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An Investigation of the Predictors of Paternal Involvement

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The traditional 'male breadwinner' family model has been in decline since the latter part of the twentieth century as increasing numbers of mothers (re)enter the labour market after having children. Although men's involvement in domestic labour is also rising, economic provisioning continues to be the essence of 'good' fathering meaning the hours a fathers works remain key in shaping their involvement at home. However, in light of economic changes and shifting gender roles, the relative impact of fathers' and mothers' employment hours on paternal involvement in childcare is unclear, and little is also known about the long term impact. To address this, we explore the relative association that mothers' and fathers' work hours have with two different levels of paternal involvement: fathers who take on the most childcare or share it equally with a partner. Multivariate analysis on the UK's Millennium Cohort Study reveals that mothers' work hours have the strongest, longitudinal association with paternal involvement in childcare suggesting ways of working in the first year of a child's life have some bearing on paternal involvement when the child is older. Mothers' work hours are also more strongly associated with paternal involvement when the child is aged three but only when the father also works full-time. The effect of mothers working full-time is reversed when the father works part-time or not at all suggesting a complete gender role reversal is incompatible with father involvement.

Keywords: Fathers, paternal involvement, mothers, childcare, gender division of labour, employment, work hours

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Introduction

During the 1970s and 1980s, economic growth generated an increased demand for women's labour in the UK, which corresponded with a change in social attitudes and expectations about gender roles. Consequently, the traditional 'male breadwinner' family model has been in decline as increasing numbers of mothers enter or return to the labour market after having children (see for example: Warren, 2007; Crompton, 2006; MacInnes, 2005; Bergman and Hobson, 2002; Lewis, 2001; and Windebank, 2001). Part-time employment has been the main way in which women have been able to combine employment with domestic responsibilities, although there were minimal public or private childcare services until the late 1990s at which time the then Labour government took office and introduced a suite of work-family reconciliation measures to support women's employment and men's work-family reconciliation. This included an extension to maternity leave, first introduced in 1979, paid paternity leave and an employee 'right to request' reduced or flexible hours introduced during the 2000s (Fagan and Norman 2012). Initiatives to facilitate men's family roles are still underway with new reforms planned for April 2015 that will give parents the option of sharing parental leave providing the mother returns to work after twenty weeks. Thus, early policy developments in the UK were mainly geared towards helping mothers with their work-family reconciliation whilst the focus on fathers, and provisions to support their parenting roles, were only implemented more recently.

As women's economic activity has increased, so too has men's childcare and domestic activity, albeit not at an equivalent rate (see Crompton and Lyonette, 2008; Lammi-Taskula, 2006; Gray, 2006; Dex, Hawkes, Joshi, and Ward, 2005; Singleton and Maher, 2004; Gershuny, Godwin and Jones 1994; Gershuny, 2000). However, recent reports indicate that the incidence of fathers taking on the primary caregiver role is increasing in the UK (The Guardian, 7 April 2010; 25 October 2011). Thus, while there is now a prevailing expectation for fathers to be 'involved' in their children's upbringing (e.g. see Nangle, Kelley, Fals-Stewart and Levant, 2003), breadwinning (i.e. employment) continues to be the essence of 'good fathering' (Dermott, 2005; Connell 1987) with those who deviate from this position

often encountering ‘social scrutiny’ and a ‘pressure to be earning’ (Doucet and Merla 2007: 463; also see The Independent, 6 January 2013).

Previous research shows that employment hours are significantly associated with parental involvement in childcare (e.g. Averett et al, 2000; Tanaka, Sakiko and Waldfogel, 2007; Dermott 2006; Brayfield 1995; XXXX, 2010); this is not surprising given parental care of a toddler can (usually) only take place outside of paid work. Although several studies have shown that mothers’ employment has some impact on fathers’ caregiver roles (e.g. see Bianchi 2000; Jacobs and Kelley 2006; Nock and Kingston 1988; Brayfield 1995), the assumption has been that fathers’ work hours take precedence in shaping their childcare contributions because of the centrality employment has with fathering, further emphasised by fathers usually working longer hours and earning more money than mothers. Indeed to date, much of the work-family literature has treated women’s employment as a secondary element around fathers’ and their caregiving roles, with women’s work hours primarily shaped by their childcare responsibilities, as well as social norms and ‘moral rationalities’ on the socially acceptable way for mothers to combine employment and parenting, which, in the UK, is by working part-time (Duncan 2006). However, in light of the changes to women’s economic activity and social attitudes towards gender roles, there has been no acknowledgement of the possibility that mothers’ employment could now have an equivalent or even greater impact on paternal involvement in childcare compared to fathers’ own employment activity. Furthermore, although studies (listed above) continue to highlight the relationship between employment hours and paternal involvement, most focus on the immediate effect of work hours on paternal involvement, at that point in time. To date, there is little evidence on whether the association between employment hours and paternal involvement is more long-term, in other words, whether the hours worked in the early stages of a child’s life have a bearing on how involved fathers are in the future.

Aims and structure of paper

This paper explores the association between parental employment hours and paternal involvement in childcare through multivariate analysis on the UK's Millennium Cohort Study (MCS). We focus on two levels of paternal involvement: fathers who share childcare roughly equally with a partner, which is the outcome most likely for fathers to be classed as 'involved', and fathers who do the most childcare, namely primary caregivers, which is a more unusual, albeit emergent, household arrangement. The aim is to establish whether mothers' employment hours have a less, equivalent or greater impact on paternal involvement compared to the fathers' own employment hours, and also, if the relative association of employment hours differs for the two types of caregiver. The second aim is to establish whether the association between employment hours and paternal involvement is longitudinal, or, whether the effect of working part- or full-time on paternal involvement is more immediate to accommodate the care needs of the child at that point in time.

We first review some of the findings from previous research on what influences paternal involvement with a particular focus on employment. We then operationalise paternal involvement and describe how we measure it within the context of the MCS data. Some descriptive analyses are then presented, which is followed by the results of the logistic regression.

Influences on paternal involvement in unpaid family work

Previous research has identified various factors that shape the opportunities and constraints, which fathers encounter in their parenting roles such as: social policies (e.g. Ellingsaeter and Leira, 2006), labour market conditions (e.g. Paihe and Solaz, 2008), symbolic representations, ideologies, norms and values (e.g. Russell, 1986; Hauari and Hollingworth, 2009), socio-demographic characteristics (e.g. Sanderson and Sanders-Thompson, 2002; Averett et al, 2000; Coltrane and Parke 1998), gender role attitudes (e.g. Crompton et al, 2003), and family background (such as fathers' own upbringing) (e.g. Dermott, 2008) and so on. There are also different levels of involvement with the majority of fathers getting involved through sharing childcare with a partner, however, there are also a minority, albeit growing group of men who

take on the most childcare by becoming the primary caregiver (see Doucet and Merla, 2007; The Guardian, 7 April 2010; 25 October 2011). It is expected that the reasons for men assuming the primary caregiver role are quite specific given this represents a complete gender role reversal and a rejection of traditional gender norms, however, qualitative research with primary caregiver fathers in Canada and Belgium found that reasons were varied. For example, fathers became primary caregivers because the mother had a financially professional or rewarding employment position, there was a lack of affordable childcare facilities, they privileged home over day care or it was a way to avoid reproducing their own father's involvement for example (Doucet and Merla 2007). Whatever the level of paternal involvement is, there appears to be a multiplicity of interconnected influences.

Singleton and Maher (2004) argue that employment is the most important factor in determining a couple's division of labour with long full-time hours consistently found to have a negative association with fathers' involvement in childcare (see, for example, studies by Sayer, Bianchi and Robinson, 2004; Hatten et al, 2002; Dex and Ward, 2007). In the UK, full-time employment often involves longer hours than applies in many other European countries (e.g. Fagan, 2004, Bishop, 2004). Whilst some mothers shift emphasis in their employment from 'career' to 'job', or exit the labour market completely, fewer fathers deal with the tension between home and work commitments by reducing work-time to be with children. As Perrons, Fagan, McDowell, Ray and Ward (2006) argue, fathers who do reduce work-time for a greater commitment to childcare face a different set of pressures because this contradicts traditional masculine norms and workplace expectations. In contrast, mothers tend to reduce their work hours after having children and are therefore usually more able to take on a greater share of the housework and childcare. Whether these transitions are due to gendered moral rationalities (Duncan 2006) or perceived economic realities or some combination of the two, the nett result is that division of labour tends to become more 'traditional' once couples have children.

While work hours tend to dictate how much time fathers can spend with his children, the times of day at which a parent works may also have some influence. Certain types of

atypical working - such as weekend or evening work - can be conducive to fathers' having a higher level of caregiving compared to a work schedule of standardised, set hours during the day. Dermott's (2003; 2006) study showed that many fathers valued the ability to control how and when they work suggesting that men may find ways of being involved in family life without an overall reduction in total work hours - such as, for example, carrying some work over to the weekend in order to accommodate greater involvement at home during the week. Thus work schedules which are flexible or provide individual autonomy as to when and where work is undertaken can enable fathers to be more involved in childcare, However, some types of work schedules, particularly part-time arrangements, continue to be associated with a 'female' way of working, which may discourage men from requesting reduced, or more flexible, hours (Fagan, Donnelly and Rubery, 2005). The pressure to work long hours and to be constantly available and present are features of the workplace culture for many full-time workers in the UK, and these expectations are difficult to resist within a competitive climate where job insecurity has increased (Hearn, 2001; Fagan, 2010). Moreover, if work colleagues and line managers are not sympathetic to a man's parental responsibilities, fathers may be further discouraged from requesting adjustments to their work schedules for the purposes of balancing work with family. Thus, all this considered, employment is central to understanding fathers' behaviour (Dermott 2006).

There are, of course, other factors to consider. For instance, Duncan (2006) argues that parental roles will be shaped by strongly held social and cultural norms on the 'proper' (i.e. socially acceptable) way to combine employment and parenting. Such social norms are referred to as 'gendered moral rationalities' by Duncan, which vary socially, spatially and according to class. So while motivations to be an involved father can influence paternal behaviour, fathers may not be completely autonomous in the roles they take due to the motivational restraint arising out of these moral rationalities. Thus, given 'breadwinning' is integral to both fathering and masculinity, fathers may be dissuaded from reducing their commitment to the labour market in favour of greater involvement at home by dominant rationalities portraying a 'good father' as one who provides for his family. Braun, Vincent

and Ball's (2011) recent study of working class men in the UK provides evidence that such discourses still impact on men's parenting role choices. So in this view, men's motivation to be involved fathers is mediated by normative processes, which propel them out of the home and into the world of work.

An alternative interpretation of this dynamic is one where men perceive economic realities which necessitate their transition into a breadwinning role. Such a position would be supported if men expressed tensions between the economic reality of the need to work and their desire to be more involved at home. For example, Dex and Ward (2007) analysed the Millennium Cohort Study and found 63 per cent of fathers felt they did not have enough time with their children due to the constraints put on them by the labour market. Similarly, the Equality and Human Rights Commission (2009) found that half of the 2,500 fathers in their survey believed they spent too much time at work while 42 per cent felt they spent too little time with their children. As Fagan (2010) argues, the persistent gender pay gap exacerbates this tension by perpetuating the financial logic of a 'male breadwinner' household arrangement between couples with the higher earning man being able to maximise household income by focusing on employment, while the woman maintains her primary caregiver role.

There are also other socio-demographic and economic characteristics to consider. For example, relative resource theory posits that the gendered division of labour and hence men's involvement in caregiving, is shaped by the relative resource levels of the individuals in the couple, such as their income, occupational position and education level. Thus, women employed full-time, particularly if well-paid, are better positioned than other women to negotiate a more equitable gender division of domestic labour because of the relative contribution of their earnings to household income (Fagan, 2010). In terms of education, Dale and Egerton's (1997) study shows couples were more likely to share domestic labour when they had higher levels of education, and were in academic or vocational related occupations (Dale and Egerton, 1997; also see Arrighi and Maume, 2000; Sayer, Gauthier and Furstenberg, 2004; Bonke and Esping-Anderson, 2009).

Coltrane and Parke (1998) argue that both class and race interact with the moral obligations of caring for children by enabling and constraining decisions around fathering with the 'new father' ideology not accessible to all and thus often viewed as a marker of race and social class. However, more recent research presents contradictory findings in the way class affects fathering practices. Brannen and Nilsen's (2006) study finds working-class fathers who were unskilled, lacked qualifications and spent significant amounts of time out of the labour market to be the most involved in childcare, which they argue, was due to a lack of traditional labour market opportunities once open to low and unskilled working-class men. In contrast, Plantin (2007) finds working class fathers are more likely to practice their roles in accordance with traditional patterns of family life and the gendered division of labour. Notwithstanding these apparently contrary evidences, social class is clearly important in shaping fathers' contributions to care and one can hypothesize that economic constraints create different opportunities for parenting; thus for working class parents, material contexts will influence family circumstances, which Braun et al (2010) argue, are pivotal to understanding fathers' actions and practices.

Flouri and Buchanen (2006) find that fathers' involvement tends to be higher with sons suggesting household composition may have some impact. Fenstermaker-Berk (1985) found that additional children make further demands on parents, particularly in terms of household chores, which increase in both volume and frequency (cited in Kane and Sanchez, 1996). Coupled with this will be an increase in financial pressure on the family with the number of children. In this context it is reasonable to propose that there will pressures on each parent to pursue activity for which they have been socialised. For example, Singleton and Maher's (2004) study of 22 couples found that the majority reverted to more orthodox gender divisions of labour following the birth of their children.

There has been little research exploring variations in paternal involvement by the father's age. One might hypothesise that paternal involvement would be greater amongst younger generations of fathers living within a 'new culture' that now posits involved fathering as desirable. Speak, Cameron and Gilroy's (1997) study of young, single, non-

residential fathers found many desired greater involvement in their child's care, however, this could have been a by product of the restrictions on access imposed by their non-residency and we do not know how they would have responded to increased opportunities for involvement.

This review of previous research shows that paternal involvement varies according to many social, economic and cultural factors and these effects vary according to different social contexts. The focus of the following analysis is on the variations of paternal involvement by employment hours and we control for a selection of socio-demographic variables according to what has been identified as important in previous research, with the selection based on what is available in the MCS data. As previously discussed, we do not know whether employment patterns established in the early years of a child's life continue to have an influence on how involved fathers are when their children grow older and so we also explore the longitudinal effects of employment hours on fathers who are shared and primary caregivers to their children.

Data and methods

The analyses reported here uses data from the Millennium Cohort Study (MCS) - a nationally representative survey following a cohort of children born around the year 2000 in Great Britain drawn using a clustered, disproportionately stratified sampling design[1]. Two sweeps of data are used: the first, carried out in 2001/2, covers a cohort of 18,819 babies aged nine months (brought up in 18,552 families) over a twelve month period starting in 2000; the second was conducted in 2003/4 and follows the same cohort of children, as well as 692 newly recruited families giving an overall, combined sample size of 19,244 households. For this analysis, the sample has been filtered to include heterosexual couples only since the focus is on the gendered division of childcare and employment hours. Fathers who were not employed at sweep one were also filtered out (10.1 per cent of households) in order to focus the study on men who all start with similar commitments to paid work (although this will vary

[1] As a result of the disproportional sampling strategy, the data has to be weighted so that it is representative of Great Britain as a whole. However, this is also combined with a non-response weight to give an 'overall weight' so that both sampling design and non-response are accounted for.

by hours worked, type of job etc) and family. This also permits a comparison of work-hour adjustments in the subsequent period and the impact that this has on fathers' caregiver roles. Households in which the father did not take part in the survey were also filtered out because no information about their employment practices could be obtained (8.4 per cent of households). Finally, the sample was filtered to retain only households containing the same parents between sweep one and two in order to remove the confounding effects of relationship breakdown, bereavement and the formation of new partnerships. Thus, in addition to households lost through attrition[2], the final sample amounted to 9,285 households (representing 48 per cent of the original, combined sweep one and two sample).

Measuring paternal involvement

For this analysis, 'being involved' is defined as participating in the nurturing tasks that are required to 'take care' of children to the extent of either sharing them roughly equally with a partner or doing the majority. We acknowledge that a father may have a reasonable degree of involvement if he did less than (roughly) half of the childcare however we take the 'roughly equal' threshold as providing a very clear marker for involvement. We also recognise that both parent's interpretations of paternal childcare contributions are equally important in measuring paternal (and maternal) involvement, but for this analysis, only mothers' reports are used. The operational choice here is primarily driven by the way in which MCS sweep two data is structured[3] (see Calderwood et al, 2005). We acknowledge that parental reports of time spend on childcare and housework can vary with spouses often overestimating their own contributions (see Kamo 2000; Mikelson 2008). However, the

[2] The sample is reduced by a total of 52% (n=9,959) households. Most of this loss is due to attrition (40.7%, n=7,841) while 11% (n=2,118) of households are excluded because the respondents experience relationship changes whereby some parents move out of the sample and are (or are not) replaced by new parents/guardians.

[3] Calderwood et al argue that in general, mothers tend to take the most responsibility for household labour (Singleton and Maher 2004; Crompton 2006), which is the rationale behind the survey only choosing the main respondent to report domestic work (Calderwood et al, 2005). This is further justified because Laurie and Gershuny (2000) judged that in the British Household Panel Survey, there was a high correlation (0.77) between fathers' and mothers' reports of their relative shares of domestic work; therefore one respondent's account provides a relatively reliable estimate of the division of domestic labour in couples (cited in Calderwood et al, 2005: 182). Furthermore, the main respondent is targeted because Laurie and Gershuny's comparisons of self-reported shares with shares calculated from time diary data found that mothers' reported shares correlated more highly with this measure than fathers'.

chosen indicator is unlikely to be overly biased since it is based on a broad, summary measure of the division of overall childcare broken down into broad categories rather than specific measures of time. The variable used to derive two measures of fathers' caregiver roles is [BMGECA00] – *who is mostly around and generally looks after the children*, which is asked in sweep two when children are age three. As this question is directed to the mother, the responses are 1) 'I do most', 2) 'my husband does most', 3) 'we share more or less equally' and 4) 'someone else does most' thus leaving little room for over or under estimation. Moreover, mothers are more likely to report lower levels of paternal involvement than fathers (e.g. see Levine-Coley and Morris 2002) so there is little chance that highly involved fathers will be incorrectly identified. (For further details on variable derivation, please see XXXX 2010).

To analyse two levels of paternal involvement, a filter was applied. The first analysis explores the factors associated with shared caregiving thus all primary caregiver fathers were filtered out. The second analysis explores the factors associated with primary caregiving thus all shared caregivers were filtered out. This creates two dichotomous variables for use in logistic regression.

Around a quarter (25.6%, n=2,377) of fathers were shared caregivers to their three year old children and 1% (n=96) of the fathers were classed as primary caregivers because they did more childcare that their partners. So sharing childcare, rather than doing the most, is the involved outcome that is most likely for fathers. However, since there is a small minority group of fathers who have, according to these data, taken a primary caregiver role when their children are age three, and it is becoming a more common role for some fathers in the UK, it is worthwhile to analyse whether the factors predicting whether a father takes the primary role are the same as those predicting that he takes the shared one. A separate logistic regression analysis is conducted comparing this smaller group of fathers with the secondary caregivers.

We use logistic regression to explore the relationship between fathers' caregiver roles and parental employment hours, controlling for various demographics that have been identified as important determinants of paternal involvement by previous research. Two

analyses are conducted using the two response variables described above with the first modelling *shared caregivers* and the second modelling *primary caregivers* where three and two models are run for each analysis respectively. For both analyses, the models are developed in stages by adding different combinations of work-hour variables. This includes an interaction of parent's work hours for the shared caregivers to test whether the relationship between fathers' work hours and their involvement in childcare changes once mothers' work hours are taken into account. The interaction is not included for the primary caregivers due to a lack of data. The first model uses sweep one employment hours (when the child is aged nine months) to establish any longitudinal association with paternal involvement. The second models include current (sweep two) work hours (when the child is aged three) to explore whether the effect of parents' current hours of work have a stronger association than the work hours established shortly after their child's birth. The final model is run only for shared caregivers and includes the longitudinal work-hour transitions of both parents to establish whether a change in work hours as the child grows older has any effect on paternal involvement. It is expected that if fathers reduce their work hours and mothers increase theirs, that fathers are more likely to be a shared caregiver. This final model is not run for primary caregivers because the group is too small, which makes cell counts too low for this combination of variables.

Each model controls for the socio-demographic variables of household income, educational level, sex of the cohort child, whether siblings of the cohort child are present in the household, whether the father has other children living outside the household and the fathers' age. In line with findings from previous research, paternal involvement is expected to have the largest association with fathers work hours while mothers' work hours are predicted to have a smaller association with the expectation that the more hours a mother works the more likely the father will take a shared or primary caregiver role. Involvement is also expected to have an association with higher levels of household income, higher levels of education, the reference child being a boy and the father having other children in and outside

the household. With reference to Speak et al's (1997) findings discussed earlier, we expect younger generations of fathers to have a higher level of involvement in their child's care.

The regression models are developed manually but using stepwise principles. All variables are from sweep one – when the cohort child is aged nine months – in order to model the longitudinal relationship of the sweep one variables with paternal involvement in sweep two - when the cohort child is aged three with the exception of the variables measuring whether the father has other children in or outside the household as the presence of other children is most likely to have a direct impact on paternal involvement at that time. However, sweep two employment hours are included in some of the models with the expectation that they will have a particularly significant impact on a father's ability to get involved in childcare.

Results

Siblings of the cohort child were present in the majority of households (77%) when the cohort child was aged three, of which 30% were older children meaning these fathers were not first-time parents. Only a minority of households (12.6%) had other children living outside the home (it is not possible to determine the age of these children).

Table 1 shows the distribution of household income for primary, shared and fathers who do the least amount of childcare (hereafter referred to as 'secondary caregivers'). Primary caregivers are most likely to have low or very low household income levels while shared caregivers are more likely to have moderate to high or high household income levels. The low household income levels associated with primary caregiver fathers may be the result of them spending less time earning money in the labour market, and therefore contributing less to household income, which will have a particularly marked effect on household income given men's earnings are usually higher than women's.

Table 1: Fathers' caregiver roles when child is aged three years according to (net) household income when child is aged nine months (in 2000-01).

Household income when child is aged	Fathers' caregiver roles when child is aged 3

9 months	Primary	Shared	Secondary	Total
Very low (below £10,400pa)	12.7	4.7	5.8	5.6
Low (£10,400-£20,800pa)	36.6	33.0	33.7	33.6
Moderate (£20,800-£31,200pa)	30.6	27.0	28.8	28.4
Moderate to high (£31,200-£52,000pa)	13.8	26.0	22.1	22.9
High (£52,000pa +)	6.4	9.5	9.5	9.5

n=8,619

Pearson Chi-Square: *p=0.012*

Source: MCS sweep one (2000-01) and MCS sweep two (2003-04), sample weighted by survey weights for sweep two (bvowt2)

Table 2a shows education level for primary, shared and secondary caregiver fathers. Interestingly, most fathers have a low level of education, regardless of their caregiver status, although higher proportions of shared and secondary caregiver fathers have a degree or higher. This suggests that a high level of education is not necessarily associated with paternal involvement. The p value is, however, not significant.

Table 2a: Fathers' caregiver roles when child is aged three years according to educational level when child is aged nine months

Education level when child is aged 9 months	Fathers' caregiver roles when child is aged 3			
	Primary	Shared	Secondary	Total
Degree or higher	15.5	22.2	24.5	23.9
Secondary level[1]	16.4	17.9	18.8	18.6
Compulsory or lower[2]	68.1	60.0	56.7	57.6

n=9,166

Pearson Chi-Square: *p=0.0594*

[1] *Equivalent to A level.*
2Equivalent to GCSE or lower, including having no qualifications

Source: MCS sweep one (2000-01) and MCS sweep two (2003-04), sample weighted by survey weights for sweep two (bvowt2)

Table 2b shows fathers' occupational class according to their caregiver status. The largest proportion of those in the managerial and professional classes are fathers who do the least

childcare while the largest proportion of fathers in the semi-routine and routine occupational classes are those who do the most. This may suggest that working-class fathers are more likely to have a greater involvement in childcare, however, there are significant proportions of primary and shared caregivers who are managers/professionals (30% and 44% respectively).

Table 2b: Fathers' caregiver roles at age three according to their occupational class when child is aged nine months (sweep one)

Education level when child is aged 9 months	Fathers' caregiver roles when child is aged 3			
	Primary	Shared	Secondary	Total
Managerial & Professional	30.3	43.6	49.3	47.7
Intermediate	11.4	5.8	5.2	5.4
Small employer & self-emp	12.6	11.3	13.6	13.1
Lo supervisory & tech	16.7	16.1	14.5	14.9
Semi-routine & routine	28.9	23.3	17.4	18.9

n=9,072

Pearson Chi-Square: *p=0.0000*

Source: MCS sweep one (2000-01) and MCS sweep two (2003-04), sample weighted by survey weights for sweep two (bvowt2)

Table 3 shows fathers' caregiver transitions from when the cohort child is aged nine months to three years old. It shows that paternal involvement (as a primary or shared caregiver) is often temporary because a significant majority transition between different caregiver roles over this period. For example, just under a third of fathers who are primary caregivers, and over half of fathers who are shared caregivers, to their nine month old baby do the least amount of childcare by the time their child is aged three. This suggests that involvement is not long-term and is variable at different stages of the child's life. Indeed, in their study of primary caregiver fathers in Canada and Belgium, Doucet and Merla (2007) found that many fathers temporarily took on the primary caregiver role and intended to return to employment later.

Table 3 Fathers' caregiver transitions from when the child is aged nine months (sweep one) to aged three years old (sweep two)

Fathers' caregiver roles when the child is aged 9 months (sweep 1)	Fathers' caregiver roles when the child is aged three (sweep 2)		
	Primary	**Shared**	**Secondary**
Does most (primary)	28.5	41.2	29.7
Shares	1.2	43.4	55.4
Does the least (secondary)	0.5	13.5	85.9
Total	0.9	23.7	75.4

n=9,285

Pearson Chi-Square: *p=0.0000*

Source: MCS sweep one (2000-01) and MCS sweep two (2003-04), sample weighted by survey weights for sweep two (bvowt2)

Since our aim is to explore the longitudinal impact of employment hours on paternal involvement, Tables 4 and 5 show fathers' and mothers' employment hours when the child is aged nine months old according to the fathers' caregiver status when the child is aged three. It appears that the hours worked by either parent, during the early stages of a child's life, may have some bearing on how involved fathers in the future. For instance in Table 4, a higher proportion of fathers working part-time when their child is aged nine months are primary caregivers when their child is aged three, while a higher proportion of fathers working long, full-time hours when the child is nine months are secondary caregivers when the child is age three. Despite this, significant proportions of fathers working full-time and long-full hours go on to be primary or shared caregivers suggesting the link between shorter work hours and paternal involvement may not be as clear-cut.

Table 4: Fathers' caregiver roles at age three according to their (previous) work hours when child is aged 9 months (sweep one)

Work hours at age 9 months	Fathers' caregiver roles when child is aged 3			
	Primary	Shared	Secondary	Total
Part-time (up to 30 hours per week)	15.3	3.7	2.7	3.1
Full-time (30-44 hours per week)	48.4	49.2	39.2	41.6
Long full-time (45+ hours per week)	36.3	47.2	58.1	55.3

n=9,285

Pearson Chi-Square: *p=0.000*

Source: MCS sweep one (2000-01) and MCS sweep two (2003-04), sample weighted by survey weights for sweep two (bvowt2)

Table 5 shows that the highest proportion of primary caregiver fathers have partners who full-time while having a partner who does not work when the child is aged nine months is more conducive to a secondary caregiver role when the child is aged three. Fathers who share childcare when the child is nine months are most likely to have partners who work part-time, which may suggest that even a mothers' part-time involvement in the labour market may encourage fathers do more childcare at home.

Table 5: Fathers' caregiver roles at age three according to the mothers' (previous) work hours when child is aged 9 months (sweep one)

Mother work hours at age 9 months	Fathers' caregiver roles when child is aged 3			
	Primary	Shared	Secondary	Total
Not in work	25.7	26.7	44.5	40.1
Part-time (up to 30 hours per week)	26.6	40.4	41.0	40.7
Full-time (>30 hours per week)	47.7	33.0	14.5	19.2

n=9,261

Pearson Chi-Square: *p=0.000*

Source: MCS sweep one (2000-01) and MCS sweep two (2003-04), sample weighted by survey weights for sweep two (bvowt2)

Tables 6 and 7 respectively present results from logistic regressions models which explore the factors associated with the probability that fathers are shared and primary caregivers to their

three year old children (i.e. in sweep two of the survey)[4]. The Wald chi square for each model is statistically significant ($p<0.0005$)

The characteristics associated with shared caregivers

Controlling for fathers' household income, educational level, sex of the cohort baby, presence of the cohort child's siblings at sweep two, other children living outside the household at sweep two and the father's age, Table 6 shows that mothers' employment hours consistently has the largest (positive) association with fathers sharing childcare when the child is age three.

Table 6: The conditions associated with fathers taking on a shared caregiver role when children are aged three years old

Variable	Model 1 [N=9,101]	Model 2 [N=9,120]	Model 3 [N=9,101]
	B (Std. Error)	B (Std. Error)	B (Std. Error)
Fathers' work hours when child is aged 9 months[1]		**--**	**--**
- Part-time	1.16 (.27)		
- Full-time	**1.37 (.15)****		
Reference Category: long-full-time			
Mother's work hours when child is aged 9 months[2]		--	**--**
- Part-time	**1.44 (.14)*****		
- Full-time	**3.37 (.37)*****		
Reference Category: not in work			
Father X Mother work hours when child is aged 9 months[3]			
- Father PT x Mother PT	2.10 (.92)	--	--
- Father PT x Mother FT	1.42 (.58)		
- Father FT x Mother PT	1.18 (.16)		
- Father FT x Mother FT	1.09 (.16)		
Reference Category: mother not in work x father long full-time			

[4] A fifth model was run to test the effect of the gender of people the father mostly works with, whether the father has managerial or supervisory duties in his job, whether he had taken any form of leave after the birth of his baby and the frequency he worked at night given this atypical pattern of work was found to be consistently significant in previous analyses of paternal involvement when children were aged nine months (see XXXX, 2010). While the gender of the people the father worked with had no significant effect on his propensity to take the shared caregiver role, the other variables did. However, the effects were all very small so the decision was taken to exclude them from the final model in order to focus the analysis on the effect of employment hours and key demographics and simplify the presentation of the models. For information, fathers were 1.2 times more likely to be shared caregivers if they worked at night every week compared to not at all; were less likely to be shared caregivers if they were managers and 1.3 times more likely to be shared caregivers if they took some form of leave after the child's birth.

Fathers' (current) work hours when child is aged 3	**--**		--
- Not in work		**2.77(.55)*** **	
- Part-time		**3.26(.84)*** **	
Reference Category: full-time			
Mothers' (current) work hours when child is aged 3	**--**		--
- Part-time		**2.58(.21)*** **	
- Full-time		**8.48(.77)*** **	
Reference Category: not in work			
Father X Mother work hours when child is aged 3[3]			
- Father Not x Mother PT	**--**	.82(.31)	--
- Father Not x Mother FT		**.20(.08)*** **	
- Father PT x Mother PT		1.03(.42)	
- Father PT x Mother FT		**.25(.11)** **	
Reference Category: father FT x mother not in work			
Father's work transitions[4]			
- Part-time – Not in work	**--**	**--**	.39(.22)
- Part time – Part time			**2.85(.82)*** **
- Part-time – Full time			1.19(.24)
- Full-time – Not in work			**2.00(.35)*** **
- Full time – Part time			**2.23(.54)** **
Reference Category: full-time to full-time			
Mother's work transitions[4]			
- Not in work – Part-time	**--**	**--**	**2.36(.29)*** **
- Not in work – Full-time			**5.17(1.12)*** **
- Part-time – Not in work			1.02 (.18)
- Part time – Part-time			**2.51(.25)*** **
- Part-time – Full-time			**6.89(.95)*** **
- Full-time – Not in work			1.46(.31)
- Full time – Part-time			**3.53(.53)*** **
- Full-time – Full-time			**8.84(.99)*** **
Reference Category: not in work to not in work			
Household income when child is aged 9 months[5]	.		
- Very low	97 (.12)	.97(.13)	1.02(.13)
- Moderate	**.81 (.06)** **	**.78(.06)** **	**.76(.06)** **
- Moderate to high	.96 (.09)	.88(.08)	.84(.08)
- High	.89 (.12)	.79(.11)	.77(.10)
Reference Category: low			
Father's education when child is aged 9 months[6]			
- Secondary	1.09(.10)	1.03(.10)	1.03(.10)
- Compulsory or lower	**1.27(.10)** **	1.16(.09)	**1.17(.09)***
Reference Category: degree or higher			
Sex of baby			
- Female	**.85(.05)** **	**.88(.05)***	**.86(.05)***
Reference Category: boy			
Siblings (currently) in household when child is aged 3			
- Yes	**.79(.06)** **	.90(.06)	.92(.06)
Reference Category: no			
Other children (currently) outside household			

when child is aged 3			
- Yes	.84(.08)	**.83(.08)***	**.83(.08)***
Reference Category: no			
Father's age when child is aged 9 months			
0-62	1.01 (.01)	1.01(.01)	1.01(.01)

Source: MCS sweep 1 (2000/01) weighted by the overall weight for sweep one (ovwt2).

*** p <0.001 ** p <0.01 * p <0.05

[1]*part-time = 1-29 hours per week; full-time = 30-44 hours per week; long full-time = 45+ hours per week*
[2] *part-time = 1-29 hours per week; full-time = 30-44 hours per week*
[3] *PT = part-time, FT = full-time*
[4] *This measures fathers'/mothers' sweep one (when child is aged nine months) to sweep two (when child is aged three years) work hour transitions*
[5] *very low (below £10,400 pa); low (£10,440-£20,800); moderate (£20,800 – £31,200 pa); moderate to high (£31,200 – £52,000 pa); high (£52,200 + pa.*
[6] *'compulsory or lower' is equivalent to GCSE or lower and includes having no qualifications; 'secondary' is equivalent to A level.*

Model one in Table 6 shows that in households where mothers worked full-time nine months after childbirth, fathers are 3.4 times more likely to share childcare when the child is aged three compared to fathers in households where the mother was not employed at this point in time; if she was employed part-time, fathers are 1.4 times more likely to be shared caregivers. In comparison, the hours a father works nine months after the child's birth has a weaker influence on the probability of the father having a shared caregiver role when the child is aged three. Fathers who work average full-time hours nine months after the child's birth are 1.3 times more likely to be a shared caregiver when their child is aged three compared to fathers who worked very long, full-time hours (45+ hours per week) at that time. This indicates that if a father works long hours nine months after their child's birth, he is setting up a pattern of long working hours and limited caregiving, which persists two years later. The interaction term for fathers' and mothers' work hours nine months after childbirth has no significant predictive effect. This suggests that mothers' and fathers' employment hours at the time when their child is nine months old have an independent effect on the probability of a father taking a shared caregiver role when the child is aged three.

In terms of (current) work hours when the child is aged three, model two also shows that it is the mothers', rather than the fathers', work hours that have the stronger association with fathers taking the shared caregiver role, and this effect is even stronger than that of

(previous) hours worked when the child was aged nine months. For instance, if mothers are employed full-time when their child is aged three, fathers are 8.5 times more likely to be a shared caregiver at this time compared to when mothers are not employed. Even if the mother is only employed part-time, the father is still almost three times as likely to share childcare compared to when she is not employed. This suggests that the chances of a father sharing childcare when the child is aged three increase considerably providing the mother is employed at this time. This finding supports relative resource theory in that men do more childcare (i.e. domestic work) when women do more paid work; this could be attributable to a shift in the balance of economic power between partners but could also be simply a matter of household logistics.

Unlike the interaction of hours worked at nine months, the interaction of mothers' and fathers' work hours when the child is aged three has a significant effect, which suggests that once children are older, fathers' and mothers' work hours no longer have an independent effect on whether fathers share childcare. Although model two shows that the chances of fathers sharing childcare increase by about 3 times when fathers work either shorter hours or not at all, this positive effect is reversed if their partner works full-time. This suggests that when parents reverse their traditional gendered employment roles, that is, when fathers do not work or work part-time hours while their partner works full-time, the chances of a father sharing childcare are significantly reduced. Thus, while mothers' work hours are an important predictive factor for shared caregiving, this is dependent on whether the father is employed full-time or part-time.

In model three, work hour variables are replaced by two longitudinal variables measuring fathers' and mothers' work hour transitions from when the child is aged nine months (sweep one) to three years (sweep two). Once again, mothers' work-hour transitions over this period have the strongest association with the probability of a father sharing childcare: fathers are 9 times more likely to take this role when their child is aged three if their partner is employed full-time over this period compared to fathers with a non-employed partner during this period. It appears that as long as mothers are employed by the time the

child is three years old, whether on a part-time or full-time basis, the chances of a father sharing childcare increase considerably; although the effect is stronger when she is employed full-time. Fathers' work-hour transitions over this period have a comparatively weaker association with them sharing childcare at this time with sharing childcare most conducive to the father working shorter hours or being out of work when the child is aged three. It is, of course, probable that fathers' and mothers' work transitions also interact for fathers may be more likely to opt for part-time hours if their partner works full-time.

In terms of socio-demographics, fathers are less likely to share childcare when they have moderate compared to low household incomes. The likelihood of a father sharing childcare when their child is aged three is 1.3 times higher if the father has a lower level of education (i.e. up to GCSE level or lower) compared to fathers educated to degree level or higher, which contradicts other research which has found that the higher the level of education, the greater the contribution a father makes at home (e.g. Dale and Egerton, 1997). As predicted, fathers are more likely to be shared caregivers to their three year old child when it is a boy but less likely to share childcare when there are other children in the household - although the latter is only apparent when we control for parental work hours nine months after the child's birth (i.e. in model one). In contrast, fathers are also less likely to share childcare when they have other children outside the household, but only when we control for parental work hours when the child is aged three (i.e. models two and three). Overall, this indicates that the presence of other children reduces the chances of a father sharing childcare for the cohort baby. The age of the father has no significant association with the probability of him being a shared caregiver.

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The characteristics associated with primary caregivers

Controlling for the same socio-demographic variables, Table 7 shows that the hours a mother and father work nine months after the child's birth have the same effect on whether fathers take the primary caregiver role when the child is aged three in the same way as they did for shared caregivers, however this time, the associations are almost identical. That is, fathers are 6.8 times more likely to be the primary caregiver if he works part-time nine months after the child's birth compared to long, full-time hours, and independently of this, he is also 6.8 times more likely to be the primary caregiver if the mother works full-time nine months after the child's birth compared to not working at all. Thus, as was the case for shared caregivers, this suggests that the employment hours worked by both parents at an early stage in the child's life have some bearing on whether the father is a primary caregiver two years later.

Table 7: The conditions associated with fathers taking on a primary caregiver role when children are aged three years old

Variable	Model 1 [N=9,101] B (Std. Error)	Model 2 [N=9,120] B (Std. Error)
Fathers' work hours s1[1]		
- Part-time	**6.85(2.89)*** **	**--**
- Full-time	1.67(.49)*	
Reference category: long full-time		
Mother's work hours s1[2]		
- Part-time	1.55(.65)	--
- Full-time	**6.81(2.41)*** **	
Reference category: not in work		
Fathers' work hours s2		
- Not in work	**--**	2.74(2.30)
- Part-time		**7.94(7.05)***
Reference category: full-time		
Mothers' work hours s2		
- Part-time	**--**	1.56(.97)
- Full-time		**17.38(8.31)*** **
Reference category: not in work		
Father X Mother work hours s2[3]		
- Father Not x Mother PT		9.09(10.94)
- Father Not x Mother FT	**--**	**8.29(7.37)***
- Father PT x Mother PT		1.30(1.57)
- Father PT x Mother FT		2.83(2.96)
Reference category: father FT x mother Not in work		

Household income[4]		
- Very low	1.80(.99)	2.42(1.36)
- Moderate	.81(.26)	1.19(.40)
- Moderate to high	**.46(.18)***	.62(.26)
- High	.56 (.33)	.75(.47)
Reference category: Moderate to high		
Father's education[5]		
- Secondary	1.22(.61)	1.19(.59)
- Compulsory or lower	1.58(.71)	1.41(.61)
Reference category: Degree or higher		
Sex of baby		
- Female	1.24(.32)	1.26(.35)
Reference category: boy		
Siblings of baby		
- Yes	.92 (.28)	.92(.27)
Reference category: no		
Other children[1]		
- Yes	**2.12 (.66)***	**1.88(.58)***
Reference category: no		
Father's age		
0-62	.99(.02)	.98(.03)

Source: MCS sweep 1 (2000/01) weighted by the overall weight for sweep one (ovwt2).

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$

[1] *part-time = 1-29 hours per week; full-time = 30-44 hours per week; long full-time = 45+ hours per week*
[2] *part-time = 1-29 hours per week; full-time = 30-44 hours per week*
[3] *PT = part-time, FT = full-time*
[4] *very low (below £10,400 pa); low (£10,440-£20,800); moderate (£20,800 – £31,200 pa); moderate to high (£31,200 – £52,000 pa); high (£52,200 + pa.*
[5] *'compulsory or lower' is equivalent to GCSE or lower and includes having no qualifications; 'secondary' is equivalent to A level.*

In model two of Table 7, there was not enough data to estimate the interaction of mothers' and fathers' work hours when the cohort child was aged nine months. Instead, we include an interaction of fathers and mothers' current work hours when the child is aged three, In line with the patterns observed for shared caregivers, the current work hours of the mother and father when the child is aged three, have the strongest association with fathers being the primary caregiver at this stage in their child's life, although the effect is much stronger than it was for the shared caregiver fathers. In particular, mothers' employment hours have by far the strongest association: if a mother works full-time when the child is aged three, the father is 17 times more likely to be the primary caregiver compared to when a mother is not in work. In comparison, if fathers work part-time when the child is aged three, they are 8 times more likely to be the primary caregiver compared to fathers employed full-time. Once again, fathers' and mothers' work hours do not have an independent effect on fathers' roles,

however, in complete contrast to the pattern observed for shared caregivers, fathers are 8 times more likely to be the primary caregiver when fathers do not work and their partner works full-time. The interaction is only significant for this division of work hours however. It is likely that this minority group of fathers (n=25) is comprised of those who stay-at-home and have (temporarily or permanently) given up employment to take a full-time responsibility for the care of their children while their partner assumes the breadwinner role.

The demographics have no significant association with the father being a primary caregiver except for having a moderate to high household income, which relative to a low household income, reduces the likelihood that a father takes on the primary caregiver role when the child is aged three but only when we control for the hours both parents work nine months after the child's birth. In contrast to shared caregivers, having other children outside the home when the cohort child is aged three doubles the likelihood of him taking the primary caregiver at this time.

Discussion

Following analysis of the relative influence of fathers' and mothers' past (sweep one, aged nine months) and current (sweep two, age three years) employment hours on two types of paternal caregiving roles - 'shared' and 'primary' - when children were aged three, we find that both parents' employment hours are significantly associated with fathers' caregiver roles but, contrary to expectation, the hours that the mothers' works has the strongest effect. We also find that ways of working that are established in the first year of a child's life significantly shape paternal involvement later on because the hours worked when the child is very young (age nine months), particularly those worked by the mother, have some association with fathers' caregiver roles when children are aged three. In other words, when a mother switches her traditional, stay-at-home maternal caregiving role for one of full-time employment during the first year of a child's life, fathers are more likely to make larger contributions to childcare later on – perhaps as a way of substituting for the reduction in the mothers' time with children during the early months. Interestingly, the hours worked by the

mother and father when the child is aged nine months have an independent effect on fathers' caregiver roles when children are aged three. That is, regardless of what hours the father works nine months after the child's birth, if a mother is employed full-time at this stage, fathers are considerably more likely to either share or, in particular, do the most childcare as the primary caregiver at age three.

In contrast, the hours that fathers and mothers work at age three (hereafter referred to as 'current' work hours) do not have an independent effect on fathers taking the shared and primary caregiver role at age three. Although current work hours, particularly those of the mother, continue to have the strongest association with fathers taking both the shared and, particularly, the primary caregiver role, the effect is mediated by what hours the father works at this time. For example, if the mother works full-time but the father is out of work or only works part-time, the effect is reversed - but only for shared caregivers. Thus, when parents reverse traditional gendered employment roles (i.e. mother works full-time and father works part-time or not at all), fathers are less likely to share their child's care at age three. Interestingly, this effect is reversed for primary caregivers. Thus, fathers are more likely to be primary caregivers when their child is aged three if they are not in work and heir partner works full-time. This arrangement only applies to a very small group of men who have committed to be the primary caregiver whilst their partner works full-time. Indeed, having a partner with a rewarding employment position was one of the reasons for men to assume a primary caregiver role in Doucet and Merla's (2007) study and it appears this could have some relevance here.

In regard to the shared caregivers, it appears to be that only when mothers work full-time alongside a full-time working partner does the father then share childcare more equally. This may suggest that out of work fathers, or those who work short hours, are, in fact, deterred from sharing childcare when their partner works full-time. This links with Doucet's (2006) work on fathers who felt that doing childcare and being out of work represented a 'double jeopardy': failing as a breadwinner and deviating from a masculine to a feminine role. This 'jeopardy' may be further aggravated by a partner enjoying more employment success

(by working full-time) in what is traditionally regarded to be their sphere i.e. the labour market. Avoiding the sharing of childcare may be the only way in which fathers can reaffirm their precarious masculine identity. Indeed, the social stigma linked to father involvement in childcare was also apparent in Doucet and Merla's (2007) study of primary caregiver men in Canada and Belgium who tended to take on on unpaid work with masculine connotations (e.g. building, renovation) in order to alleviate the public scrutiny of their non-traditional caregiver role. This stigma is also felt by fathers in the UK (see The Independent, 6 January 2013).

Maternal work-hour transitions from when the child is aged nine months (sweep one) to three years (sweep two) also have a stronger association on the probability of the father being a shared caregiver than paternal work-hour transitions but the effect is always strongest when she is in full-time work when the child is aged three, regardless of what hours she works nine months after childbirth. This reaffirms that although there is a longitudinal effect of work hours on fathers' shared caregiver roles, this is not as marked as the effect of current work hours, particularly mothers'. These results, which highlight the importance of mothers' employment in shaping fathers' caregiver roles, contradict those of previous research, which finds no statistically significant relationship between mothers' employment and fathers' childcare time (e.g. Zick, Bryant and Osterbacka, 2001; Bryant and Zick, 1996; Marsiglio, 1991) but they support the explanation offered by relative resource theory, which argues that women's work schedules have a stronger impact on men's contributions when they work full rather than part-time hours (see Fagan, 2010) although this analysis has shown that this is mediated by what hours the father works.

Gershuny and Robinson (1988) point out that the increasing time commitments the mother contends with from being in employment are often met by a reduction in the amount of time she spends in traditionally maternal activities such as childcare. In order to deal with this reduction, families opt to either shift some of the childcare to the father, purchase market substitutes or leave tasks undone. In this study, mothers' employment appears to encourage fathers to at least partly substitute for the reduction in the mothers' time with children, but only if this work pattern is established when the child is very young. When children are aged

three, mothers' employment hours still have the strongest association with fathers sharing childcare but if the father is not in work or part-time, this does not hold, in fact, he is less likely to share childcare with the mother. It is clear from the results presented here that shared caregiver fathers maintain similar employment patterns to secondary caregiver fathers (i.e. those who do less childcare than their partner) whereas primary caregiver fathers have a reduced hours employment pattern, which is similar to the way that primary caregiver mothers engage in the labour market in the UK. However, we cannot infer from these results whether parents have chosen these caregiving roles and adapted their work hours accordingly, or whether the job market has driven the domestic arrangements, for example, the father took on caregiving as a result of losing his job.

Since, in most cases, mothers' employment hours have a stronger association than fathers' employment hours with paternal involvement it may suggest that a shift in traditional gender relations has occurred. In two-parent households, fathers' labour market roles have historically been given precedence as the 'primary' earner in the couple (also see Warin, Solomon, Lewis and Langford 1999). Structural arrangements perpetuate this norm with, for example, the gender pay gap in the labour market increasing the probability that the man is in a better-paid job. If the woman interrupts her employment or switches to part-time hours this widens the disparity in their earnings and reinforces her position as a 'secondary' earner. With these labour market inequalities and gendered norms in place, it might be expected that the fathers' hours of employment would be the most influential factor on his contribution to childcare, but our results show that the mothers' employment hours has the stronger association.

A father's caregiving involvement is not determined solely by the mothers' and his employment hours worked. Fathers are more likely to be shared caregivers when their child is three years old if they have a lower education level (ie. up to GCSE standard)[5]; which conflicts with previous studies that find higher education levels are associated with men being

[5] Educational level was recorded when the child was nine months old. Some fathers may have obtained further qualifications by sweep two, but it is unlikely to be many given the majority of fathers remain in full-time employment over both sweeps and are, on average, aged 32

more involved in childcare and domestic work (e.g. Dale and Egerton, 1997; Arrighi and Maume, 2000). Fathers are also more likely to share childcare if their child is a boy, corroborating previous research (e.g. Raley and Bianchi, 2006) and if he has no other children living outside the household Whether a father is a primary caregiver is unrelated to both the child's gender and the fathers' education, but, in contrast to fathers being shared caregivers, the likelihood of being a primary caregiver is increased if there are additional children living in another household. What is not clear from the data is whether children are older and have moved out from the family home or whether they are children from a previous relationship. The former scenario may suggest the father has had previous experience of raising children and therefore acquired the skills and confidence to take on the primary caregiver role. On the other hand, the latter scenario may suggest fathers are 'making up' for a lack of involvement with their other children, particularly if contact is infrequent, by having a much higher level of involvement with the child that they live with. However, these are speculative possibilities and further, possibly qualitative, data would be required to test their substance.

Concluding remarks

The importance of understanding the context under which fathers do take on more childcare has been highlighted by Russell (1986) who argues that a critical assessment of families that 'reverse' traditional gender roles, or share roles more equally, forms the basis of knowledge about the possibilities for changing the balance of employment and family commitments between men and women, as well as highlighting the difficulties that may be experienced by those who try to share or reverse parenting responsibilities. This paper has addressed this issue directly by examining what effect the reversal of parental employment roles has on fathers' contributions to childcare. This is a particularly relevant issue for UK family policy given its recent focus on how to facilitate father's roles. Moreover, some of the factors behind the persistent gender inequalities within the division of labour between couples with children are also partly brought to light since the study identifies what reduces paternal involvement in childcare.

We have shown that paternal involvement in caregiving is higher in households where the mother is employed full-time; and the likelihood is also higher if the father is employed part-time. However, in some cases, mothers working full-time can have a negative association with paternal involvement if the father is out of work or works short hours. Thus, the father is only more likely to be involved when the child is age three providing gender employment roles are more equal, that is, when both parents work full-time. Such working arrangements are still the exception rather than the norm in the UK as most mothers work part-time after having children. At the end of 2010, only 29 percent of mothers with dependent children were employed full-time compared to 89 per cent of men who were employed full-time, men have become more exposed to unemployment and part-time working with the onset of the current recession[6].

The results have also shown that some of the characteristics associated with fathers taking the primary caregiver role when their child is aged three differ to those associated with fathers taking the shared caregiver role, which highlights variation between these two groups of men. Shared caregiving was partially associated with certain demographics (education, the gender of the cohort child, not having other, non-resident children) but these have no bearing, or an opposite effect, on whether fathers are the primary caregiver. For example, the likelihood of a father being the primary caregiver is increased significantly if he has other non-resident children who live with a partner from a previous relationship or if he has older children who have left home to set up their own households. Employment hours have an even stronger association with the likelihood of a father being a primary rather than shared caregiver. Finally, while the effect of a father not being in work and having a full-time working partner decreases the likelihood of him sharing childcare when the child is age three, this work-hour arrangement actually increases the likelihood of him being the primary caregiver at this time.

The demographic and employment variables included in our analysis of paternal involvement when the cohort child is three years old were chosen on the basis of what has

[6] Figures taken from the Labour Force Survey.

identified as influential in previous studies, including studies undertaken during earlier periods, using different methodologies or including a broader focus which included older children. Our results depart from these other studies by highlighting the weaker influence of demographic variables once the fathers', and particularly the mothers', employment hours are brought into the analysis. What is particularly striking is that fathers' employment patterns have less influence on their caregiving roles in comparison to the mothers' employment hours. This is in sharp contrast to research that finds employment to be one of the most important determinants of father involvement in childcare (e.g. Dermott, 2003; 2008, Aldous, Mulligan, and Bjarnason 1998; Cohen, 1993; Sayer, Bianchi and Robinson, 2004). This suggests that the influence of fathers' employment hours on their caregiving has waned over recent years, or is less relevant when children are young. Other factors may be more pertinent for fathers caregiving roles for babies and toddlers, such as confidence and motivation to be involved, which may have increased with the growing focus on involving fathers in ante-natal and post-natal services and parenting groups (e.g. mumsnet.com, dads-space.com and parentlineplus.org.uk for instance). The father's employment hours may have more influence on his caregiving contribution when the child is older.

While the paper has confirmed that employment continues to shape fathers' roles, we are aware that the presence of other variables, not taken into account for this study due to a lack of data, are likely to have a significant and perhaps even greater association with paternal involvement. This suggests that potentially important characteristics should be explored in future research; including the parents' attitudes to the gender division of labour around caregiving and employment, availability and use of childcare services or more informal networks of care such as wider family, kinship and friends, and additional economic and demographic information about the couple, such as ethnicity and more refined measures of their relative contribution to household earnings. It would also be particularly interesting to explore whether the primary and involved caregiver role for fathers is a temporary or stable arrangement, and whether the proportion of fathers taking on the primary or involved caregiver role changes as their children grow older.

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