

The Big Shift:

The gendered impact of twelve hour shifts on mining communities

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Conference: International Sociological Association,
Session: RC44-03A, Work restructuring and New Strategies
Location/time: 3.30pm, Room 109, Barcelona, Spain, September 5-8, 2008.

Abstract:

This is derived from work for a book we are currently writing on *Women of the Coal Rushes*, and the focus is on the impact that mining companies and changing shift patterns have had on women and communities. It includes the background to the move from five to seven day rosters, and then from eight to twelve hour shifts, why it was done, the perception of general decline in working conditions, and/or how twelve hour shifts have become embedded in the lives of the miners. It considers the impact of these shift patterns on spouses, children, fatigue and well-being of families; the decline of sporting clubs and the subsequent movement of spouses out of the mining communities to the coastal cities through drive-in-drive-out arrangements; implications for road safety and the community; whether the shift changes have been experienced differently by gender between men and women. Who benefits and who loses? We also discuss possible implications of these changes for unionism.

1. Introduction¹

At night, the bright lights that can be seen from the roads of the Bowen Basin in central Queensland, Australia, are not small towns, but non-stop mines. Most mineworkers spend half their working days on the night shift under the glare of the white lights instead of the tropical sun. For throughout most of the Bowen Basin, miners now work twelve hour shifts. A common roster is four twelve-hour days, from around 6am to 6pm, then four off, then four twelve-hour nights, then four off, and start again. Whatever the pattern, it means a lot of night and weekend work, a normal week well over the standard thirty-eight hours, and a lot of penalty rates and overtime to be bought out.

These twelve hour shifts have transformed the mining towns and the lives of the people who live or pass through them. In this paper we tell some of the stories of these people.

2. What does the literature say?

Martin Moore-Ede, Bill Davis and William Sirois 2007 from the Circadian Information Partnership purport to give a balanced assessment of the twelve hour shifts from both a workers and management perspective.² As they see it:

1. the *advantages from the perspective of the employers* are that the company gets increased productivity, reduced errors; increased continuity and accountability; reduced adaptation time; higher project completion rates; reduced absenteeism; lower turnover; improved morale and more "dedicated" employees.
2. And the *disadvantages from employer's perspective* are that there is greater challenge to sustain vigilance; extended exposure to work-related stress; diminished communication and/or personal interaction; unequal distribution of work hours; increased risk of getting out of touch; potential compromise in alertness and performance; increased "moonlighting" (taking extra days off); increased ergonomic risk; more difficult absence coverage and difficulties to change.
3. At the other end of the scale *the advantages from the employee's perspective* are that here are more days off; longer and better quality breaks; fewer consecutive days worked; less commuting required; twice as many weekend days off; improved family and social life; improved morale; more home study time; more frequent "recuperation" or "recovery" days; better use of vacation time; increased utilization of personal time; elimination of double shifts; little effect on overtime opportunities and elimination of evening shifts.

¹ This paper is derived from work for a chapter of a book we are currently writing on *Women of the Coal Rushes*. Small parts appear in 'Black Gold, White Nights and Big Girl's Toys', *Griffith Review*, 22, November 2008 (forthcoming).

²:M. Moore-Ede, W. Davis, and W. Sirois, 'Advantages and Disadvantages of Twelve-Hour Shifts: A Balanced Perspective', *Circadian: 24/7 Workforce Solutions* (Stoneham, MA: Circadian Information Limited Partnership, 2007). This is not the complete list but a synopsis of it.

4. The *disadvantages from an employee's perspective* are that there is limited family and social time during working days; sleep schedule inflexibility; irregular pay weeks; concerns of older workers; reduced tolerance of long commutes; difficulties in scheduling meetings; reduced tolerance to physically demanding jobs; more pay lost when a day is missed; driver fatigue returning home; fast-rotating twelve-hour schedules; longer hours away from home in the evenings and increased percentage of night shifts. (Moore-Ede et al 2007)

Other less enthusiastic writers identify the communities that the twelve hour shift regimes have emerged from for example, Martin Bulmer describes mining towns as 'occupational communit[ies]' defined by a specific culture: that is, the nature of the work, their comparative physical isolation and the nature of the shiftwork.³ These factors help form a relatively self-contained group whose members play and work together. Bulmer, reports that this is a physically exacting, dangerous and uncertain environment. Others like Randy Hodson and Teresa Sullivan suggest that the mining cultures has evolved from when earlier underground mining dominated mining; when individuals depended upon themselves and their 'mates' within a 'shared group responsibility for the work below ground.'⁴ Paul Blyton argues that this tough culture is exacerbated by the isolated 'location of mining operations and that ... shiftwork puts individuals out of synchrony with the leisure activities of others in the community, including their own families'.⁵ Marion Collis comments that this strong work bond amongst crew-mates creates a shared leisure culture where miners play as well as work together. The result of this male bonding was that she identifies a close patriarchal culture and illustrate this with quotes such as "I work with [mates who] are my close friends, so naturally you drink with your close friends."⁶ Others referred to a consistency with masculine, or 'bloke-ish', values in working class society.⁷ The theorist's identification of the nature of these homo social and work bonds means the practical exclusion of women at complex but subordinate levels within the community at work and play.⁸ These are largely peripheral to this paper but impact at the levels

³ M.I.A. Bulmer, 'Sociological Models of the Mining Community', *Sociological Review*, 23/ 1975), 61-92.

⁴ R. Hodson and T. A. Sullivan, *The Social Organisation of Work* (Belmont: Wadsworth Publishing, 1990).

⁵ Paul Blyton, *Changes in Working Time: An International Review* (Beckenham: Croom Helm, 1985). cited in Marion Collis, 'Marital Conflict and Men's Leisure: How Women Negotiate Male Power in a Small Mining Community', *Journal of Sociology*, 35/ 11999), 60.

⁶ Collis, 'Marital Conflict and Men's Leisure: How Women Negotiate Male Power in a Small Mining Community', /. Her *Mineton* study was based on 110 interviews of men and women on the impact of the twelve hour shift in 1995 work.

⁷ M Komarovsky, *Blue-College Marriage*. (New York: Vintage, 1967) at 59, K. Gibson, 'Researching the 'Divorce Roster' with Women in the Coal Communities of Central Queensland', in M.A. Franklin, L.M. Short, and E.K. Teather (eds.), *Country Women at the Crossroads: Perspectives on the Lives of Rural Australian Women in the 1990's* (Armidale: University of New England Press, 1994), 63-75 at 63, Collis, 'Marital Conflict and Men's Leisure: How Women Negotiate Male Power in a Small Mining Community', / at 61-7, S. Sharma and S. Rees, 'Review Article: Consideration Fo the Determinants of Women's Mental Health in Remote Australian Mining Towns', *The Australian Journal of Rural Health*, / 2007) at 2.

⁸ B. Pocock et al., 'Fifty Families: What Unreasonable Hours Are Doing to Australians, Their Families and Their Communities', (Melbourne: Australian Council of Trade Unions, 2001), K. Gibson, 'Hewers of Cake and Drawers of Tea: Women, Industrial Restructuring, and Class Processes on the Coalfields of Central Queensland', *Rethinking Marxism*, 5/ 41992), 29-56.

of the break down of community,⁹ the shattering of families through the break up of marriages in the new drive-in-drive out culture,¹⁰ the 'flexible' nature of contractual work,¹¹ the intensive consecutive rostering¹² and the ameliorative role of the union.¹³

Worker stress, generated by employment conditions, such as this long distance commuting can affect the physical and psychological health of family members. Theorists studying this relationship of the work/home conflict and concluded that satisfaction with a shift schedule is highest when workers are able to have time with family, children, friends and community. For example, Morrison and Clements' study of live-in work arrangements,¹⁴ Beach's analysis of fly-in/fly-out arrangements¹⁵ and Smith and Folkard's study of shift work¹⁶ all emphasized how attitudes to work, and limitations on a worker's ability to spend time with family, can negatively impact on the worker and the family.

We will look at whether this literature relates to our findings but first we look at the rationale for twelve hour shift and why and how they were introduced.

3. Background to the Big Shifts

Twelve hour shifts are not a new phenomena, in Australia, or elsewhere. They have a long history in mining, as noted in this British museum record of occupational definitions from 1849:

Screeners: Men who pass the coals over the skreens into the waggons, and clean them from stones, slates, brasses, &c. They should be paid in proportion to the quantity of dirt picked out from among the coals. Their wages are about 2s. 6d. to 2s. 8d. per day of twelve hours

⁹ Lee Di Milia and Bradley Bowden, 'Drive in Drive out Workforce: The Impact of the Shift Work Changes on the Bowen Basin Coalfields', in Paul Hayland and Gordon Stewart (eds.), (Central Queensland University Conference Publications, 2004).

¹⁰ L. Harbinger, A.W. Parker, and A. Clavarino, 'The Intermittant Husband - Impact of Home and Away Occupations on Wives and Partners', paper given at Queensland Mining Health and Safety Conference, 2002.

¹¹ Komarovsky, *Blue-College Marriage*, R. W. Connell, *Gender and Power* (Cambridge: Polity Press, 1987), B. Wearing, *Gender: The Pain and Pleasure of Difference* (Sydney: Longman Australia, 1996), Janeen Baxter and Michael Alexander, 'Mothers Work-to-Family Strain in Single and Couple Parent Families: The Role of the Job Characteristics and Supports', *Australian Journal of Social Issues*, 43/ Winter2008), 195 (20).

¹² K. Heiler, 'The Struggle for Time: A Review of Extended Shifts in the Tasmanian Mining Industry, Overview Report', (A report prepared for the Tasmanian Government, ACIRRT, 2002).

¹³ K. Heiler, R. Pickersgill, and C. Briggs, 'Working Time Arrangements in the Australian Mining Industry', (Geneva: International Labour Organisation (ILO). Sectoral Activities Programme, 2000).

¹⁴ D..L Morrison and R. Clements, 'The Effect of One Partner's Job Characteristics on the Other Partner's Distress: A Serendipitous, but Naturalistic, Experiment.' *Journal of Occupational and Organisational Psychology*, 70, / 1997), 307-24,.

¹⁵ R. Beach, 'The Impact of Intense Work Schedule on Family Structure: A Case Study of a 4:1 Fly-in/Fly-out Schedule in the Australian Mining Industry', *Challenges and Prospects: Sociology for a New Millenium. TASA Conference Proceedings* (Monash University: Melbourne, 1999).

¹⁶ Lawrence Smith and Simon Folkard, 'The Perceptions and Feelings of Shiftworkers' Partners ', *Ergonomics*, 36/ 1 - 3 (January 1993), 299 - 305

*Trappers: A little boy whose employment consists in opening and shutting a trap-door when required: his wages are 9d. or 10d. per day of twelve hours.*¹⁷

By 1888 the trapper's daily wage had risen to 1s to 1s2d and his shift length had dropped to 8 hours. These little boys are no longer in the mines, but the twelve hour shift is back, after a long period in recess.

Following a series of struggles, coal miners in Queensland and New South Wales miners won a reduction in working hours to a 40 hour week, in tribunal decisions handed down between 1938 and 1941. This 40 hour week was to be worked as five eight hour days. This was seven years before the 40 hour week would become widespread across Australia.¹⁸ Three decades later, in 1970, coal miners won a 35 hour week, with the working day reduced from eight to seven hours.¹⁹ Few other industries achieved this, with most settling for a 38 hour week in the early 1980s. Through this period to the 1980s, the industry operated in an environment of high coal prices and highly regulated industrial relations.²⁰ There was a permanent workforce with limited shiftwork restricted to 8 hours. 'Normal employment standards were for miners to work a maximum of 35 ordinary hours, take five weeks annual leave plus 15 days sick leave'.²¹ As our interviewee Robert said:

We were on thirty-five hour weeks, seven hour days. It was magic. You got to come home. If they wanted to produce for the twenty-four hours they would employ more blokes. It was great.

In 1988, as part of a national 'award restructuring' process, the specialist tribunal granted increased flexibility to employers including an extension of shift lengths from seven to eight hours, with longer shifts by agreement, and continuous production including six-day-a-week coal production. Under pressure from the tribunal, the unions negotiated with employers for new work models with enhanced numerical and functional flexibility. The specialist tribunal was abolished in 1995.²²

Connie Zheng, John Rolfe, Lee Di Mila and Phil Bretherton²³ describes how the new moves toward changes in the industry, rationalised as a movement toward 'flexibility', resulted in a much higher casual and contract workforce and longer hours worked with 'the subsequent changes to the industrial relations arrangement result[ing] in the unions losing significant control over employment conditions. Coal employers were afforded with considerable numerical, functional and temporal flexibility in managing their employees.'

¹⁷ Durham Mining Museum, 'Mining Occupations', <<http://www.dmm.org.uk/educate/mineocc.htm>>, accessed 5/1/07.

¹⁸ Pete Thomas, *The Coalminers of Queensland* (Ipswich: Queensland Colliery Employees Union, 1986) at 355-62.

¹⁹ Pete Thomas, *Miners in the 1970s* (Sydney: Miners Federation, 1983).

²⁰ Di Milia and Bowden, 'Drive in Drive out Workforce: The Impact of the Shift Work Changes on the Bowen Basin Coalfields'.

²¹ P. Waring and M. Barry, 'The Changing Frontier of Control in Coal: Evidence from a Decade of Enterprise Bargaining in the Australian Black Coal Mining Industry', *Australian Bulletin of Labour*, 27/ 32001), 216-37.

²² *Ibid.*.

²³ C. Zheng et al., 'Strategic People Management of Coal Mining Firms in Central Queensland', *Management Research News*, 30/ 192007), 689-704.

From 1996 a conservative (Liberal-National Party) coalition government came into office and introduced legislation that delivered the flexibility in work scheduling and employment that employers had sought. This initially took the form of the *Workplace Relation Act 1996* (and culminated in the radical *Work Choices* legislation that took effect in 2006). With a down turn in the industry in the late 1990s the unions again found themselves exposed to a more difficult environment. Workers and the union were under a barrage of exhortations from mining companies to cut costs, keep the mines going 24 hours a day and night so as to make mining internationally competitive. For example Waring and Barry (2001: p. 222) show that 'in its influential submission to the Productivity Commission's review of Australian coal mining, Rio Tinto argued that the industry suffered from a high cost structure when compared to Australian metalliferous mines and coal mining operations in other countries because of: poor work practices leading to low labour productivity; over-staffing of mines; high employee benefits in terms of wages and leave entitlements; and the absence of competition in rail and port services (Rio Tinto, 1997)'.

Central to this period was the big move to twelve hour shifts. In 1995, roughly one third of mining workplaces had at least some employees on twelve hour shifts, but this was mainly concentrated in metals mining. Coal mines were less likely to have long runs of consecutive shifts . This reflects on the differing strength of the unions to resist this development.²⁴ But during this period most coal mines also moved onto twelve hour shifts. Robert resumes his story:

Then we went onto the eight [hour day]. And then we had the nine day fortnight. And then they decided in '95 or '96 that we would have the twelve-hour shifts. Then they got rid of the [workers] they wanted to get rid of, and they just hand-picked the ones who they wanted to employ back. They know who they want and who they don't want there...They employed stockmen who were used to working a twelve or fourteen-hour shift. It didn't mean a thing to them - it was the dollars.

A major survey of 180 Australian mines with more than 20 employees was undertaken in the middle of this period, in 2000, by Kathryn Heiler, Richard Pickersgill and Chris Briggs (2000, 2003)²⁵ It showed that, by then, a majority of open cut mines and two fifths of underground mines were working 12 hour shifts, including 42 per cent of mines in Queensland and 91 per cent of mines in Western Australia (WA). Less than 2 per cent of coal mines had shifts involving 14 days consecutive work, but this was the case for 28 per cent of non-coal mines. While there are more long distance commute (LDC) mines in WA than Queensland, even amongst the non-LDC mines 12 hour shifts and long consecutive shift patterns are more common in WA than Queensland,²⁶ a reflection of the fact that metals-dominated west coast mines are less unionised than the eastern mining areas and therefore their conditions are longer and more arduous. Unionisation in coal mining

²⁴ Heiler, Pickersgill, and Briggs, 'Working Time Arrangements in the Australian Mining Industry ' . http://www.ilo.org/public/english/dialogue/sector/papers/austrmin/index.htm#_Toc496054098

²⁵ Ibid.Heiler, K, Pickersgill, R. & Briggs, C. 2000, *op cit*.

²⁶ Ibid.

was 78 per cent in 2000, compared to 18 per cent in metals mining. (Comparable figures for 2007 are 57 per cent in coal and 11 per cent in metals mining).²⁷

With increasing hours of work,²⁸ Heiler et al²⁹ showed that 60 per cent of all sites had average ordinary working hours that exceed 40 per week, with the longest working hours in isolated mines with fly-in-fly-out (FIFO) workforces. By 2006, coal mining employees worked an average of 43.8 hours per week and metals mining employees average 46.2 hours per week. Only road transport industry workers, at 48.7 hours per week, averaged longer hours.³⁰ (Think about that next time you're driving.) The industry that had led the move to the 35 hour week was now at the forefront of the shift to longer hours. Heiler et al showed that long working hours were more common in sites with twelve hour shifts. The reason for this was that 'that mandatory overtime is a common feature where twelve hour shifts exist'.³¹

As new mines in remote areas opened up in the 1990s, companies worked out it was cheaper to fly workers in and put them into demountable accommodation, known as 'dongas', for a week or two and then fly them home, rather than build towns with houses and facilities. 'Fly-in, fly-out' was born. According to writers from the Queensland Mining Council (the mining employers' organisation) David Cliff and M. Roche,³² profits are to be made by favouring commuting over new town construction. The negative cost savings arise from the high costs of new buildings and operating new resource towns; absence of government support for the new towns; long lead times for approvals to commence construction; environmental restrictions on new town construction; administrative constraints on mining towns as well as mines and inhibiting cost factors associated with town closures after mines run out. Positive factors are the improvement and safety of aircraft; the relatively lower turnover and absenteeism in mining towns; access to larger pools of qualified labour and the quality and costs of easy communications. Heiler et al show that isolated sites are more likely to be undertaking 'substantial additional hours of overtime (twelve or more per week) than those in a community setting [and] the most common method of undertaking additional overtime is through additional shifts. This is even after 'a key design principle applied to twelve-hour shifts is that they should not be routinely extended by overtime unless in emergency situations'.³³

Along with the move to twelve hour shifts, there are two other major changes in the industry. The first is efforts by many of the coal companies to decollectivise their workforces, by imposing statutory individual contracts ('Australian Workplace Agreements', recently abolished by the new Labor government) on workers and opening new non-union coal mines. The second is a massive growth in the use of

²⁷ Australian Bureau of Statistics, 'Employee Earnings, Benefits and Trade Union Membership, Australia', (Canberra, 6310.0).

²⁸ Waring and Barry, 'The Changing Frontier of Control in Coal: Evidence from a Decade of Enterprise Bargaining in the Australian Black Coal Mining Industry', /.

²⁹ Heiler, Pickersgill, and Briggs, 'Working Time Arrangements in the Australian Mining Industry'.

³⁰ Australian Bureau of Statistics, 'Employee Earnings and Hours, Australia, Unpublished Data', (Canberra, 6306.0).

³¹ Heiler, Pickersgill, and Briggs, 'Working Time Arrangements in the Australian Mining Industry'.

³² D. Cliff and M. Roche, 'Fly in Fly out Operations - Issues and Management.' *Queensland Mining Council and the North* (Townsville and Brisbane: Queensland Mining Council and the North Queensland Branch of the Australian Institute of Mining and Metallurgy, 2001).

³³ Heiler, Pickersgill, and Briggs, 'Working Time Arrangements in the Australian Mining Industry'.

external contractors – not employees of the mining company, but of some other entity. Contractors were 6 per cent of the Queensland coal workforce in 1996; by 2005 they were 47 per cent. They are usually employed on an insecure basis. Some work side by side with mining company employees, doing the same job but on different conditions. Some contractors are unionised, but many are not. Contractors frequently live in ‘donga camps’ (portable accommodation) set up by or on behalf of the mining companies, often on the edge of the mining towns, as do those permanent mineworkers who live away from the towns. It is mostly men who live in the dongas. But there are a small number of mining women who live in the dongas, usually working for contractors.

4. Methodology

We interviewed 114 mining women and men, in ten communities, nine of which were or had been primarily mining communities. We received many comments on the diverse nature of the shifts, the rosters and specifically the twelve hour shifts, and what they were doing to the health and well being of the mining communities. The distribution of our interviews is shown in the table below. Interviewees names have been changed, when quoted, for reasons of privacy.

Table 1: Number and location of interviews by gender and town

Mining Towns studied:	Interviews			People interviewed		
	held in town	held out of town*	total	female	male	total
1. Biloela	9	-	9	8	2	10
2. Moura	17	4	21	25	1	26
3. Blackwater	11	1	12	11	2	13
4. Middlemount	6	-	6	6	3	9
5. Tieri	1	1	2	3	1	4
6. Dysart	11	3	14	13	1	14
7. Moronbah	8	3	11	9	3	12
8. Collinsville	12	1	13	11	5	16
9. Ipswich	3	1	4	5	3	8
10. Mackay**	2	na	2	1	1	2
Total	80	14	94	92	22	114

* includes interviews held in Mackay, Tieri, Yeppoon, Rockhampton, Gladstone, Bowen.

** excludes ‘out of town’ interviews listed above.

Note: More people were interviewed (sometimes up to 3 people in one interview) than interviews.

This is what twelve hour shifts meant to the individual miner or miners spouse, their family and their community. Responses were a mixed bag but only a minority were they unreservedly positive. This is what they said.

5. The positives about the twelve hour shifts

The major positive is that women miners and the wives of miners have more disposable income.³⁴ Twelve hour shifts pay well. Workers can earn more in the Bowen Basin than you could almost anywhere else in Australia with equivalent qualifications. If living frugally, they will save in a way that they could not possibly do otherwise. This is what some dream of doing, but it does not always happen like that. Wilma from Collinsville described how,

when the twelve-hour shifts came in, for the first six months we just spent a lot, we had nothing to show for it. We got a block of land because otherwise it was just going to go.

Many have second houses at the coast, for the money certainly creates a lot of spending power. Marjorie, a mineworker, said:

we've been in Blackwater four years, we own everything we've got except the house – my partner has got a 21 foot boat, I've got a Club Sport, he's got a Nissan, we own a house full of furniture.

Larger blocks of leisure allow people to spend larger blocks of time away from the mine and the mining community. When we asked Kathleen from Middlemount about the advantages of twelve hour shifts and she said:

There's just so much you can do and you can choose ... days off, you can get out, if you feel you need to get out of town, when you've got four days off'.

Nellie, a miner said, 'I like the twelve-hour shift because you get it in four and four, and you get it all over and done with.' She did not mind the twelve hour shift if it was rostered well. For she had recently experienced much worse rosters and hours on the West Coast of Australia where they did not get a break of more than one day unless they took their annual leave:

You don't unless you take a holiday. Twelve-hour-days, if you go to camp, that is what you do. Like when I went to Kalgoorlie, it was a camp job and that is what you did. I could do thirteen-day fortnights if you wanted to work overtime, which I did. Or you did twelve-hour, twelve-day fortnights which is what most other people did. So you only got the two days. That is what I did for years on end.

[Your holidays were calculated on] eight hour days because that was the way it worked. I remember the time I first took holidays because at the time you were only getting six to seven hundred dollars a week. I said I have to take a week off because someone was sick. I had to take a week holiday and I got three hundred and something dollars because it was done on eight-hour days not twelve-hour days...So as I say gold is the worst ...and coal is nothing like that, it is good...

But she did not see the twelve hour shifts as the best roster:

³⁴ from David Peetz and Georgina Murray, 'Black Gold, White Nights and Big Girls Toys', *Griffith Review*, 4/ 22 (November 2008). (forthcoming).

A perfect roster is the one that BHP used to have where you used to have eight-hour shifts and still get good money. I think it was seven days, one turn-around, seven afternoons, two turn-around, seven nights, four off...[In total] you had seven offthat is why BHP had little towns like Dysart and Moranbah and that, because you couldn't do that roster unless you lived there. It is not a roster that you could go flying back to Mackay on your one day or your two days or your four days. That is why you lived there in the towns. That is where you got your houses cheap and all that sort of stuff. But those days are long gone – and the eight hour shifts.

So these are fairly qualified approvals given for the twelve hour shifts based largely on the women's relatively poor experiences elsewhere on shifts that were more onerous and less worker friendly.

On the other hand the mining companies and those who write research for them have no doubt as to the positive effects of the twelve hour shifts. For example, a report published jointly by Pasminco Mines and the University of Queensland said 'There is no evidence... that fatigue as a result of the work rosters and shift cycles worked is a significant contributor to accidents and incidents at Pasminco Century Mines',³⁵

6. The negatives about the twelve hour shifts

The negatives about the new shift and roster regimes were according to Liam, a union activist, felt immediately:

in November 1998 we went to twelve hour shifts and basically the whole world changed. It was a culture shock to everybody with work. And we lost a lot of people at that time which meant infrastructure was gone...

The union, especially at Norwich Park we were given a survival document in '98 and if we didn't accept it they were going to shut the pit and part in parcel of that was twelve hour shifts and it was no different across the whole of the BHP group. That you will have twelve hour shifts.

(a) fatigue

The men and women who are doing twelve hour shifts speak of reaching their physical limits in dealing with or recovering from the fatigue they face. And the limits that humans experience in relation to their lack of sleep manifest in different ways; partial adaptation is possible but this varies with individuals as Tessa describes:

I don't think anyone can work twelve hours effectively, I really don't. These guys who drive trucks – my husband is one of them – they get out of there at

³⁵ C. Leary, D. Cliff, and Pasminco Mines, 'A Study of the Health Aspects of Shift Work and Rosters at the Pasminco Mines', (Mineral Industry Safety and Health Centre/ University of Queensland, nd).

half past six and they are home at seven. You can't tell me that at two o'clock in the morning, they are still functioning in a fit and healthy way... Apparently there are some sort of statistics, I don't know, Des told me, that by the time they have finished that shift they are the equivalent of .05 or .06 [alcohol] – like they have had a couple of drinks. And that is at the end of their shift and that doesn't seem right... You are only getting eight hours sleep maximum before you have to get up and go again and you do that for four days and then you have a few days off and then you come back to a totally opposite shift so your body is on night shift now instead of day shift I don't think that is very healthy.

Researchers Drew Dawson and Kathryn Reid confirm Tessa's husband's comment that the effect of fatigue can be shown to have a similar performance impairment effect as alcohol, and suggest that performance impairment is a huge problem for shift workers but that it comes in different forms depending on the nature of the work, time of day, duration of work and the nature of the roster cycle.³⁶ From a union perspective, interviewee Todd questions the intentions of the companies as they ultimately leave the safety and training of the individual up to him or herself:

When you are tired you are tired. The other thing is, don't put in there that you have rotation of tasks as a control measure, when you have twenty truck drivers in there and one grader. That is a crock ... as a control measure and they would be better off providing other measures. For example, if you are in town and you are in the 'Single man's' [quarters] the company should be providing you with air conditioned rooms and they do but also black shutters - all those other factors. They keep saying that it is the individual's responsibility to stay healthy and safe. But where does the person go if the outside environments aren't being provided for him or her and if someone is putting you on a seven on and seven off roster? The individual has no control over that.

(b) Safety

Researchers indicate that there can be higher incidence and severity of work-related incidents and accidents compared amongst shift workers compared with the non-shift working population.³⁷ Heiler et al argue performance impairment is most likely where work is 'repetitive, mundane and/or requires sustained vigilance. Lack of control or discretion over work tasks or rest schedules compounds the problem'.³⁸ This broadly describes a significant proportion of production work in open cut mines. A loss of situational awareness – identified as a problem with 12 hour shifts by Dawson and Reid³⁹ – was painfully experienced by Wendy a middle-aged just-promoted to permanent miner, who was injured by a fatigued mate, driving a shovel:

³⁶ Drew Dawson and Kathryn Reid, 'Fatigue, Alcohol and Performance Impairment', *Nature*, 388/ (17th July 1997), 1-3.

³⁷ eg R.R. Rosa, 'Extended Workdays and Excessive Fatigue', *Journal of Sleep Research* 4/ Supplement 21995), 51-56, Leslie Olsen and Antonio Ambrogetti, 'Working Harder-Working Dangerously? Fatigue and Performance in Hospitals', *Medical Journal of Australia*, 168/ 1998), 614-16.

³⁸ Heiler, Pickersgill, and Briggs, 'Working Time Arrangements in the Australian Mining Industry'. http://www.ilo.org/public/english/dialogue/sector/papers/austrmin/index.htm#_Toc496054098

³⁹ Dawson and Reid, 'Fatigue, Alcohol and Performance Impairment', /.

It's very hard for me now because my injury is long term...It was a fatigued fellow and he was at work and he hit my truck, and that's the sticky situation.

So what happened?

The face shovel that loads the rear dumps, instead of being this high to load, he came in at this height, which hit me directly in the back of the tray...threw me... seven, eight metres forward even though I was on the brake ... and then he realised what he had done. So he went up ... And when he did that, he caught the back of the tray which sort of pulled it in, as if you were going to tip the load off. Actually pulled the tray up like that – and he let it go and it slammed me again. So I've had two lots of whiplash and I've been four months trying to get over it. I'm just starting to come good now after a week of intensive everything in Brisbane.

And this is basically just because he misjudged...

Yeah, instead of coming in like at a proper height to put the bucket of dirt in the back of the truck, he just went to sleep or whatever. I'm not privy to that information, he just swung around at the one height and went bang into the back of the truck. And you're looking at a 1,000 tonnes of force into the back of you...

So he was halfway through the middle of the night and how far through the week's roster was it?

Oh it was the second lot, like you do two day shifts and three night shifts, so it was the second night shift, the middle night shift, the day before Father's day it was...

So are you saying it was fatigue, exhaustion?

Absolutely! ...Not sleep, just not managing himself. I'm lucky in that I'm back at work, but he hasn't been back at work. He wasn't hurt but apparently it has affected him...I haven't seen him since, and we were good friends, actually, good friends for years.

There are a number of other examples of mine workers reaching their physiological limits through their exposure to the long shift requirements. Naomi, a chemist at the mines, said this about her and other's experiences:

You know you realise that when you have a look at where they are in their cycle of shifts generally that, if they're in night shifts and the end of the roster [it] is usually bad times for accidents and I know companies do a lot to try and manage fatigue but I think the twelve hour shifts are not good. I've worked...the fourteen on and the seven days off and by the end of the fourteen days you were just, you have lost so much coherency and being able to pick up on things and forgetfulness. You'd spend the first day, if not the first two days, after fourteen days of twelve hour shifts just trying to recover. And that was day shift only. That wasn't night shift. So I can imagine with those guys if you add night shift into there as well - it's a wicked blend.

(c) Health

Hayley reports that although she and her husband had made a lot of money out of working twelve hour shifts that they would be very prepared to take a major cut in salary to get on day shift, because problems and disorders experienced by her husband and now compounded by her serious illness which had rendered her unable to ferry her children around to sporting commitments. Now that she was on a reduced licence:

I can't say I hate twelve hour shifts because I feel like we have a great life, yeah. My husband hates nightshift but he hated them on a seven day roster, he hated them when he had to do seven in a row, he really does think that doing two, which is the maximum they do at Peak Downs, two twelve hours is much better than seven eight hours. But our goal is for him to get on day shift; I think he'll be much more even tempered, yeah.

Sometimes it is easier for the spouses than the miners themselves to recognize the existence of the problems created by their twelve hour shifts. As Barbara, a miners wife in Dysart, said:

I am witnessing what is happening to my husband and it is just not good. You know men, used to work until they were sixty-five. Leon's father worked in the sugar mill. He was a loco driver in the crush, and then on the off season they did all their cleaning up...He would work shift work and they worked eight hour shifts. So they used to work hard in those days. It was quite labour intensive work. They didn't have all the machinery. But his dad functioned quite well. Since Leon has been on twelve hour shifts, I have seen him deteriorate. He is so tired all the time. I just think to myself, 'it can't be good. It just can't be good for you'.

With an illness requiring medication, for example, the timing of the rest break which vary from day, afternoon and night shifts; can cause great distress. Barbara said that she did not think she could speak for anyone else when she described their family response to a twelve hour shift:

...It totally confuses your body and another issue that we have got at the moment is that he has to take some medication and is trying to take the medication regularly. I know that if he is on day shift he has to take a tablet and he either has to have food, he either has to take it two hours before food or two hours after. So he is right if he is on day shift, he has to get up at half past four, so he has his breakfast then an by the time he has breakfast and leaves it is just after five o' clock so he cant have his tablet until seven at the earliest. If he is flat out at work then he forgets to take the tablet and so sometimes it is ten before he takes it. When he comes home at night he is stuffed. You know working a twelve-hour shift and whether it is a busy day at work or a boring day at work you are still tired. So he gets home at half past six and I try and have tea ready at half past six so that he can have his tablet before he goes to bed. Most times it is half past eight or nine o' clock and he is half asleep- often asleep in

the lounge chair trying to stay awake to take that tablet. I don't think anyone has really raised this but it is becoming a real issue at the moment with these tablets and he has got to take them because he is on a three month course of medication. He has to have it every twelve hours and it is just not working. I am really struggling trying to help him through that and he goes ballistic every now and again about it and he says nobody thinks about shift workers blah, blah, blah.

The same with dieting you know making sure you eat correctly. That is another thing that shift work interferes with is your eating patterns. There will be days there where he will just get up and graze and then on other days he will have his proper meals.

(d) The family and gender

The gender dimensions of the twelve hour shifts become more apparent when we look at the impact on spouses, children and families. These were affected by: the long duration of the twelve hour shift from dawn to dusk and the general inconvenience of the roster pattern; total shift length, the number of consecutive shifts, the length of breaks between the shifts, and the number of consecutive shifts. For example, Naomi said that, compared to the eight hour shifts:

I think it's probably making it more difficult. I know Kev's dad, when he was in Mt Isa, they worked the three rotating eight hour shifts and it was fantastic. Kev's mum said it was great. They had the three kids at home. And Kev's dad would work his eight hours and they had a semi-normal life, even though he was on shift work. Whereas with the twelve hour shift, you've gone from daylight to dark or vice-versa, they may be only at home for a couple of hours of an afternoon, once they've slept all day, if they're on the night shift. So I think that definitely the move towards the twelve hour shifts ...I don't think it's good for families personally. You can see where the company comes from, in that it trims up their cost...But, I think they ultimately pay for it in the long term and the families pay for it.

Faye describes increased stress, frustration and irritability in her husband's being a long, long time on his feet nominally awake but functionally grumpy:

You don't talk to him. Not that you don't talk to them, but they get grumpy and tired. Then after they have finished their night shift, they will have two days off. And so virtually that first day, it is a wasted day. The second day they are still just getting their bearings. And they then go back and do their next four shifts because he is on a seven-day roster. Then they get six off, but the first day off – they are only getting five days off because the first day is sort of like a sleep day. If you do happen to say "Well you jump in the car and we will drive somewhere", well, they are grumpy and grouchy. It is a long time; it is a long time to be on your feet and be awake.

Some talked about how the starting time of the shift as affecting them and other family members and disrupting normal family rhythms. This what Harriet the

mother of two small children said about her husband's lack of contact with his children because of the hours of his shift:

They get home too late ... Ours are three and two, so they're only still little. They're in bed. When he's on day shift, I do keep them up till 7.30 if they're lucky. And normally he walks in the door. He gives them a kiss. They go to bed. So like they see him for five minutes, you know, so that's not really seeing Dad. And then in the morning, my girls are up early so they might see him for ten or fifteen minutes before he goes to work. Maybe have a shower with him, like have that little bit of time with him. But then night shift, you know, he's sleeping all the time or cranky.

Parental absence through evening shift work can, according to Angela Hattery and Rondell Merrill,⁴⁰ creates high levels of stress and disruption for the families of shift workers; something that troubled Opal:

Tony always reckons that he has missed out on a lot of the kids growing up. Sometimes if you have got the cranky shifts where they are tired and you are trying to keep the kids quiet. When the kids work it out "Okay" and they look at their father "He is over tired I am getting out of here".

Her husband tried to resolve this by spending as much time with the children as he could:

I think it is ridiculous to have twelve hour shifts, but then they have to do that so then they have four days off. So for the four days off Tony and the boys do anything and everything together.

If the problem for many men is they miss seeing their kids, the problem for many women is that they see too much of them – they take on disproportionate family responsibilities. As Edith remarked,

The men in Dysart they go to work and the women are left at home and they have different issues ... it is different for a woman out there because the men have the company of other men going to work everyday whereas the women hasn't and when they were on the twelve-hour shifts doing the twelve-hour shifts the women had to take over the role from the men they had to be a father and make a lot of decisions whereas before the men used to do that. Women take the kids away on soccer carnivals say for instance or football carnivals whereas before that the men would do it and after the twelve-hour shifts the men were always too tired.

She added,

When they turned it into twelve-hour shifts that really ruined it. That was the men were too tired they would go to work for twelve hours and then they would come home and all they would want to do was sleep for twelve hours until it

⁴⁰ A. J. Hattery and R. G. Merrill, 'The Impact of Non-Day and Non-Overlapping Shift Work on Child Development and Marital Quality: A Preliminary Analysis', paper given at American Sociological Association paper, Department of Sociology, Ball State University, 1997. See Heiler et al 2000, op cit. for further information around this point.

was time to go back to work and it was left up to the women to take the kids to all their sporting commitments. So the women took over the male role a lot of the times.

Night shifts and the problems of sleep deficit are common problems that disrupt not just workers but also their family social lives.⁴¹ A 1998 ACIRRT study on work/family impact at the Vickery mine found that the degree to which families would be affected by shift work depended on the stage at which the family was at in their life cycle; the responsibilities of the non-shift working partner, and the structure of the family within the local community.⁴² Families where the female partner worked in paid work too and if they were then juggling work and child care responsibilities the difficulties associated with coping with compressed twelve-hour shifts were very hard hit. As Selena pointed out in her interview:

the main problem there were no facilities there for child care out near the caravan park or on the mine site. You had to go back into town. And if by chance we did have an overlap in our shifts like say we couldn't get both on day shift then Ty would have to go home with his grandfather to town... my dad would be at the mine site and he'd take him home with the crew in his car, take the baby into town and I'd have to pick him up tomorrow. So that was the only child care that I could handle at that time because there wasn't any.

Significantly, the ACIRRT study also found, as reported by Heiler et al, 'a statistically significant greater likelihood that employees whose families and partners were not coping well would also be the ones experiencing more fatigue-related problems at work'⁴³.

(e) Relationship breakdown

The twelve hour shifts engendered specific emotional and social problems relating to spousal relations. Hubinger, Parker and Clavarino in their work on FIFO relationships found that emotionally that women were getting low levels of support where the absence of relatives and family caused social dislocation and created a dependence on friends. They showed that there is extra hardship involved on families when a spouse is involved with work-related absences.⁴⁴ They concluded 'Present levels of anxiety and depression and the lack of support for the group are concerning given the

⁴¹ C. Humm, 'Night-Shift Napping: Evidence Indicates That Short Naps Can Help Staff Working Night Shifts to Function Efficiently. So Why Are Employers Not Allowing Nurses to Sleep During Unpaid Breaks?.' *Nursing Standard* 22./ (17 January 2008), 20(2); .

⁴² ACIRRT (1998) cited in Heiler, Pickersgill, and Briggs, 'Working Time Arrangements in the Australian Mining Industry '.

⁴³ Ibid.

⁴⁴ L. Hubinger, A.W. Parker, and A. Clavarino, 'The Intermittent Husband - Impact of Home and Away Occupations on Wives/Partners', *Queensland Mining Industry Health and Safety Conference* (2002), 81-90. see also J. La Forte, 'Long Distance Commuting in the Mining Industry: A Wives Point of View', *CIM Bulletin*, 84 / 9531991), 65-66, D. Houghton, 'Long Distance Commuting a New Approach to Mining in Australia', *The Geographical Journal* , 159/ 31993), 281-91, K. Story and M. Schrimpton, 'Fly-in Mining Pluses and Minuses of Long Distances Commuting', *The Mining Review* 15/ 6 .1991), 27-35, L. Hogan and P. Berry, 'Mining and Regional Australia: Some Implications for Long Distance Commuting', *Australian Commodities*, . 7/ 42000), 648-59.

extensive experience by the current group in home and away situations and reinforces the need for counselling and support services.⁴⁵

Difficulties for women in mining communities included having to have a relationship with someone too tired to relate to them. Also missed timing with shifts had helped end a relationship that Nellie had had:

Well my relationship only lasted seven years...We ended up that we were in different places. He was working and I wasn't. And that is just the way it happens, you know. But, yes, they are all the same, a lot of the places – especially in the West – you are working or what ever and then you come home for a week, and then you are gone again for twelve-hours shifts. And you are away at camp for four weeks or three weeks

Wilma's marriage had ended through factors compounded by twelve hour shifts:

I have actually been divorced and remarried again and both of them were in the mines.

How did the twelve hour shift affect you?

You become totally independent and you don't rely on the other person at all. Because I was heavily into horses, and I used to go away and compete all the time. And because he was on roster. I used to go away on my own, and you just have an independent life. Sooner or later you just become too different... [its] one of the factors, because you are alone most of the time

As Martin, a Collinsville miner said when questioned about the effects of the twelve hour shift on family life:

I think it has ruined a lot of marriages. We have blokes out in the pit here who travel home to Cairns after four days.

What would that be a six hour drive?

Try eight. These blokes do twelve and a half or thirteen hours I am not sure. Just imagine it. Even though they rotate the shifts how long is it going to be before someone gets killed?

(f) The dangerous drive

As Martin indicates, driving between the mining towns and the coastal towns is an growing phenomenon. Although most who drive to the coast do so at the end of their roster cycle, some do it at the end of each shift, as Rhonda from Collinsville describes:

⁴⁵ Hubinger, Parker, and Clavarino, 'The Intermittent Husband - Impact of Home and Away Occupations on Wives/Partners', at 89.

Yes a lot of them do that. They drive in and drive out. Yes a lot of them do that. They live away. They drive to Bowen every night after work or they drive to Townsville or Charters Towers on their four days off and that is where they live. So it is like the town is full when everyone is working but on their days off it is not...people only come here for work they don't want to live here. They are just coming here for the money and their wives don't want to uproot the family and I think that is what it is. They don't want to change schools and that.

Faye in Dysart says her husband is one of the spoilt ones because she is waiting there with her husband's tea when he comes home tired from a long shift, or a series of long shifts, and has everything ready for him. She went on to say:

you know that guy that has just been killed here recently, and the media said he was going back to Rockie after he just finished work? He was just coming home from a shift that he had just done. Then you have people ringing up the media "Oh they should have a sleep before they leave." [Why would they] have to have a sleep at the mine site before they come home to their own bed? Like Henry said, when you are on night shift, you have got twenty-five kilometres from Norwich to town, and you are getting home and your eyes are [tired]. You know, they have already worked a twelve-hour shift before they have to drive another half an hour home. If you have had a bad night and a bad day before you get there you just don't go to sleep because they say you should go to sleep.

But for many workers, the dangerous drive home is not just twenty five kilometres from the mine site to the mining town, it is a two hundred kilometre drive from the mine, or the camp, to their main home on the coast. An increasing number of mineworkers in the Bowen Basin towns have moved from the mining towns to the coast, or have started work at the mines without moving into the towns, instead moving to or staying at the coast – or sometimes as far away as Brisbane. The Peak Downs Highway is not a particularly badly designed road. The trouble is, people are not designed to drive along it in the condition some do – after several days of twelve hour shifts. Sometimes small crosses, looking hand-made, planted by the side of the road and saying 'accident site' denote the site of a vehicle accident, often a single vehicle accident. They are illustrated with a simple drawing of a car, or cars, in collision.

As Australia is a vast continent the distances possible for the miners to travel are vast: The National Vice President of the CFMEU Andrew Vickers said: I'm aware that people are travelling from mines in Central Queensland to as far away as the Hunter Valley in New South Wales. I'm aware they're travelling to the Gold Coast, to the Sunshine Coast. I'm aware they're travelling by car as far north as Townsville and Cairns.⁴⁶ Olive's husband Tony is part of a large crew of fifty men, of whom only nine are local:

⁴⁶ *Fatal Fatigue* (ABC, 2007), Bridget Smith (dir.). Broadcast: August 31, Stateline.

Day shift starts at 7am, and these fellows swarm into town by 6am and straight out to work on the first day. And on the last day they finish work and they might stop and have a beer, and then they are gone. The four days they work day shifts and they work nights – four or five guys to a house – and they might drink a bit and go to the pubs but that is about it.

As Kate complains, people (including us researchers), are very concerned about road safety because of reduced and variable levels of alertness/concentration on the *road* and the high numbers of fatalities that are now occurring because of the miners leaving tired after their shifts and climbing into cars to return home;

... all this driving you know all this fatigue and that and I believe in it. Coz I drive down those roads. I'm on those roads and I mightn't be fatigued but I don't want someone that is fatigued coming towards me and my family and they're just pushing them further and further. And as I said all these families that are living out of town, blokes work, they're not in their beds, their normal beds or sleeping properly, they go and do all these shifts then the minute they're finished at six in the morning they're on that road, flying to get home because they can't wait.

Meredith discusses how some men cope with it:

Most of the guys car-pool together so that is how they drive home. But I know my brother, he cannot drive home. He cannot drive home after night shift. He sleeps from the time he gets into the car from the time he gets out of the car.

There are different views on the best roster patterns to cope with 12 hour shifts. Union official William said:

Four on and four off to be perfectly honest is most probably worse than the roster than we have got because you are encouraging people to be on the road more often and they have a shorter break than we have got anyway. So you have got, by the time you go into Mackay, you still only have got three days off and by the time you come back you have got another three days off so at least this way you get five days to recover.

Liam said,

And that was why there was so much work on getting a roster that suited. It has been refined at some other pits and some other pits have decided that four on and four off is the way to go. But we have always stuck with what we have got and it wasn't by choice.

Todd, a union official, describes the problem of the drive-in-drive-out (DIDO) situation and how their lapses in concentration and increased errors especially at low circadian point in the early morning cause dangerous driving;

I mean you change people's lifestyles, people will say that they want a lifestyle or change and they are happy to do four on, four off, twelve hour

shifts and seven on and seven off. But you move that family environment to the coast or wherever you live, it puts a lot of pressure on you. It puts a lot of pressure on you, both at home when you get home, and when you are going back to work. Like if you are in the mines, and you are going back to work...now it is leaving town at one or two o'clock in the morning, there is a lot of pressure on them.

(g) The contractors

Town residents are becoming increasingly transitory because of the system of contract workers brought in, paralleling twelve hour shifts. Without twelve hour shifts it would be very difficult for the companies to maintain a high level of contractor involvement in these towns, because the twelve hour shifts enable rosters to be designed that contain several consecutive days break in them. These several days of break in turn enable people who do not normally live in the towns to work as contractors, as they would not be able to afford the cost of accommodation in normal housing and the companies would face much higher accommodation costs. Barbara complained that the contractors had no commitment to the community as such:

I definitely think the twelve hour shifts have damaged the community seriously. But I also think that people who had lived here and who were committed to their community have gone. And there is a lot of contract labour, where people just come out here do their work and go. So you don't have those people who have community pride, not pride but community involvement. So, yes, twelve hour shifts have probably done the most damage, and with that came the contract labour. So therefore you don't have the people who are committed to the well being of the community.

Contractors, and the threats that they pose, to security, services and stability in the community was a deep problem amongst women who were mothers of young children or amongst older women who were miners' wives. As Ellen, for example, explained:

I have seen services withdrawn from the town because we now have contractors on site, and contractors tend to fly in or fly out or drive in or drive out. So they don't bring their families to the town... You just saw the town become very desolate and neglected, because no one was using the facilities in the town, because they were just gone. Then they brought the contractors in, and now you see them – they come in and they work their roster and the moment they are off roster they have gone home. So the men are out here by themselves and you will have maybe five men to a house. So you will see five cars parked on a nature strip. So there are no more lovely gardens and there are no more children running around, because there is something like two maybe three thousand contractors in town. And admittedly, we have a camp there that caters to the contractors but it is mainly the guys that work for BMA that are just there, single, not willing to bring their families out. I just feel now that because I am getting older, I don't enjoy the town as much now, because I have seen a lot of people come and a lot of people go and it takes time to make friends. You just don't make them over night and unless you get out into the community and

really be involved with the community full bore, it can be a very lonely place for someone out there in my situation.

New contract miners come and leave with monotonous regularity leaving a surface tension of insecure relations. As Lana of Moura explains, primarily in relation to the friends that her daughter makes and loses, at school with their children:

There's a lot of new contractors coming in, but we don't socialise with them because they're all down at the barracks and stuff doing their own thing. Yeah, I think probably breaking down the community spirit is mainly I think, is what I found.

With Jess our daughter, she just makes good friends and they leave. And I've had to sit down and explain that to her that "it's part of a mining town sweetheart, you know families move in and they move out and you will lose friends". You know she's lost some really good close friends and she's gotta make new ones again and it's hard for the kids.

The contractor situation was viewed as a security risk by Kathleen:

I'm not saying all contractors are strange people, but some of them are, and you just don't have that same sort of sense of safety that you used to have. I used to walk after dark all the time when I first came here, but I don't anymore. And I know most other people don't either. And most other people that I know with children don't allow their children to just go anywhere anymore. But I mean I suppose that's pretty normal in most towns too, you don't – people look after their children, sort of don't let them roam the way that we used to when we were kids.

(h) Leisure and Community

Many of our respondents suggested that shift work severely damaged organised leisure in the coal towns. The damage commenced with the move from the five day week, as lamented by Hayley, who actually preferred the 12 hour shifts:

it went from five day roster which was Monday to Friday, to seven day roster...it was devastating because people were always at work, you know clubs, community groups, it was hard to get volunteers to all of that. Then twelve hour shifts came in, it was a better roster because people didn't have to do seven night shifts or you know seven day shifts before a break so it was a better roster.

In these mining towns the result of the rosters is that there is now no such thing as a weekend. As Opal noted this is the biggest change in her life in a mining community:

Sports? There is none. Because every one is doing four on and four off, so there is no such thing as the weekend. Whereas when my dad was working you couldn't move in the town for cricket over there, football, they were all fighting

over ovals and there were ovals everywhere in Moranbah. That is the biggest thing here too. There is no such thing as weekends.

Depending on their generation, the respondents looked back on the towns of earlier decades with nostalgia and affection. It is an affection encapsulated by Victor of Moranbah as he eloquently describe the town he knew and loved:

Yeah when I came here there were 2000 people and everybody used to work eight hour shifts, Monday to Friday. They would do overtime on Saturday or Sunday if they wanted to, but rarely anybody did that because sport was played, junior sport was played Saturday, senior sport was played Sunday. Oh no, if you wanted to go out on a Friday night, and you were at a loose end, you just got an esky and put some steak in it and some bread rolls and half a dozen stubbies and just walked down the street. And whoever had a barbecue you just called in and that was it. Introduced yourself and that was it. Yeah, it was a good town to live here, it was shit hot.

Similar experiences were described by Elsa of her life in Moura:

We used to have barbecues at different people's places. All family...it was very family orientated, Moura. You just all went from one place to another. So yes it was "oh well, we'll go and drop in and see them" or "we'll go and have a game of tennis" or whatever. Our husbands played basketball; some of the wives played basketball and started the women's basketball. Others just sat on the sidelines with the kids. So it was a good time to live in Moura.

The twelve hour plus shifts and associated rosters were seen as fundamentally anti community in that the asocial shift times kill of collective community activities. As Harry indicates:

You are getting a lot of hire staff that live in the surrounding communities but it is the rosters that kill the town. A five day week roster is the only roster that really keeps a town running. Like Middlemount here. If everything goes four on and four off I think that will definitely kill this place. As soon as your four days are up they are moving into the coast and they are gone but I would rather live out here with my family. I cannot stay away from them and not see them grow up. A lot of the younger people are starting to realise that but then you have got a lot of the older people who have just moved their families away and they are just staying in the camp or in the houses.

The effect of shift work resulting in leisure times spent with the mates drinking rather than with the family, can according to Collis (1999: 69), be a cause for complaint amongst some of the women. Thomas, who had been working at the Scottsville mines when they had, against considerable pressure, retained a seven and a half hour shift, saw a link between the move to twelve hour shifts and the reinforcement of male-focused leisure activities and consequent pressure on marriages:

That twelve-hour shift killed everything....And the first thing they want to do is go fishing you know they work a twelve-hour shift and they might stay home well that is why there is all that divorce over in Moranbah for a start they have

got it shocking over there. The wife might have wanted to go to a disco and they were going fishing ...there were that many break ups over there it wasn't funny but you can understand it. When you come off that twelve-hour shift the first day is sleeping so you waste a day there and then they want to go fishing and then if you have the mid-week off there is no football. I think that is the worst thing they did.

Or as Barbara says:

I don't know like I have been in conversations where I have made comments about twelve-hour shifts and people just say to me "You will never get rid of twelve-hour shifts - the blokes like them" and I say "No they are sitting around whinging all the time about them and look what it is doing to us." And they say well "It is not really the twelve-hour shifts that they like it is the time off that they get". But what can you do if your kids are at school you have got to stick around or what happens if dad goes away fishing and mum is left here with the kids. Now that creates conflict or upset for the women because they get pinged off.

Beth also spoke out about how when the twelve hour shifts came in the whole family experience of the mining community altered for the worse, and the effects of a major dispute in 2001 over job security and the introduction of new shifts and contractors:

I really loved my time in the mining communities. One difference was that we were in the community as a family, and we could bring up our kids. And you didn't have to lock your doors. And you could go to the next door neighbours if they weren't home, the kids could. It was just a beautiful community to bring up your children with friendship. We started losing that just after the strike, when everyone left town and contractors came in. You lost the family atmosphere – especially the twelve-hour shifts – you lost the family atmosphere.

But as she continues, you can tell that she still considers mining communities to be valuable places.

I would say that I have changed and I have grown and I have learnt a lot in Dysart. I have become a part of a community and I have involved myself in the community, which is a wonderful thing being involved in a community, helping your kids grow in a community. Kids are the best thing in a community, they get you involved – soccer, sports everything...I had just been married. I came to a small coal industry community, had children, you start to realise that there is more to life than wanting a job and some money, there is a community involved and bringing up children, there are friends, group.

7. Unions and companies

Heiler and Pickersgill point out that:

Changing the structure of working time arrangements in the mining industry - especially in the coal industry - is viewed by employers as breaking down one of

the lasting remnants of inflexibility and rigidity associated with high levels of unionism and overly complex award structures. Successes in introducing the kinds of changes to rosters and shift arrangements that employers want are viewed as major victories, and a demonstration that the management agenda is driving working arrangements, rather than that of the unions.’ (H: 28)⁴⁷

The new shift arrangements have significant implications for the relationship between the companies and the unions. They raise a number of challenges for the unions. The extent to which this is a by-product of a cost-cutting strategy, or a deliberate element of it, is open for debate.

(a) A company strategy?

Hubinger et al suggests that the use of LDC (long distance commuting) in the mining industry is now utilised in favour of establishing mining towns because they had ‘economic and political limitations’ and were now no longer mandatory due to the ‘changing regulatory environments’. (2002: 81)⁴⁸ Beth described the role the mining company played in the demise of her town, as part of a deliberate cost-cutting strategies.

We still had the death of a community I suppose you could say... The cause of the death was the company wanted to down size – which they did very well – and gave out the redundancy packages and brought in contractors. They wanted to cut costs. So they brought in contractors, so they didn’t have to, they sold houses...you didn’t have the maintenance. Yes they slowly let everyone else look after themselves, instead of looking after a community that they had brought together...The community is dying which is a sad thing it really is.

For some others, though, the strategy was seen to go beyond cost cutting. Some mining community members thought the twelve hour shifts were a political retaliation by both the companies and the government to break-up the small finely inter-meshed mining communities – particularly, the older more internally cohesive and resistant mining town like Collinsville (referred to as ‘little Moscow’ by the conservative Bjelke-Petersen government), were thought to be targets. This twelve hour shift, with both the government and company support, was seen as a deliberate strategy to try to destroy communities by opening them to long distance commuting travel by miners:

We were a close-knit community and the local Police knew us all and kept us in line and used to take us home and drop us off if we were out too late and stuff like that. Yeah it was good. We had all our pony clubs, we had everything. We had the leagues and the soccer and we had cricket. We had everything. But with the change in the big twelve-hour shifts and the rosters now it has all fallen by the wayside. Mainly I suppose because you could say that we haven’t got a really big community ... like Moranbah, who have got a big population. It might not affect them as much in the sporting side of things

⁴⁷ K. Heiler and R. Rickersgill, 'Shiftwork and Rostering Arrangements in the Australian Mining Industry: An Overview of Key Trends', *Australian Bulletin of Labour*, 27/ 2001), 20-42.

⁴⁸ Hubinger, Parker, and Clavarino, 'The Intermittent Husband - Impact of Home and Away Occupations on Wives/Partners'.

because there is a bigger population, but the smaller communities it's just devastated, it really did. It all depends on which angle you look at it. From the political scene, I think it was a planned thing on the side of the coal owners to really dismantle Collinsville for a start. That's where they started.

This 'drive in drive out' (DIDO) culture has already been raised as a safety issue – tired miners are dying on the roads – but its also is an issue in relation to the mortality of the community because although (or maybe because) management were very much in favour of drive –in–drive–out or the 'live at the coast and work in the mines' solution, it is a death knell to community resources and populations. As George, a mining activist, said after he had attended a few management meetings he was left with this strong suspicion:

I attended a couple of Moomby management meetings. You've got all the companies, all the bloody thing that I got when I was at the company, was saying "look why wouldn't you prefer to live on the coast? Blah, blah, blah" I looked around the room and I said "I'll ask one question. How many blokes in this room have lived in a camp?" Looked around the room, you know, all the [men] are the mining companies and one put his hand up. I said "I thought so", I said "I lived in a camp for a while and tell me if a bloke would prefer a camp than to their families?" And he shut up. Bloody ... that's what they say "oh blokes prefer to live on the coast". Some blokes do, but you will probably find they are the blokes whose families have grown up and kids are off their hands and they are getting towards their retirement. They live on the coast and travel in and out.

(b) Union responses to the 12 hour shifts

One of the union activists, Liam, said he was told at a meeting by a manager that

the unions wanted the twelve hour shifts." ...I said to him "well I would like to go on record that the unions didn't want twelve hour shifts."

However, a complication for the union, especially in addressing the problems created by the 12 hour shifts, is the impact the changes have had on the composition of the unionised workforce. Some of those miners who are unhappy with the 12 hour shifts have left, while only those who would be willing to work under the twelve hour arrangements have entered the mines. This puts the constituency for change in a difficult position, despite the problems with shifts as recognised by the union.

According to Daryl,

We have a lot of new people into the industry, because of accommodation issues that means they have no choice as to whether they bring their families to town or not because there is no housing so they have got to leave their families on the coast.

The other side of that is we have had workers who made that decision themselves to move their families out of town and go to the coast. So we have got two lots of people that have got two different reasons for liking the roster and so you have got to differentiate between that. So you would have to go

through the people who haven't had the opportunity to move their families out to see whether they would like to have their families here. The people who have already moved their families out would be the ones who would want to keep the roster the way it is or even go to seven on and seven off type rosters. That is the very scary thing with that because all people think about is themselves.

One of the interviewees, Robert, suggested that the companies played a Machiavellian hand by seeking to manipulate who holds influence on the union side:

...and it even happens now where companies encourage certain members of their company to take on a union position. They know they are company-oriented and they encourage [them] and that is how they get their feedback about who is sitting in the crib camp whinging about this and whinging about that, fear. But it will turn.

If that is the case, it is not reflected amongst the lodge presidents we spoke to, nor in the more senior positions in the union. Andrew Vickers deputy national president of the CFMEU, demonstrates the union's unhappiness with the status quo:

Employers just can't in 2007 say 'we're goon a stick a coalmine out [there and] we'll provide you with single person accommodation. We don't care where you live; where your family is and you get yourself to and from here the best way you possibly can. It's not our responsibility.' It is their responsibility.⁴⁹

Des from Collinsville reflected the views of many of our respondents who were personally opposed to the 12 hour shifts, but who thought them untouchable. Yet even his straw poll showed a sizeable minority opposed:

You would get rolled - you wouldn't have an eight-hour shift back. Actually, something similar happened. There was probably about twenty of us in a group, and we were doing a 'Train the Trainer' Course. And one of the instructors came and said "I don't know how you did twelve-hours, this is just killing me". And there is a number of people who would be over the moon to go back to eight-hour shifts and so he said "well how many of you in the room that would do it?" And there was fairly good cross section in the room of people who lived away and people who lived here and out of twenty blokes, probably only about six or seven put their hand up and said "Yes, we want eight-hour shifts".

But the gendered dimension of it was brought out very clearly by Victor, who said, when asked how the men would react if it was suggested they vote in a ballot about returning from twelve to eight hour shifts:

Eight hour shifts? They'd cut your throat, they would, they'd cut your throat. Give that vote to the wife, and it would go eight hour shifts.

Linley from Blackwater reinforced the female perspective:

⁴⁹ *Fatal Fatigue* (Smith (dir.).

if I got to vote I would go back to eight-hour shifts rotating because the guys got to do so much more. You just have to look at our sporting organisations how we are having so much trouble filling all the positions. There was a thriving Junior Touch organisation and we can't find a committee now. The netball is the same. The junior rugby league is the same, because so many people are leaving town and it is only the handful of people there that will put their hands up and say 'yes, I will take that on'.

We were reminded of some comments by Betty, an old time resident of Collinsville, who spoke of the old union meetings in the town:

If there was anything going on in dispute between management and workers and there was a lot in those days and there used to be a union meeting for men but part of the hall was set aside for the women. We weren't allowed to speak we weren't allowed to vote but you could listen and you would know for yourself. Not your husband's view of it, listen for yourself. We were treated as people with brain enough to know and, which was very good really we were lucky really a lot of women weren't treated as people with brains.

Ngairie from Moura thought a new approach was now warranted:

I think the wives should have a vote as well. I really do, coz a lot of women aren't happy.

(c) Growing union constraints

The dilemma of dealing with the twelve hour shifts is just one of the problems facing the union. The downside of the high incomes, or the possibility that these incomes provide, is the accruing of otherwise unimaginable levels of debt. Like the rest of the country, but perhaps even more so, the mining towns have become as Beth said

a debt society now, so people try and keep up with the changes a lot more. So you have a commitment and they over-commit.

More sinister readings occurred as in Nellie's analysis of the situation in regard to debt and the advantages that it gives to the company:

Well you look at it and I am a bit cynical, I think it is the plan. You have got all these people coming in and they are all putting themselves into debt. You look at Mackay. When you buy a house in Mackay it is five hundred thousand dollars. And you go out in the mines, you are earning big money, but you have high repayments. So if the boss comes to you and says, 'you are going to have to take a one hundred dollar cut every week', you are going to do it, because you have got the mortgage and you are not going to be one of the ones that stand up and say 'no, not me!'. ...I think that the CFMEU and every other union around have got a big battle on their hands they won't do what they did all those years ago. They won't do it, it is a different society.

But perhaps bigger constraints on union action have been provided by the changes to the industrial relations environment, resulting from changes to legislation introduced by the previous conservative government. Laws passed in 1996 made it easier for companies to put workers on to individual contracts, use external contractors, open non-union mines and target union activists for ‘retrenchment’ – all of which happened in the industry. The ‘WorkChoices’ amendments of 2005 made it even harder, for example by prohibiting any restrictions in collective agreements on the use of contractors, more actively promoting individual contracts, and restricting union access to workplaces. As George said:

legislation is bloody there for them to [make it] hard for organisers to get in there, you know. Right of entry.

Perhaps principal amongst the constraints on unions is the ready availability of contractors to do the work of striking permanent workers. Harry said that,

they can get them in to move coal and things like that. The only thing they can’t do is over drag lines. The ‘staffies’, a lot of them now have dozer tickets and that, so they just get them on loading trains and things like that. So you pretty much have your hands tied now.

The twelve hour shifts also pose logistical problems for the union in accessing their members, and vice versa. As Nellie pointed out:

the last couple [of union meetings], when I have had the problems, they usually have been when we are going to work on night shift. So we have to leave there at a certain time, so we can get to work or what ever. So you can’t hang back and have a chat. So you don’t get to see them.

The union has responded to the challenges created by this new environment by building on its lodge-focused approach which is based on similar principles to those underlying the ‘organising’ model. Despite facing some of the most belligerent anti-union employees in the country, it has succeeded in unionising the majority of workers in a new, originally non-union mine near Tieri. It also became actively involved in the ‘Your Rights at Work’ campaign, on an issue that can rightly be credited with being the principal factor in the defeat of the former Howard government, and made major financial contributions to the cost of such components as the national rallies. Out of over 50 industries, coal mining remains the one with the second highest rate of union density in Australia (behind rail transport). In trend terms, based on data published by the Bureau of Statistics, over the three years to August 2007 it was the only industry to record a significant increase in union density, in the face of WorkChoices (see Figure 1). Yet the difficulties facing the union, with individualising employers, a workforce flooding with contractors, and the divisions caused by shift patterns, are profound.

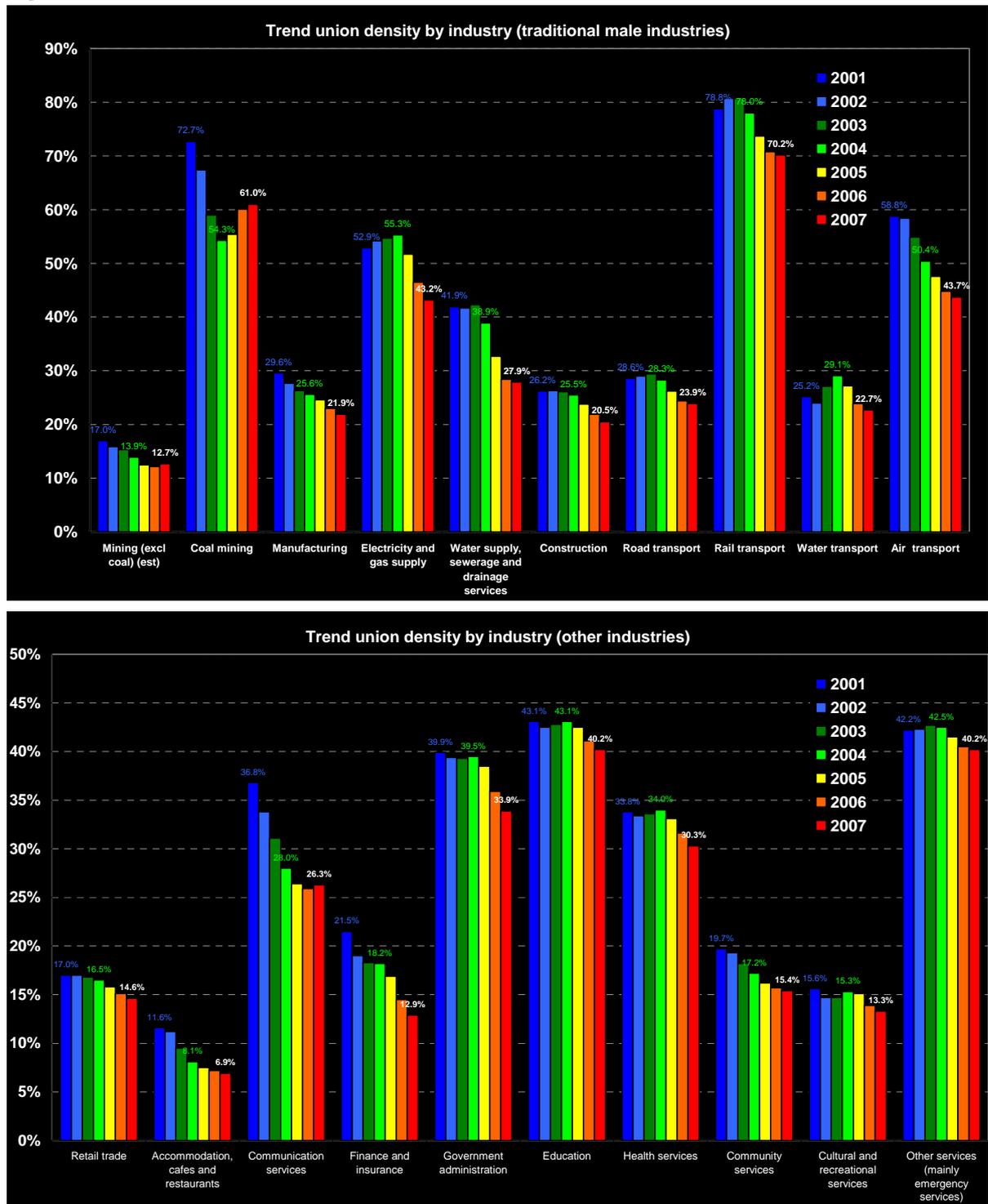
8. Concluding comments

Twelve hour shifts work for management. The shift's length must always make it a central concern for miners, unions and management for although it is not the *only* factor involved with whether or not rosters pose minimum risks, the shift length is highly significant, if not critical. Indeed, the combinations of extended days and extended weekly hours are still not properly charted waters in terms of the fatigue and safety effects, especially within a mining environment has implications for shift design and for ensuring that both shift length and total hours of work are carefully managed. Similarly, roster designs that do not allow time for biological and social preparation and recuperation due to extended work days, or which have long periods of compression in arduous or difficult environments (such as hot, humid underground environments), are highly problematic.

In their response to the new work arrangements, all involved must consider the effects on women- in relationship to her role as a worker, wife, mother and community member - and also must not underestimate her as a contributor to the union. The last words for the moment go to Harry:

Well if it wasn't for Tamsin I probably wouldn't have so much involvement with the union. Every time a meeting comes up, she tells me to go. Even if the kids are crook, she lets me go down and see what is happening and things like that. I reckon it has to work on both sides. Like if it wasn't for her support, I probably wouldn't be working here. It has to be a two way street. She is actually not just a housewife, she keeps me going as well. If it wasn't for her – bugger this place I would be gone.

Figure 1



Source: calculated from unpublished data from ABS Cat No 6306.0 using the methodology on Peetz (2005).

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