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ABSTRACT

The growing prevalence of shift work and non-standard working hours is challenging many taken-for-granted notions about family and household life. This paper examines how rotating shift-schedules shape household strategies with regard to childcare and unpaid domestic work. In 1993-1994 we conducted in-depth interviews with 90 predominantly male newsprint mill-workers and their spouses living in three communities located in different regions of Canada. Our analysis is based on these interviews as well as data collected in a questionnaire survey administered to a much larger sample in each community. We focus on the effects of fixed versus rotating shifts and the extent to which household strategies differ between households with one or two wage-earners. Our findings reveal that the onus for adjusting to shifts fell mainly on the spouses of mill-workers who felt constrained in their own choices regarding employment and childcare by the demanding regimen of their partner's shift schedules. In the vast majority of households a traditional division of labour predominated with regard to both childcare and domestic work. When women quit paid employment to accommodate the schedules of shift-workers and ensure time for the family to be together, traditional values reassert themselves. Surprisingly, we found a high level of satisfaction with current shift schedules despite the significant adjustments to family life they had engendered. By comparing families employed in the same industry but living in three very different communities our analysis underscores the importance of local circumstances in mediating the strategies households deploy with regards to coping with shift-work; especially with regard to childcare.

INTRODUCTION

The growing prevalence of non-standard employment in Canadian labour markets—part-time, short-term, temporary, and contract jobs and own account self-employment (Canada, 1994)—is being accompanied by transformations in working hours and work schedules. Increasingly, workers are being asked to work outside the hours of nine to five and on weekends and holidays (Brayfield, 1995). In their analysis of the 1990 General Social Survey, Le Bourdais and Sauriol (1998) found that about half of all Canadian couples with minor children included two wage earners and of these, 49 percent of men and 37 percent of women regularly worked evenings, nights, or weekends.

The changing configuration of working hours increasingly challenges our taken-for-granted notions about household life. While some household members may welcome non-standard working hours that allow parents to share child care and pursue educational, recreational, and other interests (Hanson and Pratt, 1995), for many, shift work is disruptive (Statistics Canada, 1998). Most industrial shift work is still done by men (Simon, 1990), so many women have little choice but to adapt to and cope with the shift schedules of their partners. The continuing wage gap between men and women may also shape women's reactions to shifts. Notwithstanding their individual and collective abilities to promote change in industrial practices that might ameliorate the negative aspects of contemporary shift schedules, thereby reducing the potential adverse impacts of shifts on household life (Gibson-Graham, 1996), to what extent do women judge that they have any alternatives in the short term but to adapt to shifts?

Current research does not provide answers to this question. Our understanding of the impacts of shift work on family life is incomplete in at least three respects. Shift schedules are diverse. They range from a regular schedule of eight hours of work that start before 9 am or extend beyond 5 pm from Monday to Friday to rotating shifts of up to twelve hours that must be worked on any day of the week including weekends and holidays. While many work schedules are fixed months in advance, in other instances shift schedules are unpredictable, as in the case of casual or on-call workers. The implications for household organization are different in each case. Research has concentrated mainly on fixed schedules, rather than rotating schedules that may present even more disruptions to household life.

The effects of shift work also vary among households depending upon the number and ages of children in the household and men's and women's participation in paid work. For two-earner families in which both partners must accommodate the often competing demands of paid employment and unpaid domestic work (Gill, 1986; Luxton, 1986), shifts may pose particular challenges regarding childcare and housework. A few researchers have wondered whether and to what extent traditional gendered divisions

of labour and responsibility within the household may be altered when men and women are employed on different shifts (Pratt, 1993; Presser, 1989: 524; Presser, 1994).

Local circumstances mediate the strategies households deploy with regards to coping with shift work. For example, the availability of childcare services and informal childcare may affect women's and men's decisions to enter the paid labour market. The types and hours of employment available to women may also influence the division of domestic labour. The extent to which private dissatisfaction with shift schedules and their disruption of household life results in public action may also vary from place to place (Gibson-Graham, 1996). Yet previous studies have rarely considered how local context influences the effects of shift on household life.

This paper examines the effects of shift work in one industry, the newsprint industry,[1] on the division of labour in childcare and domestic work in the households of shift workers employed in three different mills. A comparative analysis of the impacts of shift work addresses the effects of fixed versus rotating shifts and the extent to which the household strategies deployed by mill workers and their households differ between households with one and two wage-earners. Finally, by comparing the strategies of workers and their partners from three different mills located in three different Canadian regions, our analysis also points to reasons for local variations in reactions to shift schedules, which may begin to explain why dissatisfaction is expressed publicly in some places while it remains a private concern in others.

The analysis begins with a brief review of existing literature, highlighting the limited empirical knowledge of the impacts of shift work on household life. The empirical studies from which our qualitative and quantitative data about child care and housework are drawn are then described briefly. Next, the general characteristics of the three places and the history of shifts in the newsprint mill in each town are outlined; this is followed by a detailed comparison of the impacts of shifts on childcare and housework. The paper ends with a brief discussion of the main empirical findings and their implications for our understanding of how households deal with the imperatives of contemporary industrial production and the work schedules it entails.

SHIFT WORK AND DOMESTIC LIFE: EXISTING LITERATURE

Despite the quantitative importance of shift work, there is surprisingly little research on how shift work patterns affect the organization of family time and divisions of household labour. Most studies have focussed on the social-psychological impacts

[1] As a continuous process industry, the newsprint industry is one in which production costs are reduced by 24-hour operation, so there is a long history of shift work in the industry. Recently, in many North American mills, the schedule of shifts has changed from 8-hour shifts to 12-hour shifts with increasing emphasis on rotating shifts (Holmes 1997).

of shift work on individual male blue-collar workers,[2] with only occasional and generally hypothetical references to disruptions to spouses' routines or family life, usually focusing on interpersonal relations (Dunham, 1977; Finn, 1981; Simon, 1981). Back in 1984, Presser (1984: 577) noted that "our knowledge of the dynamics of shift work within a family context is minimal"; over a decade later, detailed studies of how changes in shift patterns affect family and social life are still lacking (Hornberger & Knauth, 1995). Moreover, the quantitative techniques used by most studies are unable to explore cause and effect links beyond what can be inferred from measures of statistical association (see Sayer, 1992: 190ff.). In addition, data limitations usually lead to a blurring of distinctions between situations in which workers work fixed shifts (e.g. night shift) and those in which rotating shifts are the norm (Brayfield, 1995; LeBourdais and Sauriaol, 1998). Furthermore, most considerations of the effects of shift work on family life abstract from the local context that makes shifts more or less "liveable"; yet, as Simon (1990: 347) points out:

> The more common and visible shift work is in a community, the more likely it is that the community will provide cultural activities, childcare, recreational opportunities, shopping, medical and dental services, and other resources at times convenient for the person who works non-standard hours (Simon, 1990: 347).

It is telling that this comment, as well as an earlier review essay by Dunham (1977), refers only to the person who works shifts, and not to that person's spouse or partner.

Gibson's work (1992a; 1992b) constitutes a significant exception to these lacunae, reinforcing and amplifying fragmentary findings of earlier work reviewed by Presser (1984). She explored how the introduction of a new rotating shift in isolated Australian coal-mining communities involving 7 straight days of work including compulsory overtime and never more than one weekend off per month affected families accustomed to having time together on weekends.[3] She found that the new schedule left less time for family activities, especially when there were young children, as well as for activities with other friends. It not only disrupted the way women did household domestic labour but also increased their share of it. Women took on most of the responsibility for children's leisure activities, while men's role in the family tended to be stripped of its companionship aspect and reduced to the economic "breadwinner" function. Although some men got more involved in their children's school activities, it would seem that on the whole the "7-day roster" studied by Gibson reinforced or even caricatured traditional gendered divisions of labour between the "provider" and the "nurturer".

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[2] Still the most prevalent type of shift worker although shift work is growing very rapidly among women in service industries (see e.g. Wharton 1994).

[3] The new system was devised as a means to move the mines into continuous production mode without hiring new workers (Gibson 1992b).

Gibson's study concerned a locale where many wives of shift workers did not have paid employment outside the home, however, the growing number of dual-earner households has generated new questions about how women and men combine paid and unpaid labour in the household when at least one of them works shifts (Luxton, 1986; Brayfield, 1995; Wharton, 1994; Le Bourdais and Sauriol, 1998). Whereas the earlier studies took women's responsibilities for unpaid household-based responsibilities for granted, this has begun to change. In this context, shift working has received some attention, mainly with respect to childcare. Several studies indicate that shift workers rely more on other family members and relatives for childcare and less on formal daycare services (Presser, 1986; Weiss & Leiss, 1988; Lapierre-Adamcyck & Marcil-Gratton, 1995), which is to be expected given the limited range of hours often offered by formal daycare services (Friendly et al., 1989). In the United States, men working non-day shifts are more likely to take on sole responsibility for childcare of pre-schoolers when their wives are at work than are men working day shifts, according to the 1990 National Child Care Survey (Brayfield, 1995). Several American and Canadian surveys have identified the existence of "sequential scheduling" in which parents deliberately set out to work different shifts so as to minimize recourse to extra-familial childcare (Morgan, 1981; Lero et al., 1992; Hanson & Pratt, 1995: 135-139); this has been interpreted as a strategy for enabling each parent to spend time with the children as well as providing what they see as quality child care at the least cost.

While the performance of childcare by shift-working men may indicate some blurring of traditional, strictly demarcated gender roles within the home (Pratt, 1993: Presser, 1994), the weight of evidence suggests that greater sharing of childcare between parents is more likely to be an outcome of rather than a reason for fathers taking on shift work (Presser, 1989). Generally, shift work is imposed on families who subsequently may try to take advantage of shift schedules to care for children at home (Lapierre-Adamcyck & Marcil-Gratton, 1995, Statistics Canada, 1998). Presser (1989) reports that when the 1985 US Current Population Survey asked parents who worked fixed non-day shifts and had children under 6 why they worked these hours, almost three-quarters of the fathers said it was because "their employment situation left them with no choice as to their hours" whereas more than half of the mothers said they opted for these hours for childcare or other family reasons.[4] Similar findings are reported in other American research (Simon, 1990).

There appears, then, to be very little blurring of "patriarchy at work" when it comes to industries organized on a shift work basis: the shift-work schedule of the male "breadwinner" essentially determines who does the "adapting", and how. In general, as

[4] In the CPS, the question was not asked of mothers who worked days while their husbands worked non-days.

an article in a human resources periodical bluntly puts it, "most shift workers do not have a choice about working shifts, because they usually don't have the seniority to transfer to regular day shifts or the education to find other jobs that would pay as well" (Overman, 1993: 47).[5] Thus, what at first sight appear to be pragmatic "family strategies" for coping with shift work usually turn out to be primarily adaptations made by the wife and mother to male shift schedules (see Hanson and Pratt, 1995: 137-138).[6] It is she who arranges her employment hours around the schedules of her husband (see O'Connell, 1993, cited in Folk and Yi, 1994: 678-679), and around those of her children, if they are school-aged (Rose, 1993), while maintaining primary responsibility for domestic labour (Wharton, 1994).

As to housework in families of shift-workers, this issue must first be placed in its wider context. The broader literature on divisions of household tasks indicates that gender ideologies by which domestic work is constructed as women's work are at the root of the gender division of household labour. Nonetheless, different models of task division have been identified, making generalization difficult (Ferree, 1991). Men's involvement in domestic work is affected by several factors including their partners' employment, gender ideologies, and work schedules. In households where women do paid work outside the home, the gender gap in housework is smaller. Paid employment reduces the time available for women to do housework so women who work in the paid labour force do fewer hours of housework than full-time homemakers (Hochschild, 1989). Paid work may also influence gender ideologies in the household. Women who earn as much or more than their partners tend to have greater power and influence on household decisions (Blumstein and Schwartz, 1991; Brayfield, 1992). Egalitarian views of men's and women's domestic roles may result in reducing the gender gap (Presser, 1994; Bernier, Laflamme & Zhou, 1996; Rose and Villeneuve, 1998). Whether as a result of more egalitarian ideologies or greater financial resources, women in professional occupations are also more likely to substitute hired domestic services for their own unpaid labour (Gregson and Lowe, 1994). They may also accept reduced standards of household order and cleanliness (Presser, 1994). Clement and Myles (1994: 197-199) note that working-class men are more likely than professional men to share tasks, particularly when married to women in middle-class occupations. Nevertheless, a comparison of married mothers and fathers with full-time paid employment and in the 25-44 age group in Canada indicates that the former still spend much more time on household tasks, as well as doing more childcare (Frederick, 1995).

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[5] Compared with older and more senior workers, shiftworkers who are parents of young children tend to be younger with little seniority in the workplace. Of all shiftworkers, the young and less senior are least likely to have much choice about their shift schedules.

[6] See Wolf (1991) for a trenchant critique of the notion of household strategy.

We know even less about how employment schedules affect the gender division of housework than we do about their impact on childcare. Survey research in the United States indicates that while only a minority of two-earner couples share domestic tasks in an egalitarian way, households with shift workers are more inclined to do so (Blair & Lichter, 1991). The blurring of gender roles reported earlier for childcare when mothers and fathers work different shifts extends to housework. Shift-working fathers' increased involvement in childcare is associated with increased involvement in housework (Presser, 1994). Fathers do not substitute time spent on childcare for housework, rather men who do more childcare also do more housework. Husbands who are home alone while their wives are working spend more hours on housework than husbands who have the same work schedules as their partners (Presser, 1994).

Finally, existing research reveals little about the specific effects of rotating shift schedules compared with those of fixed shifts, despite their quantitative importance—a recent study using the US National Child Care Survey for 1990 found that rotating shifts were worked by 29% of fathers of children under 13 in dual-earner families, and by 25% of mothers (Brayfield, 1995). Some authors suggest that when one member of a couple works rotating shifts, sequential childcare by the mother and father is unlikely to be feasible (Presser, 1989), increasing the likelihood of recourse to multiple childcare arrangements (Folk and Yi, 1994). The task of coordinating childcare generally falls to the mother (Luxton, 1986; Lamphere, 1991: 29-30;). Fathers' rotating shifts may be most disruptive when the schedule is not known more than a few weeks ahead of time (Simon, 1990). Our study addresses the paucity of empirical work about the impact of rotating shifts by a comparative analysis of the impacts of shifts on workers and their families in three Canadian communities.

SHIFT WORK AND DOMESTIC WORK IN CASE STUDY COMMUNITIES

In 1993-1994 we conducted in-depth interviews with about 90 almost exclusively male newsprint production workers and their spouses/partners, living in three communities in different parts of Canada. The information garnered from these interviews complemented data from a questionnaire administered to a larger sample, enabling us to address some of the gaps in our understanding of how rotating shift schedules shape household strategies with respect to childcare and unpaid domestic work.[7] The discussion of household labour in the interviews was part of a larger study designed to investigate the diverse ways that households and communities have been

[7] We also collected data on patterns of leisure and home-improvement projects, but, for reasons of space and coherence, this material is not presented here.

shaped by and have shaped the restructuring of the newsprint industry (Mackenzie and Norcliffe, 1997).[8]

The questionnaire survey asked millworkers' partners to enumerate the types of domestic labour that occurred in the household and to identify who did them. Three types of domestic work were emphasized: household maintenance and renovations, housework, and child care. Measures of household labour are controversial (Doucet, 1996; Purcell, 1996). A recent study suggests that time diary data may provide the most accurate information about the nature of domestic work, its duration, and scheduling (Wright et al., 1992). The measures used here are cruder, but they do provide a comprehensive indication of the types of domestic work done in these households and the division of responsibilities.

Our focus here is primarily on the impacts of a rotating shift work schedule on other spheres of life, and only secondarily on how millworkers' experiences in their families and communities affect their strategies with respect to their workplace. This should not be construed as economic determinism, but as a realistic perspective for the contexts we studied—a high-wage male-dominated continuous process industry, undergoing rapid restructuring involving technological change, increasingly flexible labour deployment, and at the national level, the shedding of a large percentage of its workforce (Holmes, 1997). Importantly, the families lived in places where there were few or no alternative forms of employment offering equivalent remuneration.

THE THREE COMMUNITIES: GENERAL CHARACTERISTICS

We begin by presenting some general characteristics of the three newsprint mills and the communities they are embedded in, which are likely to affect the ways the shift system operates and how households deal with shifts. The mills in Corner Brook, on the west coast of Newfoundland, and Gatineau, on the north shore of the Ottawa River in western Québec (the Outaouais region), date from the 1920s and were originally the nuclei of one-industry towns (Norcliffe and Bates, 1997; Rose and Villemaire, 1997). Today, Corner Brook is a regional service centre with a population of ove 32 000 while Gatineau is a sprawling and diffuse municipality of some 92 000 inhabitants on the fringes of Canada's fourth largest metropolitan region and national capital, the Ottawa (Ontario)-Hull (Quebec) agglomeration. The mill at Whitecourt,

[8] Our decision to interview both husband and wife together may have generated narratives that appeared more consensual than they really were, however, the joint interview also provided an opportunity to observe the dynamic of the couple and its implications for the power relations that affect the gender division of household labour. Moreover, the joint nature of the interview did not preclude partners from expressing different opinions that come through clearly in a number of transcripts (see Doucet, 1996).

Alberta—located 160km from Edmonton toward the Alaska Highway—is virtually new; it opened in 1990 in a resource-based community of just under 7000 inhabitants that already had a sawmill, pulp mill and oil and gas operations. Whereas millworkers at Gatineau and Corner Brook are drawn largely from families with local or regional roots and with long traditions of work in the pulp and paper or ancillary industries, since Whitecourt was a "greenfield" site a substantial proportion of its workforce had to be recruited from elsewhere (Preston, Holmes and Williams, 1997). The Whitecourt millworker families are thus much less likely to have locally-based family support networks to draw on for needs such as childcare than those in Gatineau or Corner Brook, and so are likely to depend more on formal childcare services when one or other parent is not available. There may be variations from place to place in gender role ideologies due to the age of the workforce in each mill. Existing research indicates that younger men and women generally have less traditional gender role ideologies and more egalitarian views about task-sharing (Hochschild, 1989). The Whitecourt mill is one of the few mills in Canada with a relatively young workforce, whereas the majority of workers in Corner Brook and Gatineau are considerably older.

The local/regional job markets differ considerably between the three communities. Over the past twenty years, the respective provincial governments have promoted economic diversification in both Whitecourt and Corner Brook. In the former, this has entailed growth in the forestry sector with relatively few job opportunities for women. In the latter, substantial numbers of government and parapublic sector (education, health) jobs augmented jobs in new commercial activities, creating new openings for women. Gatineau's proximity (15 minutes by car) to downtown Ottawa-Hull encourages large numbers of women to commute to relatively well-paid federal government jobs as well as to jobs in a variety of other sectors in this diversified metropolitan area. Consequently, in 1991 in Gatineau the labour force participation rate of women with children at home was 72.7%, whereas the corresponding figures for Corner Brook and Whitecourt were 65% and 72.4%. Among women whose children were of preschool age 76.5% of those in Gatineau were in the labour force, in Corner Brook 79%, whereas in Whitecourt only 63.9% (Statistics Canada, 1991 Census of Population, cat. 95-326, Table 1), indicating that in the latter mothers of young children are somewhat more likely to withdraw from the labour market. Indicative of generational differences among mothers, in both Gatineau and Corner Brook mothers of young children are more likely to participate in the labour market than mothers of older children.

In both Gatineau and Corner Brook, opportunities for semi-skilled male employment at rates anywhere near the high wages paid in the pulp and paper industry were few and far between, since neither is located in a region of traditional manufacturing and jobs were being severely cut throughout the pulp and paper and forestry sectors in Québec's Outaouais region in the early 1990s (Rose and Villemaire,

1997; Norcliffe and Bates, 1997), while for Whitecourt workers alternative prospects were subject to the boom-bust cycles of the oil and gas industries. In all three places, millworker families were highly dependent on the paper mill for remunerative male employment although in Gatineau there was a greater likelihood of a substantial female contribution to household income than in the other two communities.

There are major differences between the three communities in the availability of formal childcare and related services that might mitigate or otherwise influence the impacts of shifts on family life. For example, at the time of our study, Corner Brook had only one daycare centre listed in the "Yellow Pages", and four other licenced centres (whose operators complained about lack of demand!). Following embedded Newfoundland traditions, extended families still play an important role in childcare during the preschool years and in supervising children at the end of the school day and before their parents return home from work. In contrast, Whitecourt is well supplied with childcare services. Three organized services provide group and in-home licensed care for pre-school and school-age children. While shift schedules may reduce the usefulness of the group daycare facility which is open from 7:00 am until 6:00 pm, both in-home child care services encourage parents to negotiate hours of care with each provider. Other forms of childcare include a cooperative play program organized by parents (mainly mothers) and a cooperative nursery school that operates a half-day program for preschool age children. In the Gatineau case, there were 11 formal daycare centres within the city limits at the time of our study, mostly parent-controlled cooperatives receiving a government operating subsidy, although as in Whitecourt, these do not offer "off-hours" care. In addition, there were 300 places in licensed family home daycare, and before- and after-school programs for children aged 12 and under were available in 15 schools. It should be noted that none of the mills themselves organize programs to help employees with childcare needs.[9] Both Whitecourt and Gatineau also have numerous recreational programs after school, on the weekends and during holiday periods for school-age children.

THE THREE COMMUNITIES: SHIFT WORK PAST AND PRESENT

At Gatineau and Corner Brook, many mill workers and their wives are the children and even grandchildren of mill workers, so the rhythm of shift work has permeated their lives for a long time. As one interviewee recollected of her father's work at the Corner Brook mill: "I could picture him working hard. He worked the shifts, the day shift, the 4 to 12, and the 12 to 8.... I remember him sleeping a lot, like in the

[9] A few such schemes do exist for shiftworkers in the US and Canada (see Mayfield, 1990; Stam and Sodano, 1991).

daytime. (June, CB022)".[10] This is less true of Whitecourt, although more than half of mill workers were recruited from other pulp and paper mills or sawmills which generally worked shifts, so even there some employees were used to life with shifts.

Until the recent past, although paper mills operated 24 hours a day, workers benefited from scheduled shutdowns on Sundays and statutory holidays. However, in the past couple of decades Canadian mills have come under growing pressure to increase their competitive efficiency by minimizing the production down-time and output-quality disruptions caused by the start-ups and shut-downs of increasingly sophisticated equipment; it became necessary to operate as close as possible to 365 days per year at as little additional cost as possible (Holmes, 1997). Worker resistance to these pressures was sometimes strong: the Gatineau unions, for example, successfully held out against Sunday operations until the early 1960s, and against the loss of most statutory holidays until the early 1990s (Rose and Villemaire, 1997). By the time of our study, the Corner Brook and Gatineau mills were nonetheless down to two short holiday closures per year while the Whitecourt mill has from the outset attempted to operate continuously, 365 days of the year, with no holiday closures.

A number of interviewees had also experienced changes in their shift schedules over the years. Until recently, shift schedules in continuous process industries were designed according to the simplest mathematical solution for maintaining continuous production, which generally meant working a rotating eight-hour schedule, working 21 out of 28 days and with one long weekend per month (Stam & Sodano, 1991). In Gatineau for instance, most departments at the mill used to operate under a system called the 7-2, which involved working either 5 or 7 straight days on each part of the rotation, with two sometimes consecutive and sometimes non-consecutive days off except for, once a month, 4 days off always including a weekend. At Corner Brook, a similar system, involving a 5 day rotation, operated until 1988.

The supposed efficiency of this traditional shift schedule has been rethought in recent years due to the high costs of worker dissatisfaction, absenteeism—widespread among the Gatineau workforce under the 7-2 system, for example—health problems, and associated safety problems (Stam & Sodano, 1991). Thus at Gatineau in the mid-1980s, unions and management agreed to move, in most production departments, to a new shift system, which, while retaining an 8 hour shift, gave the workers more breaks resembling the type of "normal weekend" so missed by those interviewed in the Gibson study (1992b). Known as the 6-3, meaning 6 days on and 3 days off, with a backwards rotation from midnight to 8am, 4pm to midnight, then 8am to 4pm, this system always gives workers two weekends off per month (either Fri.-Sat.-Sun. or Sat.-Sun.-Mon.). The schedule is given out a full year in advance.

[10] All interviewee names are pseudonyms.

The Corner Brook mill shifted to a 12 hour shift system as a result of a lengthy negotiation process, finally resolved during a 1988 strike (Norcliffe and Bates, 1997). The new schedule involved two 12-hour day shifts, 24 hours off, then two 12-hour night shifts, followed by four days off. This system (called the 2-2-4) was also implemented at Whitecourt from the outset. In general, management in continuous process industries increasingly favours 12 hour shift systems because fewer shift changes reduce mistakes and breakages and it is believed that longer shifts can improve communication and workers' sense of responsibility (Overman, 1993). In the Corner Brook case, this change was also much desired by workers because it reduced the number of consecutive night shifts and would give them longer blocks of free time to work on projects at home or take time out to go hunting or fishing.

On the whole, production workers who had experienced the current shift pattern at each mill and the previous system—or, in the case of Whitecourt, a different kind of shift system at their previous workplace—expressed a surprising degree of satisfaction when asked general questions about the shift system. On the whole, with the exception of some elderly workers at Corner Brook, those who worked 12 hour shifts found them less exhausting:

> That's something we should have had 30 years ago. With this 12 hour shift you have a lot more family life, a lot more free time to yourself. It's 100% better. Five night shifts, they were murder, but now you only got to do two. [Fred, CB 005]

Such favourable reactions to the new shift patterns must be placed in the context of workers' previous experiences. Several of the interviewees had experienced health problems as a result of the irregularity of previous shift patterns such as the 7-2. Many of the Whitecourt workers had previously endured the unpredictable work patterns of the oil and gas industry; in contrast, the attraction of the Whitecourt mill was

> the stability of the hours. I knew when I left here and I pulled into ANC's [Alberta Newsprint Company] yards that when I finished my shift, that was where I was gonna be. Get in my car and go home. (Ken, W16)

Similarly, the 6-3 was a vast improvement on what a number of our Gatineau interviewees had experienced—not just once in their career at the mill, but repeatedly as the mill went through a reorganization process with associated reassignments and demotions—namely schedules even more irregular than the hated 7-2, as casual worker or on-call—which meant being summoned to your shift with at best a week's and at worst only an hour's notice. As we shall see below, however, a closer examination of how shift working affected gendered divisions of labour around childcare and housework reveals a far more nuanced portrait than the constructed discourse of general satisfaction suggests.

There are also marked differences between the mills in the amount of overtime worked in addition to the basic shift[11] Overtime creates significant irregularities in millworkers' shift schedules that may have important consequences for family and community life, as well as for leisure activities (Rose and Villemaire, 1997). While we concentrate on the impact of shift work on family life, space limitations preclude detailed discussion of the impact of overtime.

SHIFT WORK AND CHILDCARE

A fundamental parameter in how fathers' shift work at the paper mills shaped the ways families dealt with childcare is clearly the decisions that women make concerning labour force participation while their children are young. These decisions are shaped in part by local opportunities for jobs and by the possibilities of arranging childcare through the formal system or through relatives, but also by broader considerations as to the most appropriate ways of dealing with situations where fathers' shift work alters the "normal" patterns of family life.

Some women opt not to take on paid employment because of their husbands' shifts. For example, Alice (G26), aged 46 at the time of the interview, quit her job at a life insurance company as soon as she had the first of three children, because her husband's shifts would have made arrangements too complicated and disrupted family life. "To me, it's no life if one's at work, the other one's leaving when one's coming". Some women who tried initially to keep working found that the limited time family members could spend together led them to re-evaluate the situation:

> Francine: "So we discussed it, and, well, with the salary he was making, we could allow ourselves..."
>
> Marcel: "It was either me or her who had to give up [their job]". [G09, translation]

So she quit and only returned to work (as a part-time daycare educator) when the child was 11.

[11] Overtime is one of the mechanisms that continuous process industries use to maintain a steady level of production, given various contingencies affecting the availability of regular shift workers or given short-term labour demands for major repairs or construction (Holmes, 1997; Stam and Sodano, 1991). Most Corner Brook workers today are unwilling to work overtime. This is partly a function of age (the majority are over 45), and partly the result of local social pressures not to take work away from underemployed casual workers (Norcliffe and Bates, 1997). Prior to the introduction of the 12-hour shift, workers faced great pressure to work overtime. In contrast, at Whitecourt, where there is no pool of casual workers and where most workers are "cross-trained" the shiftworkers (who on average are probably 15 years younger than their Corner Brook counterparts) work considerable overtime (Preston, Holmes, and Williams, 1997). Gatineau has a long tradition of overtime due to an insufficient pool of appropriately-trained casual workers, and during the period of mill restructuring, overtime increased still further.

Another strategy employed by women who had quit formal jobs was to do informal paid work in their homes. While the husband's job insecurity was often the major reason these women returned to paid work, the shift schedule was their reason for opting for this type of work. Being at home with young children, their own or others', did not necessarily mesh easily with shift schedules; a number of interviewees (male and female) in the different communities, mentioned a problem that arose when the millworker was doing night shifts:

> It was hard, especially, our house is so noisy ... like in the summer I could go outside in the morning for awhile, but in the winter, it was hard on the kids, like shhh! Daddy's sleeping. They wanna yell and scream (Ellen, W039)

Several Whitecourt women noted, nonetheless, that the alternation of two day and two night shifts meant they only had to keep the house quiet on two successive days, which they felt was more manageable than 5 or 7 days as is the case under 8 hour shift systems. One Gatineau woman resolved childcare, financial and noise problems by opening a licensed family home daycare centre in the downstairs unit of the duplex owned by the couple (Christine, G25).

Among families where mothers were always employed outside the home while their children were young, we found varied and sometimes complex strategies for dealing with childcare needs. In Corner Brook, some households could rely on extended family members for childcare. Others resorted to a Newfoundland tradition—taking in a teenage girl from a rural area as a nanny. This enabled Carol (who variously worked days and evenings at the mill while raising 7 children) and her husband Bill (a butcher in a retail shop) to manage since they had no relatives in the Corner Brook area:

> Carol: We had an actual live-in babysitter for quite a long time .... We knew her family, but she came from [an outport] and I guess her living with her family didn't work out too well so actually she needed somewhere to live so we sort of took her in and made a place for her to live and it was helpful to us. She was quite good with the children too ... she didn't only babysit, she did other work chores ... Well she was part of the family because actually she lived here, and then she had a little girl of her own. They didn't have anywhere to live. Her daughter still lives with us, she's 27. She calls [us] dad and mum all the time. [CB057]

In the Gatineau case, in contrast, live-in caregiver arrangements were rare. Families who relied heavily on non-family caregivers or daycare centres had at times to contend with complex logistical problems. Husbands and wives tried to share drop-off and pick-up of children but the husband's shift schedules sometimes made this impossible. When Robert (G20) worked the 4-midnight shift and Monique was also working evenings at the credit union in Ottawa she had to drive back and forth across the Ottawa River during her supper break to shuttle the kids from the day-time caregiver to their home before the evening caregiver came in; for unlike in Whitecourt

where shift-workers were relatively much more numerous in the local community, caregivers did not organize their services with shift workers' schedules in mind. Monique (G20) went to see the school daycare service every month with the "little blue book", the shift schedule diary published a year in advance, to arrange the weeks the children would attend the after school program and the weeks they would be sent home on the bus from school. However, Nicole's (G21) circuit-board assembly job started at 7am, some distance away from the school daycare service that only opened at 7am, so when Georges was on night shift and couldn't drop off their daughter at daycare it was Nicole who had to negotiate a special arrangement with her boss.

Several of the dual-earner families interviewed employed multiple childcare arrangements to make use of father care whenever possible. Nathalie and Simon (G01) were lucky to find a caregiver willing to take and to charge for their pre-schooler only on the weekdays when Simon had to work or sleep during the day. This arrangement saved them money as well as allowing the father to spend more time with his daughter. Sometimes relatives filled the gaps. For example, Lynn (G15) called on her mother for childcare when Mike was working on day or night shifts, while Mike took charge of daytime childcare the week he worked the 4-midnight shift. The work of coordinating childcare is done by the mother. Josée (G24) explained that with Alain's "little blue book" in one hand, and her irregular shift schedule at a supermarket (given out a month in advance) in the other, she took charge of working out the caregiving arrangements, which included both parents, her mother, their oldest daughter and a non-family caregiver.

Some Gatineau women tailored their working hours around child care arrangements so as to minimize the disruptive effects of shifts on their children. Lucie (G12) (aged 48 at the time of the interview) was committed to her career as an infant nurse, but changed from a rotating shift schedule to working mostly evenings after the first of two children was born, to maximize sequential caregiving with her husband Réjean. Once her first child began school, Lucie made it a priority to be there when the child got home; she was able to switch to a part-time schedule involving a mixture of day, evening and weekend work.

Although some couples spoke of actively wanting to seize the opportunity of the husband's shift work to share childcare, for others, this was essentially just part of a pragmatic coping strategy, a way of life they approached with a certain degree of resignation. In one Corner Brook family, [Ken, CB016]:

> I was working six days and two nights, and Ken started working shift work. So we didn't see each other a lot anyway, so you just got used to it and when ... the kids came along you were just so used to it—it was just a part of life .... His mother lived just down the street .... With our daughter, his mother took care of her when we'd work, so I didn't have any worries. [When Ken was doing 12 hour shifts and off in the day] he babysat, he was Mr. Mom. We shared.

To what extent sequential childcare strategies involving father care actually foster emergent changes in gender relations, as suggested by some authors (Hanson & Pratt, 1995), remains a moot point as regards our millworker families. In a study of household divisions of labour in a Manitoba mining community, Luxton found that the attitude of husbands tended to be one of "babysitting" their own children rather than taking on the role as primary caregiver for the time concerned (1986: 29). Our interviews did not systematically probe for parents' attitudes towards or opinions of father care, and the comments we heard are somewhat ambiguous:

> Mike: Being on shifts I got to spend a lot of time with Alison, more time than most fathers would probably.
>
> Lynn: More time than me. When you think about it you would be with her all day.
>
> Mike: And that's what I really liked about shifts. I miss that now [he'd recently been laid off from the mill and got a day job in a service industry]. We used to go to McDonald's for breakfast sometimes. She used to love it. She'd say, 'where are we going today Daddy?' I'd say, 'All the pit stops. We have to go to Canadian Tire, Jean Coutu, IGA'. I can't do that anymore except on the weekend or something. (G15)

Nonetheless, there were indications in a few of the Gatineau interviews that the fact of having (or choosing) to take care of their pre-school children some of the time when their wives were at work, had made them more appreciative of the value of "family time". While the shift system gave them little room to manoeuvre, some workers had, as a result of these experiences, begun rethinking the value of doing a lot of overtime, for example (Rose and Villemaire, 1997). During the long 1990 Gatineau strike Mike (G15) loved taking care of his daughter: "I was with her every day for 4 months straight and would see her growing up"; he greatly missed this when he went back to work. Some Corner Brook workers, too, were rueful about the effects of the overtime they had worked under the old shift system: "the work was pulling you away all the time ... I never seen the kids growing up" (Fred, CB 022).

In other cases, dual-earner couples eventually sought to alter their work schedules so as to abandon sequential childcare arrangements. Simon (G01) switched to a day job at the mill when the opportunity came up. For this couple, spending more time together as a family unit was ultimately more important than having the father spend time alone with the children.

In Whitecourt, in addition to appropriate local child care services, some women relied on their social networks to help them cope with the mill's work schedule. Mothers of preschoolers commented that they hired the children of friends to babysit, while others remarked that people living in the neighbourhood could help them out. Ellen coped with shifts by taking her three preschool-aged children to the cooperative play group, CHIPS, in the winter, and going outside in the summer (W39). Another woman

was able to drop off her preschooler at the town's day care centre on a casual basis whenever she wanted a break.

However, it is important not to overestimate the women's ability to rely on resources embedded in local social networks. When Whitecourt mothers were asked how they reacted to an unexpected crisis such as a sick child, 65 percent said they cancelled their plans and stayed home. Help from neighbours was mentioned second but by only 27 percent of the women. In only 10 percent of the households did fathers stay home. This was the least frequently mentioned response, mainly because the men's shifts drew them away from the household so much. The situation was similar at Gatineau and Corner Brook, but with relatives playing a more important role than friends and neighbours and with the situation exacerbated in families where father often worked on-call. As Nathalie (G01) pointed out, "it's an environment for MEN [at the mill]", unlike the female-dominated electronics assembly plant where Nicole (G21) could make special arrangements because she was a valued employee. The mill makes no accommodation for occasional child care needs unless there is a major family emergency. Also, as one Whitecourt mother explained, "the money is too good for him to miss work".

On the whole then, household strategies around childcare and other child-related activities underline the traditional nature of gender divisions in millworker families in all three communities. The daily responsibilities of taking children to medical and child care services, watching them after school, and picking them up from friends are done mainly by women acting alone—although several of the Gatineau mothers used the "little blue book" to schedule children's medical appointments for days when their husband could take them. Few men assume sole responsiblity for any aspect of their children's care. Men share responsibility for their children with their wives, but their involvement is greatest for recreational and special events and attending parent/teacher meetings at school when shift schedules permit (Table 1).

> You know, the four days on and the four days off, like sometimes, Lyle's home during the week and he can take them for their practices and stuff. The next month, then I know I have to take them to all their practices and he can take 'em to their games on the weekends and stuff. (Susan, W63)

But even here, several interviewees commented that their partners were simply not available to attend school events or take children to sports and other activities:

> Yeah, get home at 5:30 and go to the rink from 6 to 8... Anyways, shifts kind of screw that up a little bit. I'd rather be off at 4:30." (Howard, W26)

SHIFT WORK AND HOUSEWORK

A traditional gender division of labour is also apparent in the millworkers' households when it comes to housework with few differences among the three communities. Men do far fewer household chores by themselves than women. Tasks are differentiated on the basis of gender. Men are more likely to do outside work and to take care of the car (Table 2). Indeed, the only three types of domestic work in which men are more involved than women are mowing the lawn, shovelling snow, and minor car repairs. Four other jobs: washing the cars, washing the dishes, putting out the garbage and gardening are shared between both partners. By themselves, women are responsible for grocery shopping, food and meal preparation, and laundry, the routine tasks that must be completed on a daily or regular basis.

The reliance on either or both partners is noteworthy. Few children help with domestic work and there is even less use of commercial services. The frequency with which people other than the millworker and his partner do the housework ranges from a high of 27.2 percent for washing dishes to 1.4 percent for grocery shopping. Older children are sometimes responsible for washing the dishes, taking out the garbage, and heating dinner. They also help mow lawns and shovel snow. Friends and relatives are more likely to help with minor car repairs.

To minimize disruptions to family time that is limited already by the shift schedule, women often schedule unpaid work to accommodate millworkers' hours. Among the many strategies that women deploy, rescheduling housework is one of the most frequent. Women try to complete all their housework on days when men are working so that they are available when their partners are off work. Women also limit their housework on days when men need to sleep in preparation for a night shift. Finally, women often take responsibility for organizing family life because their partners are too tired to do these managerial tasks.

Women's decisions about taking up paid employment are influenced greatly by their partners' shifts. Many women try to arrange paid work so that they are free when their partners are available and their children are out of school. In Whitecourt, adjustments to the shift schedule are difficult to distinguish from women's efforts to ease the effects of relocation. Several women commented that they had decided not to seek paid employment upon arrival in Whitecourt since they had to be available to help their children and partner settle in a new place. They recognized that their partners were unlikely to be available because of the demands of starting a new mill and the 12-hour shift schedule. Most women planned to return to paid work once the family was settled in Whitecourt. Once women leave paid employment, traditional gendered divisions of household work may be accentuated. The availability of more time for housework and the loss of their own incomes may be associated with a tacit, unspoken

revision of expectations about responsibility for housework that resulted in a more traditional division of household labour (David and Heather, G27).

Among women who have paid employment, there are diverse arrangements for housework. Some women reported a gradual evolution in the gender division of labour whereby they successfully encouraged their partners to take more responsibility. In Gatineau, Fred's (G26) chronic job insecurity led Alice, who had been out of the workforce for almost 20 years until her youngest child was 12, to take retraining courses and land a demanding federal government position. This motivated Fred to take on much more domestic labour and start calling himself Mr Mom.

Men sometimes make "pragmatic" adaptations to the shift schedule similar to those adopted by many women. To free time when both partners are not at work for leisure and recreation, some men do housework on their days off. This strategy is typical of households where women work long hours at demanding jobs. For example, Don, whose wife has a full-time job, does all the jobs around the house including cooking meals, baking, and the laundry when he is off work (CB101).

Occasionally, women's paid work encourages an explicit commitment to a more egalitarian division of housework. As the literature suggests, these women typically have well paid jobs that provide relatively high incomes which may give women more power to insist that their partners do housework (Suzanne and Denis, G16). The following excerpt from an interview with the only female production worker in Corner Brook exemplifies this relationship (CB57):

> Bill: Put it this way, Carol's got a good job and she got good pay so I got no choice but go along with it.
>
> Interviewer: Does Bill cook the dinners?
>
> Bill: Oh yes, I washes and hangs out the clothes. I always did.
>
> Carol: Bill helps with everything ... he had to when the children were small.
>
> Interviewer: And then when Carol's off it's Carol's turn?
>
> Bill: We shares it between us. I still does it if Carol's home, and if two of us is off on Sunday, I cooks dinner. And when the family all comes home they all wants me to cook.

CONCLUDING REMARKS

Our study found that the onus of adjustments to shifts fell mostly on women, the partners of millworkers. Women felt constrained in their choices by the demanding regime of their husbands' shift work. They felt obliged to do most of the adapting, for

the sake of the family (see Olson and Shopes, 1991). They did not expect their husbands to change their jobs, probably because they recognized that working at the mill was the best-paying job available to these men who in a number of cases had never finished high school. Although often better educated than their partners,the women still had lower earning potential in most instances. When employed, women's incomes were generally lower than those of millworkers. This financial reality likely encouraged women to adjust to the shift system rather than resist it. The importance of this income differential is underscored by consistent evidence that millworkers do more housework and childcare in the minority of cases where their partners do have well paid employment. These factors may help explain why, especially in regards to housework, we found few differences between the communities despite variations in female labour force participation, age structure and levels of overtime being worked.

Our interviews do nevertheless reveal glimpses of alternative strategies. In Whitecourt, mothers maintained CHIPS, the cooperative play program, to reduce the social isolation caused by shift work. CHIPS and the willingness of Whitecourt homecare providers to provide childcare outside regular work hours both exemplify long term and communal adaptations to shift schedules that improve the lives of shiftworkers' partners and children. At an individual household level, in the short term, households “cope” with shift work. In the long term, some dual-earner households actually altered their work schedules to allow for more time together as a family. However, the rapid pace of industrial restructuring in the Canadian newsprint industry and the financial uncertainty that it has engendered have encouraged adaptation rather than resistance in the short term. In the privacy of their homes, women seek ways to ameliorate the impacts of shift work. However, much like the miners' wives in Queensland (Gibson-Graham, 1996), as yet there is little evidence of public resistance.

Our findings are closer to those of Presser (1989) than of Hanson and Pratt (1995), insofar as some parents took advantage of rotating shifts to maximize their involvement in child care, however, few millworkers expressly chose shift work so as to be available to care for young children. "Father care" was, as Presser (1989) argues, mainly an unintended outcome of these couples' intermittently sequential schedules, rather than a planned strategy. In some dual earner couples that had tried to use complementary shift schedules to manage their childcare needs, the lack of time to be together as a family led them to seek alternative work schedules. Our findings may be specific to the newsprint industry in which many workers have little choice but to accept imposed shift schedules since there are few alternative, equally remunerative jobs for workers in the three localities we studied. In a large urban area with more abundant job opportunities for both men and women, shift work may be deployed more often as a household strategy for managing childcare needs.

In answer to our original question about how shift work affects the gender divisions of domestic labour, in the few couples where women had demanding and well paid jobs that confer greater power within the household, men took responsibility for more childcare and housework. In this sense, our empirical analysis has confirmed previous findings that gender divisions of domestic labour are affected profoundly by women's earnings (Hochschild, 1989; Presser, 1994; Brayfield, 1995; Bernier, Laflamme and Zhou, 1996). However, in the vast majority of households, a traditional division of labour predominates, mainly for pragmatic reasons. Couples want free time together in a context where there are few good job opportunities for women. When women quit paid employment to accommodate the schedules of shift workers and free time for the family to be together, traditional values reassert themselves.

The overall satisfaction with shifts was unexpected. In Whitecourt, all but four households said the 12-hour shifts had increased or at least not altered a worker's time with his family, his contributions to housework and home repairs, and his participation in recreation and family social activities. This sentiment is surprising in light of the adaptations that shifts have required. It also contradicts previous findings in which the female partners of shift workers have been dissatisfied with the impact of 12-hour shifts on family life (Hertz and Charlton, 1989; Gibson, 1992b). The satisfaction expressed in our interviews can be understood only in the context of each mill town. In Whitecourt, workers and their partners welcomed the security of employment in Canada's most productive newsprint mill. As mentioned earlier, many workers were already familiar with 12-hour shifts. The shift schedule tended to be viewed as either an improvement on previous longer and more irregular work hours or an inconvenience. In both cases, the benefits of a secure, highly paid job outweighed the disadvantages of the shift schedule. In Corner Brook, 12-hour shifts were viewed as easier for workers and their families than previous shift schedules. Among this group of older workers, the 12-hour shift was physically demanding, but workers found it less tiring than previous schedules and easier for families in which the majority of children were grown. With four days off each tour, partners had more time to spend on recreation and leisure at the same time as they were largely freed from the need to fit with regular Monday to Friday day-time schedules of schools and other institutions. Certainly, as the stories told by Gatineau workers revealed, shorter shifts spread over more days of the week also pose serious challenges to family life. Although workers at Gatineau have a history of resisting successfully management's efforts to impose various shift schedules, at the time of our interviews their main concern was the threat of unemployment as the mill was restructured, rather than shift schedules. In each locality, opinions about shift work are framed within a specific economic and social context that accounts for the seeming paradox wherein millworkers and their partners are forced to alter many aspects of their daily lives to accommodate shift work yet rarely express dissatisfaction with either shifts in general or their own shift schedule in particular.

Our research has also highlighted the ways that communities can organize and coordinate childcare arrangements and recreational and cultural services so as to accommodate shift work and thereby ease its burden on millworkers' families. In Whitecourt and Corner Brook where 12-hour shifts are well established, childcare that accommodated shift schedules was available respectively through home daycare and live-in caregivers. By taking gender into account, our findings flesh out and add nuance to Simon's (1990) contention that the lived experiences of shift work are greatly affected by the presence and nature of such community supports.

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TABLE 1 – AGGREGATE FREQUENCY OF CHILDCARE IN THE THREE COMMUNITIES

CHILDCARE	Wife	%	Husband	%	Both	%	Other	%	N[1]
Puts children to bed	16	25.8%	2	3.2%	42	67.7%	2	3.2%	62
Meets teachers/attend parent-teacher	15	28.8%	3	5.8%	34	65.4%	0	0.0%	52
Takes children to sports	14	26.9%	6	11.5%	32	61.5%	0	0.0%	52
Takes children to friends	4	22.2%	2	11.1%	12	66.7%	0	0.0%	18
Takes children to medical appointments	30	43.5%	4	5.8%	34	49.3%	1	1.4%	69
Attends children's sports activities	8	17.0%	3	6.4%	35	74.5%	1	2.1%	47
Attends children's special events	10	17.9%	1	1.8%	44	78.6%	1	1.8%	56
Takes child(ren) to child care	17	48.6%	2	5.7%	15	42.9%	1	2.9%	35
Watch child after school[2]	25	52.1%	1	2.1%	19	39.6%	3	6.3%	48

1. N refers to currently-employed shiftworkers' households with children only.
2. Only asked in Whitecourt and Corner Brook.

TABLE 2 – FREQUENCY OF DOING HOUSEWORK

	Gatineau					Whitecourt					Corner Brook				
HOUSEHOLD TASK	Wife	Husb.	Both	Other	N_1	Wife	Husb.	Both	Other	N_1	Wife	Husb.	Both	Other	N_1
Mows lawn	0	10	1	2	13	9	29	14	11	63	1	24	7	5	37
Shovels snow	0	7	5	1	13	4	28	24	11	67	0	19	11	11	41
Minor car repairs	0	9	1	3	13	3	58	1	8	70	0	31	0	0	38
Washes car	1	5	6	0	12	8	25	33	4	70	2	13	10	10	38
Does shopping	4	0	9	0	13	44	2	23	1	70	19	3	16	16	41
Makes grocery list	9	0	4	0	13	55	1	11	3	70	21	1	11	11	35
Does laundry	7	0	6	0	13	52	2	12	4	70	22	1	11	11	41
Vacuums	3	4	6	0	13	48	6	10	6	70	15	1	13	13	41
Puts out garbage	1	3	8	1	13	13	18	26	13	70	1	19	15	15	40
Washes dishes	3	0	8	2	13	28	2	21	19	70	10	1	19	19	41
Cans/freezes produce	5	0	3	1	9	36	1	6	1	44	7	3	8	8	19
Cans/freezes fish/game	3	1	4	0	8	11	7	10	2	30	4	9	12	12	27
Prepares main meal on days...															
-when husband works	10	0	2	1	13	50	1	7	2	60	34	0	1	4	39
-when wife works*	3	7	2	0	12	21	9	12	4	46	3	10	8	4	25
-when both work	4	0	6	3	13	30	1	10	6	47	9	0	8	5	22
-when no-one works	6	0	7	0	13	30	5	21	5	61	17	2	18	4	41
Gardening	3	2	5	1	11	21	6	27	5	59	7	13	10	1	31

1. N refers to currently-employed shiftworkers' households only.