies (and especially northern Europe and Australia) since the 1970s were predicated on building a collaborative and participatory approach that relied on informed employees and a high level of union organisation. However, changes to work organisation and labour market structures during the same period have the potential to weaken if not undermine such developments. In his study of British manufacturing in the 1980s, Nichols argued (see Nichols, 1997) that a combination of work intensification, shifts to the balance of class forces (itself a product of changes in labour markets) and weakened unions overwhelming any improvements in injury rates which might be expected to flow from the Health and Safety at Work Act. While labour market de-regulation has been pursued with greater vigor in Britain than elsewhere in Europe, OHS policy-makers and researchers need to take note that changes to labour markets and industrial laws may work against attempts to improve OHS standards in the workplace.

Workers' Compensation

In many countries, including Australia and the USA, self-employed workers are largely excluded from the workers' compensation and there is evidence that only few take out accident insurance to fill gap (or at an adequate level. Mayhew and Peterson, forthcoming). While casual and part-time employees, and those employed by small business or subcontractors, may have a formal entitlement to workers' compensation in practice many injured at work will not make claims due to a combination of ignorance, fear of losing their job, involvement in illegal employment practices and the 'black economy' and the difficulty

of making claims in areas where there is rapid labour and businesses turnover (see James, 1993). In Australia, the National Occupational Health and Safety Commission has estimated that workers' compensation schemes only cover about 75% of workers. A recent survey found that workers' compensation costs per employee in small business were roughly half those of the largest enterprises (Small Business Research Program, 1996:xviii). Despite this, there is concern that a growing number of subcontractors and small businesses are failing to take out workers' compensation cover for their employees although this is compulsory (and criticism of government agencies for failing to address this. See Phelan, 1997:6).

There is already a significant level of cross-subsidization within most industrialised countries whereby work-related injury and disease which falls between the cracks in the employer-funded workers' compensation system is picked up by the public health system, social security and ultimately the taxpayer and the community (including support provided by the families of injured workers). In Australia, the Industry Commission (1995) estimated that of the total costs of occupational illness was \$A20 billion in 1992/3, with workers' compensation costs employers bore around 30% (mainly through workers' compensation premiums), injured workers and their families bore around 30%, and taxpayers around 40% (through social security and health care etc). A similar breakdown seems to apply in other industrialised countries (such as Norway). The Industry Commission (1995:102) also argued that the cost-burden on workers and the community was greater in the case of more serious injury, something which could have important policy consequences.

Indirect Effects on Inequality, Social Deprivation and Health Care Infrastructure

As Brosnan (1996) has observed the growth of marginal and contingent forms of work will almost certainly be associated with a significant widening in inequalities within the labour market and a consequent increase in social deprivation. By itself this will also have indirect effects on occupational health and safety by contributing to a reduction in general health levels amongst some groups of workers and their families, by placing additional demands on government health infrastructure and by reducing the number of workers able to protect themselves through collective regulation and unions. In most advanced industrialised countries the publicly funded health care and insurance system (like the NHS in the UK and Medicare in Australia) picks up those work-related injuries and diseases which fall through the gaps in workers' compensation. This is already substantial. However, the growing number of contingent workers unable to access workers' compensation will significantly increase this

burden. Without this safety net the burden will fall more directly on contingent workers and their families. Most notably, the USA has no comprehensive public health insurance system. One outcome of this has been that health insurance has often been incorporated into the employment conditions of larger employers. The growth of contingent and part-time employment will reduce the component of the workforce with access to the latter. A more volatile labour market and higher level of part-time work will also reduce the number of US workers with access to pension benefits. As a result of these factors, the impact of labour market changes on health inequalities is liable to be more profound, especially in the context of an aging workforce (Campanelli, 1990).

For governments the shift to contingent forms of labour is likely to entail significant externalities. Reviewing international evidence on the contracting out of government services Hodges (1996) argues that cost savings have frequently been exaggerated and may even be negative once employment impacts, additional social security and training costs are taken into account (local government outsourcing in the UK saved this tier of government 125 million annually but cost the national government 250 million, a net cost of 125 million. See Paddon, 1997). In the UK for example, the growth of self-employment has been more than matched by the number of these workers in receipt of social security benefits (which more than doubled between 1981 and 1991) - undoubtedly a consequence of both their low incomes and the difficulty of measuring their income (exacerbated by the black economy). Consistent with this, a study of low paid workers in Australia liable to make calls on social security found that they were concentrated in a number of jobs and industries where contingent workers (especially women and young unskilled workers) were concentrated such as cleaning, textile, clothing, footwear, hospitality and retailing (Buchanan and Watson, 1997:6).

Further, the promotion of outsourcing, self-employment and other forms of labour flexibility can contribute to other regulatory problems including an expansion in the 'black economy', which is a reason why the Australian Taxation Office has recently funded research into these labour market changes (see Vandenheuval and Wooden, 1995). A reduction in the tax base actually compounds the problem that are posed by an increasing number of injured workers and their families claiming social security because, defacto or dejure, they now fall outside the net of workers' compensation.

In sum, there will be a tendency for OHS cost associated with contingent labour to be further externalised from employers to the state via the social security system and public health care system at the same time that the reduction in taxable earnings due to lower income levels amongst such workers and direct tax avoidance (due to the black economy associated with contractors, small business etc) reduces the level of government revenue which must meet these increasing demands.

Summary

In sum, the restructuring of labour markets within industrialised countries is likely to have the following effects on OHS regulation and policies:

- a reduction in the coverage and effectiveness of workers' compensation systems, including occupational health services and rehabilitation systems operating in conjunction with these systems (including those of private insurance providers);
- a reduction in the comprehensiveness and accuracy of official occupational injury and disease statistics based on workers' compensation claim records. The growing level of omissions will include serious injuries (such as fatalities), will make the establishment of work-link to disease even more difficult in some circumstances, and the understatement will affect some industries and activities more than others (due to variations in the use of contingent labour etc);
- the last problem will have serious implications for OHS prevention policies given the (increasing?) tendency to use claims data to drive prevention. Some important areas of risk will be understated if not entirely overlooked;
- there will be an increasing externalisation of costs associated with occupational injury and disease away from employers/workers' compensation insurance to the government/community via social security and the public health system, and to contingent workers and their families;
- this externalisation will make it more difficult to calculate the full costs of occupational illness to the community or for governments to shape OHS policy and outcomes using conventional means;
- although these changes will affect broad categories of workers, the conjunction of particular market and job characteristics will mean an increased level of risk for already vulnerable groups of workers namely the young, the old and women (the changes are not gender neutral and will further undermine EEO/AA/Anti-discrimination laws); and

- undermine the effectiveness of OHS laws both directly and indirectly, via effects on collective employment regimes. It will reduce the coverage and effectiveness of participatory mechanisms in OHS legislation and make the implementation of internal control systems more difficult in large enterprises (using contractors and more transient workers). It will also lead to more small workplaces and situations where the enforcement of quite basic OHS standards is problematic. The changes will place increasing demands on often already overstretched inspectorates in terms of visiting worksites. OHS agencies will need to re-orientate their compliance activities to recognise the problems associated with outsourcing etc;

To address these problems, governments will need to reconfigure existing infrastructure dealing with research and the compilation of statistics, the provision of medical and rehabilitation services as well as rethinking regulatory strategies. Ultimately, given the interconnectedness of most these shifts and free-market policies in various spheres, the regulatory solutions will need to extend beyond the sphere of OHS law and other employment laws. As this paper has tried to argue, the arguments used to justify economic rationalist policies ignore massive externalities. In the sphere of occupational health alone, these externalities warrant a rethink of a head long pursuit of labour market flexibility. As suggested in a recent report to the Netherlands Ministry of Social Affairs and Employment (van Waarden et al, 1997) new and radical forms of state intervention may be required if governments are to re-assert control over OHS policy and outcomes.

THE IMPLICATIONS FOR LABOUR MARKET CHANGES FOR OHS RESEARCH

The foregoing discussion has only highlighted the most apparent impacts of labour market restructuring on OHS. Other effects awaiting investigation include more subtle changes in worker behaviour and morale. For example, a number of studies of contractors and casualised labour (see Jackson and Rasmussen, 1995 and Benson, 1996) have found that these workers have lower levels of organisational commitment (or higher levels of cynicism), poor job satisfaction, high turnover and their use can lead to less harmonious industrial relations. A study by International Survey Research found that job insecurity was a leading cause of the high levels of work dissatisfaction amongst European workers (cited *Workers Health International Newsletter*, July/December 1997:6). It is plausible that changes in commitment, morale and job satisfaction can have adverse effects on OHS. Sarkis (1996) reported findings on correlations between 120 variables and injury rates that became apparent in client studies

by the Reliability Group in the USA, UK, France and New Zealand. The studies revealed that higher job satisfaction and cheerfulness in the workplace were associated with lower injury rates; that careful selection and job placement practices reduced the likelihood of injury; and that lower job autonomy and high stress levels both had adverse effects on injury rates. The growth of contingent labour is also likely to place difficult demands on OHS managers and OHS management systems and runs counter to the more collaborative approach to combining OHS improvements with workplace reform (Quinlan, 1995).

It is not being suggested that some of the factors identified in earlier OHS research, including the array of hazards specific to particular industries and work processes, should be ignored. What is being suggested is that particular employment practices and associated labour market structures - practices and structures undergoing significant change - must be seen as an overlay on this which can have significant effects on OHS. Further, the combinant effects of overlapping characteristics within particular labour market segments, such as young casual workers employed in a franchised or outsourced arrangements in the hospitality industry, need to be recognised and addressed. Just researching one aspect, such the OHS problems of younger workers, may deflect attention from critical causal factors.

Another point following on from the foregoing is that undertaking this research requires broadly based multidisciplinary research teams.

CONCLUSION

A series of interconnected changes to labour markets, employment structures and work organisation within industrialised societies over the last 20 years present a major challenge to OHS in the 1990s and beyond. The cumulative nature of these changes means that their impact is only beginning to be recognised.

This paper does not contend the trends identified have operated with equal strength in all countries. For example, Australia may be, leaving problems of statistical comparability aside, an extreme case in areas like casual employment (aside from New Zealand which appears to have an even more casualised labour market with greater reliance on homeworkers and youth workers. See Brosnan and Walsh). However, this observation does not deflect from the urgent need to investigate the OHS implications of these shifts within the EU and elsewhere. Trend differences amongst EU member countries raise their own problems in terms of co-ordinating policy responses. Further, examples of more extreme shifts within countries like Australia,

with its history of centralised employment regulation not altogether dissimilar to northern Europe (excluding the UK), may also form a useful base for predicting the OHS implications of such developments.

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