

**Maternal employment and gender role attitudes:
Dissonance among British men and women in the transition to parenthood**

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Abstract

This study examines how changes in gender role attitudes of men and women after childbirth relate to women's paid work and the type of childcare used. Identifying attitude-practice dissonances matters because how they get resolved influences mothers' future employment. Previous research examined changes in women's attitudes and employment, or spouses' adaptations to each others' attitudes. We extend this literature by considering how women and men in couples simultaneously adapt to parenthood in terms of attitude and behavioural changes and by exploring indirect effects of economic constraints. We use the British Household Panel Study (1991-2007) and apply structural equation models and regression analysis. We find that less traditional attitudes among women and men are more likely in couples where women's postnatal labour market participation and the use of formal childcare contradict their traditional prenatal attitudes. Women's prenatal earnings have an indirect effect on attitude change by providing incentives for maternal employment.

Keywords: Britain; childcare; cognitive dissonance; female employment; gender role attitudes; parenthood

Introduction

This paper explores how childcare and women's employment are associated with changes in British men's and women's gender role attitudes across the transition to parenthood. In particular, we examine possible dissonance between their prenatal attitudes and postnatal practice, regarding maternal employment. In Britain, like most other European countries, recent governments have aimed at increasing the labour market participation of mothers. At the macro level, this is motivated by the need to provide sufficient labour supply to finance an ageing population. At the micro level, continuous attachment to the labour market is seen as a crucial safeguard against poverty following family splits, for mothers and children. It also helps protect women's long-term prospects for good earnings and pensions. British parents of young children face very high childcare costs. Over the past decade, the typical cost of a nursery place were more than one third of average full-time gross earnings and exceeded average household spending on either food or housing (Daycare Trust 2001; 2008). We therefore also explore the importance of couples' economic resources for their work and care arrangements and attitudinal adaptations.

Previous research shows that women's economic resources have a positive effect on their labour market return and career progression. In Britain, mothers' labour market participation varies strongly by their educational attainment with highly educated women being more likely to return to full-time work sooner after childbirth than those with lower qualification levels (Dex, et al. 2008; Smeaton 2006). In recent years, there has been a marked increase in research on women's gender role attitudes or work-family preferences as predictors of their labour force participation (e.g. Hakim 2000; Kan 2005; Kangas and Rostgaard 2007). Many of these studies suggest that the relationship is context-dependent with financial resources and policy entitlements constraining or enabling choice, e.g. in terms of childcare arrangements

(Crompton and Harris 1999; Debacker 2008; Duncan, et al. 2003; Gash 2008; Kangas and Rostgaard 2007; Kremer 2007; McRae 2003; Singley and Hynes 2005). Much of this research, however, is based on small-scale qualitative interviews or cross-sectional snapshots of different countries at one point in time.

While gender role attitudes are seen as important predictors of behaviour, much less is known about the drivers of attitudinal change across the lifecourse. One possible driver of attitudinal change is cognitive dissonance, whereby attitudes may change if they are at odds with a person's behaviour (Festinger 1957). Alternatively behaviour might change. How dissonance is resolved matters, when the conflict concerns beliefs about the detrimental consequences of maternal employment. If women give-up work on childbirth then this has knock-on effects on women's longer-term employment prospects, as well as heightened economic risks for children if the couple splits. If attitudes change then, overtime, this will contribute to a shift in population level gender roles beliefs, which may in turn have some impact on social norms.

Some recent studies have explored how life course events and changes in women's labour market participation are associated with gender role attitude change. They find increases in educational attainment and full-time employment to result in more egalitarian attitudes, while marriage, parenthood, and reductions in paid work are associated with more traditional attitudes (Cunningham, et al. 2005; Fan and Marini 2000; Himmelweit and Sigala 2004; Kan 2005). Berrington et al (2008) suggest that it is not entry into parenthood as such, but the change in women's economic activity as a consequence of parenthood which is associated with attitude change. Himmelweit and Sigala (2004) show that changes in attitudes or behaviour are more likely when mothers' labour market status is inconsistent with their attitudes towards women's employment. Some qualitative studies also provide evidence of a complex interplay of economic and identity-driven motivations for mothers' labour market

participation (Duncan, et al. 2003; Himmelweit and Sigala 2004; Singley and Hynes 2005).

There has been little quantitative longitudinal research, however, on how contextual factors shape work and care arrangements of new mothers and fathers (with some exceptions such as Gash 2008); how such arrangements conflict or not with existing attitudes; and how any possible dissonances between attitudes and practices are resolved.

This study contributes to the literature by exploring whether gender role attitude change is more likely among new parents when mothers' labour market participation and the type of childcare they use show some discrepancy with the prenatal gender role attitudes. Given the substantial costs of formal childcare in Britain, this research also examines how economic resources, in particular education and earnings, impact on parents' work and childcare arrangements and whether they have an indirect effect on gender role attitude change by influencing the likelihood of dissonances between attitudes and practice. Our analysis is based on a representative sample of 337 British couples from before pregnancy to two or three years after their first birth.

Gender role attitude change during the transition to parenthood: theories and hypotheses

Our hypotheses about gender role attitude change during the transition to parenthood are derived from both theoretical perspectives and empirical observations about constraints and opportunities concerning parenting and employment strategies in the UK.

Our first hypothesis is that *men and women in couples where maternal employment behaviour is consonant with their prenatal gender role attitudes are less likely than those who experience dissonance to change attitudes after having children.*

The notion of cognitive dissonance comes from the social psychological literature, where psychologists have argued that personal experiences promote attitudinal change in particular when a situation involves dissonant cognitions based on one's own attitudes and behaviour (Festinger 1957; Wickland and Brehm 1976). A person who has dissonant or discrepant cognitions is thought to be in a state of psychological discomfort, which is experienced as unpleasant psychological tension such as frustration, anger or anxiety. One way to reduce cognitive dissonance is to change either attitudes or behaviour to make it consistent with the other. In practice it is often attitudes that change as behaviour is more constrained.

Cognitive dissonance can be linked specifically to gender role attitudes through the theoretical approaches focussing on gender identity (Stets and Burke 2000; West and Zimmerman 1987). These suggest that male and female roles as partners or parents serve as core standards on which to evaluate gendered aspects of paid work and childcare arrangements. Discrepancies between these standards and actual practice are likely to lead to changes in identity or behaviour or both. Attitudes are relatively general beliefs that are only tangentially related to identities (Himmelweit and Sigala 2004). Nevertheless, we expect changes in women's or men's gender role attitudes to be more likely when they are in conflict with the postnatal work and care arrangements.

The phrasing of the attitude questions in our data only allows a differentiation between agreement and disagreement with relatively traditional statements. Therefore, our focus is on dissonances between traditional attitudes and more egalitarian practice of women's work and childcare arrangements. The available measures are less suitable for capturing conflicts between egalitarian attitudes and traditional practices

Our second hypothesis is that *dissonance is likely to result in greater attitudinal change among couples that use formal childcare rather than care by family members or friends. Type of childcare is therefore assumed to have an additional effect to any dissonances arising from mothers' labour force participation.*

In Britain, the care ideal for young children has been family care, preferably by the mother (Kremer 2007). The institutional context including gendered family policies and associated social norms provide clear incentives for mothers to be the main carer for young children. Since the early 1990s, maternity leave provisions have been extended from less than six months to a year, while leave options for fathers are still very short and largely unpaid (for details see e.g. Moss and O'Brien 2006). Leave policies and the widespread availability of part-time employment for women therefore promote a gendered division of labour among parents with young children. Although father care recently has gained greater acceptance, even egalitarian men are often limited in the time they have available for childcare, as British fathers' working hours are some of the longest in Europe (OECD 2004).

Informal care by relatives, in particular by grandmothers, has been perceived as the most acceptable substitute of mother care and has been widely used (Dench, et al. 1999; Wheelock and Jones 2002). Although the availability and use of formal childcare, such as nurseries and childminders, has increased since the implementation of the childcare strategy in 1998, provision of subsidised childcare places has focussed on 4- and 5-year olds. For younger children, most couples still prefer informal care by relatives over formal daycare. Thus we expect mothers who use formal care to be more susceptible to attitudinal change than mothers using informal childcare, if their prenatal gender role attitudes were relatively traditional. In addition, in the UK, formal childcare is primarily paid and informal childcare is unpaid. The economic constraints of childcare costs are of relevance to our third hypothesis.

Our third hypothesis is that *women's larger economic resources will have an indirect effect on women's and men's attitude change through positive incentives for women's labour force return.*

Following a growing body of literature on the structural embeddedness of attitudes and preferences (e.g. Crompton and Harris 1999; Debacker 2008), we assume that structural constraints, in particular large costs of formal childcare, may limit some women's choices. Women's low earnings may make good-quality childcare unaffordable thus restricting options to return to work; relatively high earnings may provide a strong incentive to return to the labour market. Men's economic resources are assumed to show a weaker association with dissonances between attitudes and practice, as higher earnings may have contradictory effects on paid work and childcare arrangements, in part depending on couples' attitudes. Some women will use their partners' earnings to pay for childcare, while others will interrupt their employment for longer in absence of the financial necessity to work.

Our fourth hypothesis is that *partners will influence each others' attitudes directly as well as indirectly through the extent of mothers' paid work reduction and the choice of childcare.*

According to the psychological theory of interdependence (Kelley and Thibaut 1978), partners will sometimes modify attitudes or behaviours to bring them in line with their spouses' preferences, rather than their own. Men, in particular, may be more influenced by their partners' views as, in general, husbands change work patterns less than their wives, in response to the transition to parenthood. However, an alternative scenario is that wives are more likely to adapt to their husbands' views because women tend to take more responsibility for 'emotion work' than do men (Hochschild and Machung 1990). Existing studies provide

contradictory evidence for which partner's attitudes are more influential (Johnson and Huston 1998; Kalmijn 2005). Thus we have no clear theoretical or empirical grounds for predicting which partner's attitudes will exercise the most influence.

Data and Methods

Our data is drawn from couple responses in the British Household Panel Survey (BHPS) from 1991 to 2007. The BHPS is based on a probability sample of households from Great Britain in the year 1991. All members of the household are interviewed annually, and new partners of sample members or additional household members are added to the sample over time. In addition to relationship and fertility histories and annual questions on employment, earnings and childcare, the BHPS has asked biannually repeated questions on attitudes about gender since 1991.

We use change models to measure how gender role attitudes, paid work and childcare arrangements in the second or third year after birth are related. Whether it is the second or third year depends on when gender role attitudes were measured, as these indicators are only available every other year. Postnatal attitudes and practice are not measured in the first year because most women take maternity leave for at least part of the year and their employment status is therefore somewhat unclear. In the second and third year after birth, about three quarters of mothers in our sample have returned to the labour market and one quarter remains out of employment.

We apply structural equation modelling (SEM) to investigate the effects of couple's earnings and gender role attitudes before childbirth on postnatal changes in women's paid work hours and gender role attitudes of men and women. The advantage of SEM is that it allows us to investigate direct and indirect effects and to take account of the correlated measurement errors

between attitude indicators before and after childbirth. However, because structural equation models normally require interval or ordinal variables, it is problematic to incorporate type of childcare used in our structural equation models. Therefore, in a second step, we use OLS regression to examine the impact of childcare type on postnatal attitude change. Consistent with Smith et al. (2009), we find no substantive differences in the coefficient sizes or significance levels when OLS and SEM models are compared. This suggests that correlated errors in attitudinal measures are not significantly biasing our OLS results. To reduce the possibility of other biases through the bounded categorical gender role attitude variables, we combine three gender role attitude indicators based on a Likert-scale into one continuous factor for the dependent variable and we compare the results with tobit regressions which adjust for bounded variables.

Previous research found that men and women who become parents may be a select group in terms of gender role attitudes, age, educational qualifications, and marital status (e.g. Rendall, et al. 2005). We tested this concern using Heckman selection correction factors. Couples' pre-pregnancy relationship duration and marital status are used as identifying variables, which are only included in the selection model. Both are expected to be positively associated with parenthood, but after controlling for prenatal attitudes about gender, religiosity and economic resources they are not expected to contribute to explaining the change in women's paid work and both partners' gender role attitudes. As the Heckman models do not provide qualitatively different results and rho as a measure of selectivity was not significant, we only present the results without selection correction factors.

Sample selection. We limit the sample to couples, irrespective of marital status, where women are at least 20 years old when they have their first child. This is because we are interested in maternal employment and the choices for teenage mothers are likely to be subject to different

constraints. The selection of couples who become parents is based on women's fertility history. Therefore the birth we observe is the first birth for the woman. Although some of the men will be fathers in a previous relationship, this information is not captured with the same reliability as women's fertility. We observe 775 couples where the woman has a first child during the observation period. However, of these, we have no prenatal observations for 310 couples, usually because they only started cohabiting during or after the pregnancy. A further 39 couples dropped out of the sample in the second or third year after the birth and also have to be excluded. Out of the remaining 426 couples, only 337 have complete information on all dependent and independent variables. Thus 89 couples were dropped because of non-response on crucial items.

Sample bias because of attrition and item non-response is always a potential problem with longitudinal research. However, we have compared the 337 couples in our sample with the 310 who joined later. The latter, on average have shorter relationship durations. This occurs most frequently among women with less than GCSE education and therefore our sample slightly under-represents the less well educated. We also compared results using multiple imputation techniques for item non response, but as the results were not substantially different, we report results using the sample with complete responses.

Measures and descriptive statistics

Gender role attitudes. We use three of the six available gender role attitude statements in the BHPS, for which respondents are asked whether they agree or disagree (strongly) on a 5-point Likert scale: i) 'A preschool child is likely to suffer if his or her mother works', ii) 'All in all, family life suffers when the woman has a full-time job', and iii) 'A husband's job is to earn money; a wife's job is to look after the home and family'. The first and second statements tap into similar concepts of consequences of women's employment on children's and families'

wellbeing. Question 3 addresses people's ideologies about women's and men's roles in different spheres. The BHPS contains three other statements which are sometimes used to measure gender role attitudes: iv) 'A woman and her family would all be happier if she goes out to work', v) 'Both the husband and wife should contribute to the household income', vi) 'Having a fulltime job is the best way for a woman to be an independent person'. These are omitted since it is conceptually less clear what attitudes they capture. Empirical tests of internal consistency based on Cronbach's alpha also suggest a greater reliability of a latent gender role attitude construct based on the first three rather than all six items. The three item Cronbach alphas are 0.80 for women and 0.82 for men. We use factor analysis to create latent factors of the underlying attitude construct. We create one gender role attitude factor for women and one for men by multiplying the responses with the respective factor loadings and summing them up. Higher values represent greater egalitarianism. To facilitate interpretation of effect sizes, we rescale the factors to a 5-point scale similar to the original Likert scale.

'Table 1 here'

Table 1 shows the descriptive statistics for the variables used in our analysis. The gender role attitude mean shows that as expected women are more egalitarian than men in gender role attitudes. The average change in gender role attitudes from before to after birth is very slight, approximately 0.05 on a five point scale, as changes in both directions partly offset each other. We also include the percentage of people who experience changes in attitudes measured as plus or minus one standard deviation. About 12 percent of women and 16 percent of men experience a change of this size towards more egalitarian attitudes, while 15 and 11 percent of women and men, respectively, become more traditional.

Women's paid work and childcare arrangements. Women's paid work hours are based on a question asking for the respondent's usual weekly hours in employment or self-employment

plus overtime hours. The amount of change in women's labour market hours is calculated as the difference between women's paid work time in the second or third year of parenthood and the time they spent on it before pregnancy. Only families where mothers are working for pay have been asked about their childcare arrangement. Therefore, we cannot explore whether formal childcare use is associated with greater attitudinal change also for mothers who do not work for pay. The question is phrased "who is looking after the children while the mother works" and the answer options include the father, relatives, neighbours or friends, and various types of formal childcare, i.e. day nurseries, nannies, and childminders. We distinguish between i) mothers who do not work for pay and act as the main carer for their children, ii) couples whose children are looked after by family members, neighbours or friends while the mother works, and iii) those who use some sort of formal daycare. Only 55 people mention using a second form of childcare arrangement (mostly the father or relatives). Since we are interested mainly in whether using formal childcare as opposed to only informal arrangements has an effect on attitude change, we only consider the type of childcare that respondents mention first.

As can be seen in Table 1, women reduce their paid work time on average by 15 hours per week from before pregnancy to the second or third year after the first birth. 27 percent of mothers do not work for pay when their first child is between one and three years old. Among the remaining 73 percent of working mothers, about half has family members or friends looking after their children, while the other half uses mainly formal childcare.

Independent variables

We measure our independent variables at least nine months before the woman gives birth. This helps reduce but does not eliminate the possibility that couples alter work and earning patterns in anticipation of birth. We measure prenatal economic resources of the couple in

terms of the log of women's prenatal gross hourly wage and the log of men's monthly gross earnings. All earnings variables are adjusted for inflation using the retail price index with 1991 as the base year. As another proxy of future earnings potential, we also include women's levels of education. We differentiate between three levels of educational attainment: 'GCSE or less', 'A-levels or similar qualification' or 'university degree'. Men's highest educational attainment is also controlled. We include women's prenatal work hours as a proxy for labour market attachment and unobserved career orientations. Other controls include the woman's age, the age of the first child in months, and whether or not the couple has had a second child by the year following the first birth. We also account for whether the woman regularly attends religious services, and include regional dummy variables for Scotland, Wales, London and the rest of England. Religion is included because of its possible links with traditional values, whereas region matters because of variation in employment and childcare availability. To reduce the risk of bias due to period effects and correlated trends over time in dependent and independent variables, we include the survey year. We also tested potential confounding events such as unemployment of the male partner and illness of either partner since the year before birth and other controls such as occupational status, employment sector, company size and fathers' ages. These were not significant and are therefore omitted in the final model.

Results

Gender role attitude-practice dissonance. There is no way of measuring directly the dissonances between couples' gender role attitudes, mothers' labour market activities and childcare arrangements. However, we can estimate the frequency of when dissonances are likely to occur among men and women after they become parents (data not shown). Twenty seven percent of women had traditional gender role attitudes before the birth. Among these, two thirds nevertheless work for pay after having children, of whom just under a half use formal childcare. However, because most women hold non-traditional views, overall only

18% of all the women in our sample hold traditional attitudes and work. This includes 8 percent who use formal child care. Men are, on average, more traditional than women before having children, and thus are more at risk of dissonance between their prenatal attitudes and their partners' postnatal employment (32 percent). This includes 9 percent who are in couples using formal childcare.

Structural Equation Models. We use structural equation models to investigate the pathways from women's and men's prenatal gender role attitudes and economic resources to postnatal changes in women's paid work hours and gender role attitudes. Only the significant control variables are included in the final structural equation model.

'Figure 1 here'

Figure 1 shows the main paths of the structural equation models (details of the measurement model and error correlations are available on request). All the goodness of fit indices suggest a close fit. The indirect effects of the exogenous variables are obtained by multiplying the direct effects on the mediating endogenous variable, i.e. women's paid work change, and the direct effect the latter has on the dependent variable, i.e. postnatal gender role attitudes. The sum of direct and indirect effects gives the total effect.

In line with Hypothesis 1, Figure 1 shows that a larger change in women's work hours subsequent to birth is associated with more egalitarian postnatal gender role attitudes for both women and men (coefficients .29 for women and .31 for men). More egalitarian prenatal gender role attitudes of women also have an additional indirect effect by lowering the reductions in women's paid work which usually follow childbirth. A one standard deviation

increase in women's egalitarianism before having children raises their paid work by about 10 hours and indirectly increases women's postnatal gender role egalitarianism.

The change in women's paid work hours is significantly associated with gender role attitudes of men and women even after considering the direct and indirect effects of women's prenatal work hours on women's or men's gender role attitudes after childbirth. Not surprisingly, women who work longer hours before their pregnancy reduce their paid work time more (coefficient -.46). However, the positive direct effect of prenatal work hours on gender role attitudes (.30), which possibly reflects labour market attachment and unobserved career orientations, more than offsets the negative indirect effect. Thus women who work longer hours before their pregnancy also participate more in the labour market after childbirth.

As expected in Hypothesis 3, women's prenatal earnings show a significant positive association with the change in women's paid work hours from before to after the transition to parenthood (.12). Thus higher wages of women lead to more egalitarian attitudes among new mothers and fathers, as a result of greater stability or less reduction in women's paid work hours. A rise in women's prenatal hourly wages by one standard deviation (£3.7) increases their paid work change by over 5 hours a week, which is associated with greater egalitarianism for women and their partners. Women's prenatal earnings do not, however, affect their own or their partners' postnatal gender role attitudes directly, but only indirectly through influencing maternal employment.

We also tested models which included women's education instead of their prenatal wages. These also confirm Hypothesis 3 about the indirect effect of women's economic resources on their own and their partners' gender role attitudes. Women with university degrees reduce their work hours less than those with A-level qualifications or below. The two measures of

women's economic resources, however, are correlated and reduce each others' effects to only marginal significance if both are included simultaneously. This is not surprising given that they capture closely related concepts.

Hypothesis 4 assumed that women's and men's prenatal attitudes would also influence the change in their partners' gender role attitudes after childbirth, either directly through unobserved relationship processes or indirectly through the change in women's labour market participation. However, after controlling for each partner's own prenatal attitudes and the change in women's employment, we do not find evidence of women or men adapting their attitudes to those of their partner. Also, men's prenatal attitudes do not seem to influence how much women reduce their paid work after becoming mothers. Hypothesis 4 is therefore rejected, except for the indirect effect of women's prenatal attitudes on men's postnatal attitudes, which is mediated by the change in women's work.

'Table 2 here'

Childcare choices and gender role attitude change. In a second step, we examine whether the type of childcare used may also promote gender role attitude change, after couples become parents. Table 2 shows OLS models of women's and men's gender role attitudes in the second or third year after the first birth. The dependent variables are composite attitude factors based on the three gender role attitude questions. Both models include a combined variable of mothers' labour market status and whether they use mainly formal or informal childcare. The omitted category is 'working mothers whose children are looked after only by family members or friends'. In line with our results from the structural equation model, we see that gender role attitudes of mothers and fathers become more traditional when women do not work for pay after childbirth. Holding everything else constant, the postnatal attitudes of non-

employed women and their male partners are more traditional by about 0.4 and 0.5 points on a 5-point scale compared to families where informal care is used while the woman works. By contrast, women and men in families that use formal childcare while the mother works seem to be come more egalitarian in their attitudes by 0.2 and 0.4 points, respectively. Hypothesis 2 therefore cannot be rejected. The results are the same if the change in mothers' paid work hours is controlled for in addition to the childcare variables. As in the structural equation model, the associations of women's and men's postnatal gender role attitudes with women's prenatal wages and with partners' attitudes are not significant.

The effects of mothers' paid work change or labour market status on women's and men's postnatal gender role attitudes are modest, with a maximum of 0.5 change on a 5-point scale. However, this is not surprising given that the available gender role attitude measures represent relatively conservative statements, with which only 27 and 32 percent of women and men, respectively, agree before having children. Based on these statements, therefore, only a minority of couples are likely to experience attitude-practice dissonances. However, our results do provide substantial support for the hypothesis that cognitive dissonance is an important mechanism of attitudinal change. In Figure 2, we plot the amount of gender role attitude change for women and men who could be expected to experience some dissonance with paid work and childcare arrangements versus those whose work and childcare practices are in line with their prenatal gender role attitudes, after controlling for other characteristics.

'Figure 2 here'

There is less attitude change when paid work and childcare arrangements are in line with the prenatal attitudes of women and men in categories 5, and 6. Surprisingly, even traditional women who do not work for pay (category 1) become somewhat less traditional after childbirth; whereas non-traditional women who are not employed (category 4) become more

traditional. Attitude change, however, is largest for women and men in categories 2 and 3, whose postnatal paid work and childcare arrangements seem dissonant with their prenatal traditional stance. For some of these traditional couples postnatal work is likely to be an economic necessity yet, even so, postnatal attitude change is in a less traditional direction.

Discussion and Conclusions

This research investigates changes in gender role attitudes among partnered women and men after becoming parents. The results suggest that gender role attitudes remain relatively stable among the majority of new parents, whose paid work and care arrangements do not conflict with their prenatal gender-role attitudes. However, about a quarter of parents do change their gender role attitudes and this appears particularly likely if paid work and care arrangements are at odds with their prenatal gender role attitudes. Our analysis shows that women's postnatal labour market participation and childcare choices are significantly associated with changes in both partners' attitudes. We also find that women's prenatal economic resources and attitudes impact on the extent of change in their labour market participation after having a child and this indirectly changes their own and their partners' gender role attitudes.

In line with previous studies (Berrington, et al. 2008; Himmelweit and Sigala 2004), we also find evidence of a reciprocal relationship between women's gender role attitudes and their labour market participation suggesting that behaviour and attitudes reinforce each other.

Women with less traditional attitudes before having children reduce their labour market hours less which makes a postnatal attitude change towards greater traditionalism less likely.

Women's longer prenatal employment hours are also positively associated with less traditional postnatal gender role attitudes.

As found in previous British and cross-national studies (Dex, et al. 2008; Smeaton 2006), higher levels of education and earnings increase women's labour market participation after having a child. Low wages before motherhood seem to discourage their labour market return even for women with non-traditional prenatal attitudes. The significance of women's earnings despite controlling for the presence of a second child suggests that the relatively high cost and limited availability of formal childcare in the UK compared to other countries may explain the extent to which low earnings pose constraints for women's return to work. The lack of significance of men's earnings also agrees with previous studies (Himmelweit and Sigala 2004). In Britain, couples' work and care strategies still seem to be largely based on women's earnings rather than their husbands' or the sum of both.

We also find that using formal childcare rather than having fathers, extended family, friends or neighbours look after the children while mothers are at work is associated with greater change towards less traditional attitudes for mothers and fathers. This suggest that formal childcare is more likely to be problematic than informal care, for those with negative views about the consequences of maternal employment on children's wellbeing. This is in line with previous literature, according to which British mothers favour family members as carers for young children (Kremer 2007; Wheelock and Jones 2002).

In line with previous studies on American and Dutch couples (Johnson and Huston 1998; Kalmijn 2005), we find that changes in attitudes between the female and male partners in couples are strongly correlated. However, once the change in behaviour in terms of women's paid work and childcare arrangement is taken into account, the partner's prenatal attitude does not have a significant direct effect on the postnatal attitudes of either women or men.

Women's prenatal gender role attitudes do however have an indirect effect on men's postnatal attitudes through influencing change in maternal labour market participation. This is

consistent with Kalmijn's (2005) finding that husbands change more often in the direction of the wife than vice versa. However, it contradicts the notion that wives adapt more often to their husbands' attitudes because women see it as their responsibility to do emotion work (Johnson and Huston 1998). The most plausible explanation is that decisions about how to combine working and caring are still seen as women's business.

One should note that the pathways examined in the structural equations and regression models cannot be interpreted as causal. Suitable instrumental variables for women's paid work which do not affect gender role attitudes through other channels are not available to test this further. However, cognitive dissonance between traditional prenatal attitudes and subsequent maternal employment and formal childcare use is a more plausible explanation for the observed changes towards less traditional attitudes among certain groups than alternative factors such as social norms of family networks and gendered policy entitlements, which would rather point to greater traditionalism after childbirth.

The identification of cognitive dissonance as a likely mechanism of attitudinal and behavioural change in maternal employment is important for understanding the changing gender roles in British society. In general, attitudes may be moving in a less traditional direction but changes in gender role attitudes (in both directions) after childbirth confirm that parenting brings well-recognized conflicts between work and family. It is clearly desirable if such conflicts can be ameliorated through more family friendly policies, by employers or the state, such as maternity or paternity leave, flexible working, and provision of affordable childcare. Yet family friendly policies are not sufficient alone. An important part of the problem is that parenting tends to be viewed in conflict only with maternal employment and lack of maternal childcare substitutes. Gender role egalitarianism, on such terms, is at best

lop-sided. Advances in gender equality will only occur when the roles of mothers and fathers in parenting and employment become more symmetrical.

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Table 1: Descriptive statistics

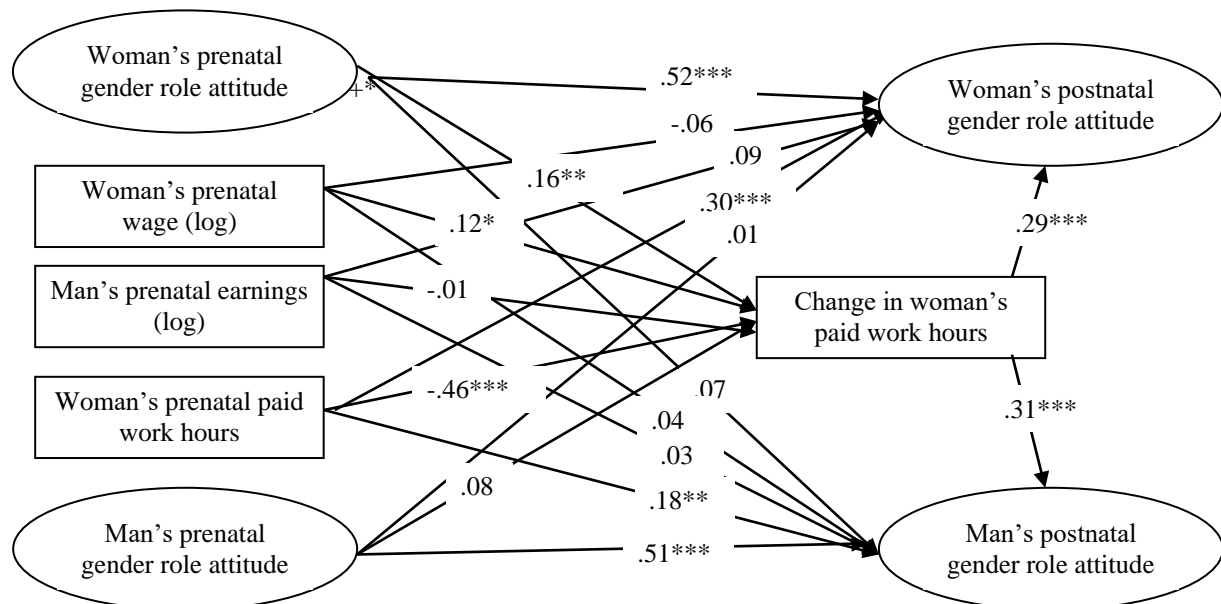
<i>Dependent variables (13-36 months after first birth)</i>	<i>Women</i>		<i>Men</i>	
	<i>Mean/ Perc.</i>	<i>Std. Dev.</i>	<i>Mean/ Perc.</i>	<i>Std. Dev.</i>
Gender role attitude factor	3.61	0.88	3.48	0.81
Change in gender role attitudes	-0.02	0.78	0.09	0.81
% more egalitarian by >1 SD	12.14		15.79	
% more traditional by >1 SD	15.32		11.11	
Paid work hours	21.97	16.54	42.69	13.63
Change in paid work hours	-15.45	17.17	-0.54	14.25
<i>Independent variables</i>				
Prenatal gender role attitudes	3.63	0.82	3.39	0.78
Woman's prenatal gross hourly wage (£)	5.87	3.70		
Man's prenatal gross monthly earnings (£)			1373.37	1178.38
Prenatal paid work hours	37.54	12.72		
% Mothers not working for pay	26.72		26.72	
% Mothers working & only informal childcare	37.04		37.04	
% Mothers working & formal childcare	36.24		36.24	
Low education	25.29		24.78	
Medium education	46.47		48.67	
High education	28.24		26.55	
Woman regularly attends religious services	14.16			
Woman's age	30.77	4.24		
Age of 1st child in months	24.37	7.33	24.37	7.33
Couple has second child within 2 or 3 years	10.56		10.56	
London	7.69		7.69	
England except London	78.40		78.40	
Wales	3.25		3.25	
Scotland	10.65		10.65	
Survey year	9.90	3.93	9.90	3.93

Table 2: OLS regression models of women's and men's gender role attitudes after childbirth

	Women's postnatal gender role attitude factor		Men's postnatal gender role attitude factor	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Man's prenatal gender role attitudes	0.01	0.05	0.53	0.053***
Woman's prenatal gender role attitudes	0.54	0.050***	0.09	0.051
Mainly mother care/mother not working	-0.38	0.105***	-0.47	0.107***
Mother works and uses informal childcare -omitted				
Mother works and uses formal childcare	0.18	0.090*	0.36	0.092***
Log of woman's prenatal wage	-0.06	0.08	0.00	0.08
Log of man's prenatal earnings	0.04	0.023	0.01	0.02
Woman's prenatal work hours	0.01	0.00	0.00	0.00
Woman medium education	0.01	0.10	0.14	0.10
Woman high education	-0.04	0.12	0.09	0.13
Constant	1.65	0.432***	1.55	0.442***
N	337		337	
Adjusted R ²	0.41		0.43	

Note: Other controls included: Man's educational level, woman's age and religiosity, age of 1st child in months, presence of a second child, regional control for London, rest of England, Scotland and Wales, and the survey year. * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 1: Path diagram of structural equation model for women's and men's gender role attitudes after transition to parenthood

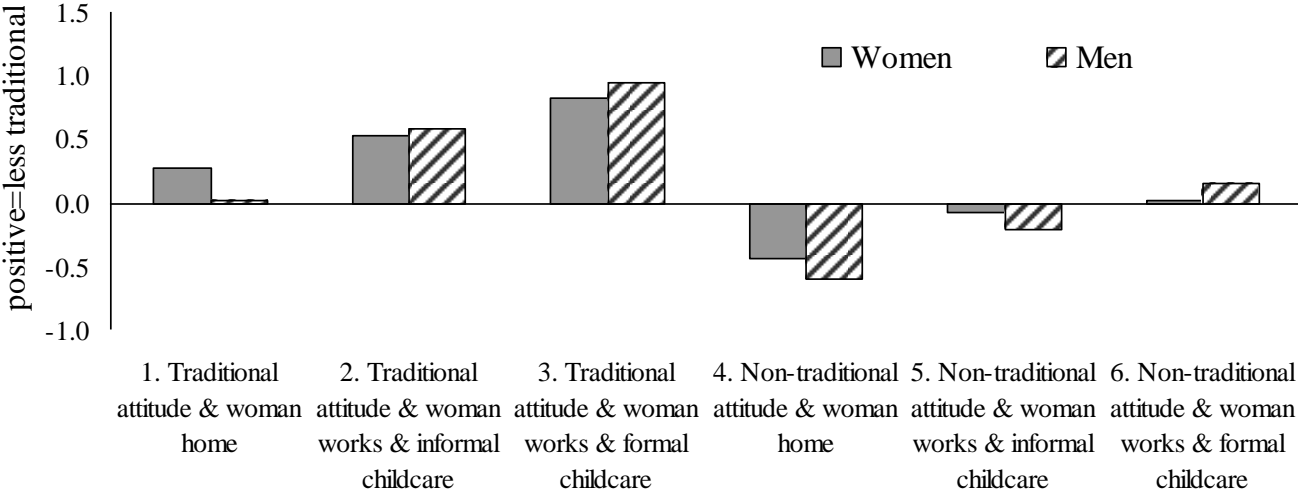


Note: Model fit statistics $\chi^2(113) = 186.52$, $p < .001$; GFI = .95; NFI = .95; RMSEA = .044

Other controls included: Age of 1st child in months, presence of a second child, regional control for Scotland. Standardised coefficients shown.

* $p < .05$; ** $p < .01$; *** $p < .001$

Figure 2: Change in gender role attitude score (5-point scale) from before pregnancy to two or three years after the first birth, by categories of prenatal attitudes and postnatal practice



Note: The distinction of traditional versus non-traditional prenatal attitudes on the horizontal axis is based on the rescaled gender role attitude factor (scale 1-5). Traditional= values lower than 3, non-traditional= values equal or greater than 3.