A CROSS-NATIONAL COMPARISON OF THE IMPACT OF CHILDREN ON ADULT TIME

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Abstract

This paper uses a framework of welfare state typology pioneered by Gosta Esping-Andersen and developed by Walter Korpi, and data from the Multinational Time Use World 5 Series, to compare the impact of children on adult time-use in four countries (Australia, Italy, Norway and Germany) with different approaches to economic, social and family organisation. It quantifies three measures of the time effects of parenthood. These are 1) the gap between couple parents and non-parents in total paid and unpaid work undertaken (the workload penalty of parenthood), 2) the relative time allocation to paid and unpaid work by couple parents and by non-parents (work-family balance), and 3) the relative contribution to unpaid work by couple parents and by non-parents (gender equity in domestic labour). Of the sample, 'familialistic' Italy has the most inequitable division of labour for childless men and women, and it is 'liberal' Australia in which the changes in time commitment that come with parenthood are most pronounced and most inequitable by sex.

1 A cross-national comparison of the impact of children on adult time

All countries both expect parents to provide care and accept some social responsibility for children (Folbre 2002), but there are cross-national differences in the extent, both practically and rhetorically, to which children are seen as a private responsibility and pleasure or as a contribution to common prosperity. At one extreme, children are regarded as a private good, and any gap in time or money expenditures between parents and the childless, or between mothers and fathers, is not a matter of public concern (Becker 1981). Ramifications for labour supply and earning capacity are, similarly, a personal issue for parents. An alternative view is that children are most accurately not a private, but a public good. Rather than being a consumption items for parents, children are a product of family inputs comprising money, time and labour (England and Folbre 1997). They have an economic worth of considerable magnitude, not to the parents who rear them, but to the government, employers, and the whole community (Chesnais 1998; Crittenden 2001; Folbre 1994; Klevmarken and Stafford 1997).

The degree to which a country accepts either the private or the public good view of children will be reflected in social and family policy. Of interest in this paper is whether these differences in the social approach to children are also reflected in how becoming a parent is experienced in daily life.

Comparative international research can be regarded as a 'natural experiment' on the effects of policy variation that is not possible from looking at one country at one point in time (Castles 2002). There is a body of cross national research that addresses how policies of relevance to the family such as the availability of childcare, maternity leave, or flexible work arrangements, affect public measures such as maternal work force participation (see for example Bradshaw et al. 1993; Gornick et al. 1996; Orloff 1997; Plantenga and Hansen 1999). The mirror image of public measures, how life is lived within the home in terms of the burden of unpaid work and the division of labour, has been the subject of much less cross-national investigation. The relatively recent addition of time-use data to the more established social and economic statistics arsenal offers a methodology by which to address this issue directly, and a small body of cross-national research into intra-household time-use has begun to emerge (Bittman 1999; Bonke and Koch-Weser 2004; Gornick and Meyers 2004; Pacholok and Gauthier 2004).

In this paper I quantify the effect of children on adult time-use in different policy regimes. Using a framework of welfare state typology pioneered by Gosta Esping-Andersen and developed by Walter Korpi, and data from the Multinational Time Use World 5 Series, I compare the impact of children on parents' time in four countries (Australia, Italy, Norway and Germany) with contrasting social policy settings.

1.1 Welfare regime typology

In an analysis that facilitates cross-national comparison of the effect of social policies, Esping-Andersen (1990) formulated a welfare regime typology that built on both Titmuss' trilogy of residual, industrial-achievement and institutional-redistributive models and Marshall's idea of social citizenship (Titmuss 1974; Marshall 1950). Arguing that how social risks are distributed is the defining feature of a welfare state, Esping-Andersen went beyond expenditure as the sole criterion of welfare effort and devised a typology according to how countries drew on the three pillars of social

wellbeing – states, markets, and families. He divided western states into a three-way grouping: 'liberal', 'corporatist', and 'social democratic', according to the extent to which social rights permitted people a reasonable living standard independent of market forces (de-commodification).

He categorised liberal welfare states, exemplified by USA, Canada, UK, Australia and New Zealand as market-based. In their purest form, liberal states expect their citizens to provide for themselves through work force participation. Welfare support is largely targeted towards those with demonstrated need, through modest means-tested benefits for those who cannot support themselves. The state intervenes only if the market fails. In corporatist states, a category into which he put Germany, Austria, Italy and France, social insurance systems group people in similar occupations. Rights are accrued through contribution, and are attached to class and status, and so welfare is a product of group membership. It is not need that dictates whether welfare requirements are met, but whether or not one is a member of the group. In the social democratic model, exemplified by Norway, Finland, Denmark and Sweden, rights accrue from citizenship and there is equality of the highest standard, not of minimum needs. Under this model, people are bound together across social class because all citizens are potential beneficiaries (Esping-Andersen 1990).

Feminists responded to Esping-Andersen's three-way typology by pointing out that social risk structure for women is not covered by the concept of de-commodification. The concept assumed a level of work force participation not necessarily achieved by women. It failed to adequately acknowledge the family's place in the provision of welfare and care and how this impacted upon women in different welfare regimes. In addition to the criteria of the necessity to work and not to work, which reflected the situation of males, an essential dimension of social risk for women is the freedom to provide or to not provide caring services. According to many feminist authors, the crucial relationship is not just between paid work and welfare but between paid work, unpaid work and welfare (Lewis 1989; Lewis 1993; Lewis 1998; Orloff 1993) (Arts and Gelissen 2002; Korpi 2000; O'Connor et al. 1999; Sainsbury 1996; Siaroff 1994).

Feminist research into comparative social policy found that the closer the gender dimension is to the analysis, the more the inadequacy of traditional regime theory is exposed (Sainsbury 1999). Feminists suggested various criteria that would better reflect the position of women within different welfare state regimes. Lewis (1992) argued that it is important to look at the extent to which policy makers in different regimes presume that women would be dependent on male breadwinners. Sainsbury (1996) argued for attention to caring regimes, that is, policies that constitute and structure women's unpaid work. Daly and Lewis (2000) advocated using social care as a critical dimension for analysing welfare state variation (Daly and Lewis 2000). Several suggested that a differentiating measure should be the capacity of women to form and maintain an autonomous household without relying on support from family (McLaughlin and Glendinning 1994; O'Connor 1993; Orloff 1993; Shaver and Burke 2003).

The feminist criticism led Esping-Andersen to integrate gender issues more centrally into his typology. In his recent work, Esping-Andersen more emphatically states that the components of welfare regimes are not only labour markets and the state, but also the family and that the sum total of societal welfare derives from how inputs from these are combined. 'Welfare states are an inter-causal triad of state, market, and family' (Esping-Andersen 1999:9). He incorporates familialisation, the degree to

which citizens' welfare depends on family support, as a criterion for categorisation in welfare regime typology. A familialistic system is one in which public policy reflects the expectation that households are the main provider of their members' welfare. A regime that promotes de-familialisation is one in which the burden on direct family welfare provision can be lessened through market or state provision of care and support (Esping-Andersen 1999).

Social enquiry was historically able to concentrate on the public policy areas of state and market, sidelining families on the assumption that family inputs were both private and stable. This assumption is no longer justified. Welfare states presume a society that no longer obtains. The welfare state is a particular historical construction of the early to mid-20th century. It catered to a historically specific population with an historically specific risk structure. The labour force was predominantly male, women were at home, and post-World War II families were stable with high fertility. These factors are no longer the norm, and there is a disjuncture between existing institutional structures and social patterns.

One of the results of this is that parenting has become problematised. In some countries, there has been half a sex revolution, in that women are entering the paid work force, but are receiving little extra assistance with domestic responsibilities. In others, the sex revolution is even less advanced. Esping-Andersen argues that the household's traditional caring capacities are eroding and poverty risks are mounting while families are being asked to absorb new labour market risks. He asserts that the blindness of nearly all comparative political economy to the world of families can no longer be justified. 'There is currently a social crisis, its locus is the nexus between the family and the labour market and therefore investigation into household economy is central to a sound understanding of post-industrial society' (Esping-Andersen 1999:11).

A four-way typology

It is Esping-Andersen's view that the inclusion of familialisation as a criterion fits into his original tripartite typology, and does not necessitate the addition of separate regime types. However, a major difficulty in categorising regimes from a perspective that acknowledges both gender issues and the way childcare is distributed, is the enormous range of social factors that impact upon families, and upon the care-giving burden. The complexity of possible impacts has led some researchers to disagree with Esping-Andersen's conclusion that adding the dimension of familialisation does not necessitate extending his original tripartite model, arguing that no simple categorisation of welfare states covers class and gender neatly (Arts and Gelissen 2002). Nor is there any that explicitly arise from child-related policies, so it is necessary to view this issue through the overlapping but not entirely commensurate prism of gender.

While there is a range of policies that could assist with the care burden, an important distinction is between policies that promote mothers' access to work and policies that discourage women's work force participation. This relates to an old feminist dilemma, first identified by Mary Wollstonecraft (and sometimes called Wollstonecraft's dilemma); the problem of whether women should fight for opportunities to participate in public life on equal terms with men, or to fulfil caring roles at home and be valued for those contributions (Lister 1997; Pateman 1988). In short, should women base citizenship demands on difference from or equality with men. Although many

commentators say that the equality-difference dichotomy is unfortunate (Chambers 2000; Fraser 1994; Lister 1997), this difficult issue is as yet unresolved. There are ongoing arguments about, for example, whether a wage for mothering would value caring or merely enshrine care-giving as women's work (Cass 1994; England and Folbre 1999; Knijin 1994; Lewis 1997).

In an attempt to build on Esping-Andersen's typology but recognise the gender and caring issue more fully, Korpi (2000) suggests a two-dimensional policy conception in terms of the relative stress on unpaid versus paid work. The first policy choice is whether to leave gender issues to family and markets or whether the state should to take an active role, and the second policy choice is whether to promote the dual-earner model or breadwinner model. Using these criteria, he identifies four policy models – dual-earner support, general family support divided into two subgroups, and market-oriented. Each has a different approach, sometimes articulated and sometimes not, to how the care of children should be shared between state, market and family. Korpi's typology is one of a number that adopt a four-way comparative research approach see (Arts and Gelissen 2002; Leibfried 1991; Siaroff 1994).

Some question the usefulness of the project of regime classification, arguing that it may not be very useful to distinguish families of nations in terms of social policy models, but rather to examine empirical variations along separate dimensions (Boje 1996; Sainsbury 1996). The categories can be regarded as ideal types only, no country will unambiguously exemplify what is essentially a heuristic model, and countries in any one grouping are in some ways different (Goodin et al. 1999; Therborn 1993). Any comparison will be very broad-brush. The picture is further complicated by the fact that welfare states are undergoing change, and the boundaries between regime types are blurring (Andinach 2002; Arts and Gelissen 2002; Thevenon 2003). Acknowledging these limitations, I follow Korpi's four-way categorisation into market-oriented, Scandinavian, continental Western European and Southern European. Due to space constraints, I can undertake comparison of only one example of each, and have selected Norway, Germany and Italy to compare with Australia.

I now briefly outline the characteristics of each grouping.

Dual-earner support

Countries that adopt the dual-earner support model implicitly acknowledge the public good aspect of children and do not expect women to be solely responsible for their care. The Scandinavian countries comprise this group. They have policy arrangements that pre-emptively socialise the cost of family-hood and explicitly promote women's independence from family obligations. These include public day care services for young children, and generous paid maternity and paternity leave. Public policies intentionally aim to shift provision of care from the unpaid to the paid sector. There is a heavy social service burden, not only to service family needs but also to allow women to choose work rather than household labour. Such comprehensive coverage requires many workers to meet the high costs, which reinforces the need for women's employment inputs (Korpi 2000). I have chosen Norway as an example of this type of regime. It aims its policy at encouraging the sharing of childcare and household tasks, and supports gender equality in workforce participation (O'Hara 1998).

General family support

Continental Europe

Countries that follow the general family support model place a high rhetorical value on children, and have policy arrangements that both assume their care will be assigned to their mothers and encourage this outcome. They regard the family as the primary source of care and welfare, and public policy supports the 'breadwinner-husband-stay-at-home-mother' family model. Indicators of this type of policy regime include cash child allowances, family tax benefits and public day care services for slightly older children, but not for the very young. Family benefits and taxation measures discourage mothers from working. The principle of subsidiarity means that the state will only interfere if family resources are exhausted (Korpi 2000). Continental European countries are the usual examples of this regime (Andinach 2002; Esping-Andersen 1999; Thevenon 2003), and I have chosen Germany. Germany's strategy is to support a stay-at-home parent, and to encourage mothers that do work, to work part-time (O'Hara 1998; Trzcinski 2000).

Southern Europe

(Korpi 2000) suggests that the general family support model should be subdivided into two. Southern European countries constitute a meaningful fourth category because of the extreme lack of state intervention, which results in an even greater reliance on family resources than in Western Europe. Other comparative researchers support this sub-grouping, with the fourth category variously called Latin Rim, late female mobilisation or Mediterranean (Arts and Gelissen 2002; Leibfried 1991; Siaroff 1994). The distinguishing feature between the two sub-categories of general family support is that, though both assign the care of children to their mothers, the former provides more state assistance to home carers than the latter. My southern European example is Italy. The national constitution of Italy defines the family as a private domain with which the state should not interfere (Hantrais 1997). So Italy's family policies neither facilitate women's workforce participation, nor generously subsidise home care.

Market-oriented

In market-oriented regimes (United States, United Kingdom, Canada, Australia and New Zealand) children are viewed as a private responsibility, and family and childcare issues largely left to private arrangements in the market. These regimes are theoretically gender-blind, and though they do not actively facilitate women's independence from care, tend to be open to its occurrence through private market arrangements. Gender concerns matter less than the sanctity of the market (Esping-Andersen 1999; Korpi 2000; O'Connor et al. 1999; Orloff 1996).

Australian policy regime

Although some argue that the US is actually the only true example of a liberal welfare state (Castles and Mitchell 1993), Australia is usually included in this grouping. As with any country, it conforms to the categorisation in some ways, and deviates from it in others. The Australian welfare system is very targeted, and there are almost no universal benefits. It is heavily predicated on workforce participation (O'Connor et al. 1999) and has been labelled the 'wage earners' welfare state' (Castles and Mitchell

1993). It historically used the breadwinner model of welfare entitlement in which benefits were directed through the male head of the household. Women's eligibility was as part of the family unit and home production had an implicit value, as was demonstrated by the family wage, intended as sufficient to maintain a man, his wife and three children, introduced in the 1907 Harvester Judgement (Bryson 1992; Cass 1994; Shaver 1995).

There are some features of Australian social policy that have led researchers to argue that it should be categorised separately from the groupings above. Antipodean countries redistribute wealth to a greater extent than other liberal states (Castles and Mitchell 1993). There is fairly substantial government funding for social services including health and education. Extra-household childcare arrangements are highly regulated and the standard is comparatively high (Brennan 1994; Cass 1993). Orloff (1993) argues that the extent to which the state will support sole parents in their caring responsibilities is a definitive criterion by which regimes can be typed, and Australia provides comparatively generous support to sole parents who care for their own children (O'Connor et al. 1999; O'Hara 1998).

Child-related policies in Australia

Direct state subsidisation of the costs of children in intact families has, however, not been generous in Australia by international standards (except in comparison with the US). Parents of dependent children under the age of 18 are granted means-tested tax benefits related to income and number of children. Parenting payment is made to families in which mothers do no paid work, to sole parents and to targeted low-income families with dependent children under 16. There is no statutory paid maternity leave except for public servants, who are eligible for 3 months leave paid at 100% of wages. Other workers must make individual arrangements with their employer. There is provision for unpaid parental leave for one year. There is a modest maternity allowance paid in three instalments linked to child immunisation. A benefit graded by income level is paid to parents who use registered childcare arrangements. (In initiatives too recent to affect this study, a baby payment of $3,000 and childcare subsidies capped at $4,000, have been introduced).

Country comparison

Most previous cross-national research into the effect of policy variation on the family examine public rather than private indicators (see for example Bradshaw et al. 1993; Gornick et al. 1996; Orloff 1997; Plantenga and Hansen 1999). Public measures can give some insight into the effect of having children. For example, there are cross-national differences in the way parenthood interrelates with female workforce participation. Table 1 compares the four countries discussed above on female workforce participation before and after having children. Becoming a parent impacts differently upon female workforce participation in the four countries. Having one child has a minimal effect on female workforce participation in Italy and Norway, and a greater impact in Germany and Australia.

Table 1: Women's employment rates by presence of children in 2000 as a percentage of women aged 25-54

	No Children %	One Child %	Two or More Children %
Country			
Italy	53	52	42
Germany	77	60	56
Australia	78	55	43
Norway	83	83	78

Source OECD 2003

Norway has the highest workforce participation for childless women and for mothers (both 83%), although about 50% of employed mothers work part-time (Norway 1999; Ronsen 1999). Australia has quite high workforce participation for childless women, but it is much lower for mothers (78% compared to 55%). Germany has similar childless and slightly higher maternal workforce participation than Australia. In both Germany and Australia, a very high proportion of mothers work part time (Diprete et al. 2003; Hantrais 1997). Italy has a very low workforce participation rate for childless women (53%), but this does not seem to be much affected by motherhood. It only drops by one percentage point to 52%. In contrast to the other three countries, in Italy most women who are economically active work full-time (Hantrais 1997).

Time as an indicator

Examining such public data allows inferences to be made about how households manage the impact of children. However, a more direct indication of how the policy environment ameliorates or exacerbates the impact of children is how life is lived within the home in terms of the burden of unpaid work and the division of labour. Time spent on unpaid domestic obligations is an important indicator of the intensity of familial welfare responsibilities (Esping-Andersen 1999). It is becoming increasingly widely recognised that direct attention to the unpaid work burden could yield important information on how the social policy environment translates into reality in people's lives (Esping-Andersen 1999; Gornick et al. 1996; Land 1995; Orloff 1997; Plantenga and Hansen 1999), and, recently, there have been signs of emerging research interest in studying intra-household time use in a cross-national framework (Bittman 1999; Bonke and Koch-Weser 2004; Gornick and Meyers 2004; Pacholok and Gauthier 2004).

Summary of the issue

The aim of this paper is to quantify the time impact of children as it is experienced within the home, and to establish whether and how this varies with the policy environment. I calculate the time impact of children in three interrelated ways.

- I establish the gap between couple parents and non-parents in a) paid and b) unpaid work undertaken, to get a measure of any extra workload associated with becoming a parent rather than remaining childless.
- I establish the relative time allocation between paid and unpaid work for both men and women in each welfare regime, and how this distribution of time to home and employment is affected by becoming a parent.

- I look at the relative contribution to unpaid work by men and women in childless couples, and by mothers and fathers, to establish the degree of gender equity in domestic labour, and how this is affected by parenthood.

1.2 Data

The data I use is from the Multi-national Time Use Study World 5 series. The Multinational Time Use Study (MTUS) began in the late 1980s when researchers collected time-use data sets from 20 countries, and prepared a version of these data sets that would allow cross-national comparability. They are being constantly updated as new surveys are completed.

Sub-sample

From the MTUS I created a sub-sample of individuals in couple-headed families in Australia (survey year 1992 N=5905), Germany (survey year 1992 N=7761), Italy (survey year 1989 N=13457), and Norway (survey year 1990 N=2644).

Limitations

The central limitation of this study is that each of the regime types is represented by a single case (i.e. N=4). A survey with more countries in each of the analytic cells would provide more grounds for a meaningful comparison.

Also, although the range and quality of the MTUS World series is being constantly improved over time, it has internal limitations. It is necessary to sacrifice detail in order to obtain comparability across surveys. A particularly regrettable loss of information is on simultaneous (secondary) activities, which most countries do not collect. Because most childcare is performed as a secondary activity, this means that childcare time is underestimated.

Demographic data is also limited. In some cases, it is missing (for example, there are no German children coded as aged 5-12). The MTUS draws on country time-use surveys of different quality, and which used different collection methods and coding. They were not all done in the same year. To minimise the impact of this, I selected countries whose surveys fell within a three years of each other. The survey years in this sample were Italy 1989, Australia 1992, Norway 1990 and Germany 1992.

In some countries, particularly Germany and Italy, regional differences may be glossed over. Most surveys in the MTUS collect information from only one household member, so it is not possible to match the diaries of husbands and wives. Due to the time it takes to collate the surveys, the latest surveys of some countries (e.g. Australia) are not yet included.

These limitations mean that the results of this study can be regarded as exploratory only. A more reliable study of greater depth may entail the comparison of individual countries' pre-harmonised time-use surveys and would certainly require the inclusion of many more countries in the sample. Nevertheless, this study allows a preliminary cross-national comparison across many variables as a starting point for enquiry into this topic.

1.3 Method

For this study, I conduct a series of Ordinary Least Squares (OLS) regressions. The dependent variables are time spent in total work (paid and unpaid), and time spent in unpaid work (including childcare) only. Unpaid work is a subset of total work.

The independent variables of interest in the model are nationality, sex, parenthood and interactions between them. The series of regression models become increasingly specified, using a stepwise (forward) method progressively adding nationality, sex, age of youngest child and then the interacted variables. The first model has nationality and the dummy variable 'female', meaning the default category is an Australian male. The second has the same default category, but has separate dummy variables that combine sex and nationality. The third model introduces new dummy variables for 'youngest child is under 5' and 'youngest child is aged 5-11'. The fourth model interacts the nationality, sex and age of youngest child. The intention is to tease out the separate effects of nationality, gender and being a parent.

The models hold constant age, income, level of education, number of children, day of the week and spouse's employment status. In the OLS regressions that did not have time in paid work as part of the dependent variable, the model also controls for labour force status, with employed full-time as the default category. The intention is to isolate the effect of the policy environment by holding constant regional differences in the sex, age, income, employment status and educational level of populations.

The constant term in all four regression models represents an Australian male aged 35 to 44, with no tertiary education, no children, in the middle 50% of income and whose spouse works full-time.

1.4 Results

I briefly summarise the results of the first three models as they relate to the variables of interest, before proceeding to a more detailed discussion of Model 4. the full results are set out in Appendix A.

Model 1

Model 1 (which has independent dummy variables for each nationality and a separate dummy variable 'female') shows that there is slight variation cross-nationally in total work as a primary activity for childless people. Australian men average 9.16 hours a day. Norwegian and Italian men average about 20 minutes less, and German men about 10 minutes more. This variation is largely comprised of time spent in unpaid work. This confirms that it is worthwhile to take cross-national comparison of time-use patterns beyond participation in paid work to include time in domestic pursuits, because the latter has independent potential to reveal differences in living patterns.

Cross-nationally, being female is associated with a higher total workload than being male. The model predicts that women will average 40 minutes more total work a day than men, which is double the largest cross-national variation between men. The effect of gender on unpaid labour is even more striking. Childless women average 4 hours a day in unpaid work compared with a male average of 1½ hours.

The results of Model 1 also show that, cross-nationally, the presence of children in a household brings with it a higher workload, an average increase in total work of 21 minutes a day for each child. The average increase in primary unpaid work with each child is just under half an hour a day. That the unpaid work increase is higher than the

total shows that households adjust to the presence of children at least partly by reducing the amount of paid labour they supply to the market.

Model 2

Model 2 (which combines sex and nationality in a series of dummy variables) shows that having one independent variable for sex obscures important cross-national variation. There are significant differences between being a woman in each of the countries. The cross-national finding in Model 1 that women do more total work than men is shown by this closer analysis to reflect the behaviour of Italian women only. Italian women do by far the most work of all groups in the sample. Italian men do by far the least. This means that within Italy, there is a large difference between male and female total workloads, which is not found in the other countries. The inequity is sufficient to have skewed the results of Model 1.

The finding in Model 1 that women do more unpaid work than men does hold true for each of the separate countries, but the amount is much the higher for Italian women, and much lower for Norwegian women.

Model 3

Model 3 (which contains dummy variables for 'youngest child is under 5' and 'youngest child is aged 5-11') shows that, cross-nationally, the average time demand of parenthood is higher the younger the child. The presence of a youngest child under 5 years old is associated with over 50 minutes a day extra total paid and unpaid work as a primary activity, and the presence of a youngest child aged between 5 and 11 years with 16 minutes.

When the dependent variable in Model 3 is unpaid work, the additional time associated with the presence of an under-5-year-old is an hour and ten minutes a day. The presence of a 5-11 year old is associated with an extra 21 minutes a day. Again it should be remembered that, due to data limitations, this is a calculation of primary activity only.

Model 4

Having dummies for age and number of children (as in Models 1-3) averages their impact across gender and nationality. Model 4 interacts nationality, gender and the age of the youngest child, and is therefore able to show the effect of parenthood in each country for each sex, and for each age group of children. These results are now discussed in detail.

Total work

Table 2: Predicted hours a day spent in total work (paid and unpaid) by nationality and parental status[1]

	No Children		Youngest Child Under 5		Youngest Child 5-11	
	Women	Men	Women	Men	Women	Men
Nationality						
Italy	10.15	8.11	11.53	9.29	10.65	8.61
Germany	9.26	9.63	10.80	11.09	n.a.	n.a.
Australia	9.16	9.63	10.89	10.30	10.17	10.13
Norway	9.22	9.17	9.89	11.00	9.72	9.67

Source: MTUS World 5.1

Table 2 summarises the information from Model 4 on total paid and unpaid work. It shows the number of hours worked by women and men from each country when they are childless (column 1), have a youngest child under 5 (column 2), or a youngest child aged 5-11 (column 3).

Table 3: Parents' total workload as a proportion (%) of non-parents' total workload by nationality

	Youngest Child Under 5		Youngest Child 5-11	
	Women	Men	Women	Men
Nationality				
Italy	113	114	104	105
Germany	116	115	n.a.	n.a.
Australia	118	107	111	105
Norway	107	118	105	105

Source: MTUS World 5.1

I use the figures from Table 2 to calculate the proportion of time that is spent in total work activities (paid and unpaid) by parents compared to non-parents in each country. Table 3 shows parents' time in total work as a percentage of non-parents' time in total work. This is to provide a measure of the relative welfare associated with being a parent and with not being a parent within countries, for example, to see how life differs for a Norwegian woman according to whether or not she has children.

It is in the social democratic country of Norway that the workloads of mothers are most similar to that of childless women. A Norwegian mother of a child under 5 has 107% of the workload of a childless Norwegian woman. It is in the liberal state of Australia that mothers have time commitments that are most different from those of their childless compatriots (118%). The next highest impact is in corporatist Germany (116%). The country representing the Mediterranean sub-category of corporatist states, Italy, has the second lowest female total time increase associated with parenthood. In Italy a mother's workload is 113% of a childless woman's. Of course,

[1] The figures in this table are fitted values drawn from Table A.1, Appendix A

this is added to the higher female workload for childless Italian women who, for this reason, continue to have the highest total workload of all women (indeed, all people) post-parenthood as well as when childless, despite the relatively lower impact of motherhood itself.

The effect of parenthood upon men in Norway and in Australia is the opposite of that upon women; it is most pronounced in Norway and least pronounced in Australia. A Norwegian father has a workload that is 119% of that of a childless Norwegian man. In Australia the difference between fathers and non-fathers is the least of the countries studied (107%). These findings suggest that of the countries studied, the impact of children upon adult time is most similar by sex in Norway, and least similar by sex in Australia.

This comparatively high time-penalty of being a mother in Australia continues when the women have a youngest child of school age. Australian mothers of 5-11 year olds have a total workload than is 111% of that of childless Australian women. Norwegian women, Italian women, and all men with older children, do only slightly more work than their childless compatriots (104-105%) do.

Unpaid work

Table 4: Predicted hours a day spent in unpaid work by nationality and parental status[2]

	No Children		Youngest Child Under 5		Youngest Child 5-11	
	Women	Men	Women	Men	Women	Men
Nationality						
Italy	4.77	1.05	6.64	2.05	5.18	1.05
Germany	3.92	2.12	6.72	3.46	n.a.	n.a.
Australia	3.79	2.12	7.07	2.73	5.24	2.12
Norway	3.20	2.12	5.93	3.68	3.84	2.12

Source: MTUS World 5.1

Table 4 shows how becoming a parent affects time in unpaid work within each country. The impact of becoming a parent is most strong upon Australian women and least upon Italian men. Italian fathers contribute much less unpaid work than their counterparts in the other countries. Italian mothers of under-5-year-olds do an hour and a quarter more unpaid work than their childless compatriots. Even though this is added to a very substantial pre-child average, it is not Italian mothers who have the highest unpaid workload, but Australian mothers. Indeed, motherhood is associated with a higher increase in unpaid workload all the other countries, including Norway, than it is in Italy. The biggest factor impacting on unpaid workload in Italy compared to the other countries is being female, whereas in Australia it is motherhood.

[2] The figures in this table are fitted values drawn from Table A.1, Appendix A

Table 5: Parents' unpaid workload as a proportion (%) of non-parents' unpaid workload by nationality

	Youngest Child Under 5		Youngest Child 5-11	
	Women	Men	Women	Men
Nationality				
Italy	139	195	108	100
Germany	185	163	n.a.	n.a.
Australia	186	128	138	100
Norway	185	173	120	100

Source: MTUS World 5.1

Table 5 shows parents' time in unpaid work as a percentage of non-parents' time in unpaid work within each country (based on the figures in Table 4). Again, this is intended as a measure of the relative time commitment of being a parent or not.

Cross-nationally parents do a great deal more unpaid work than childless people do. The presence of children brings a greater increase in unpaid work than in total work. This shows that although total workload does rise following parenthood, reallocation of time is the most widespread strategy to accommodate the time demands of children. However, the degree to which this is true is not universally consistent. The effect of parenthood upon unpaid work varies with both sex and nationality.

With a youngest child under 5, most mothers do nearly twice the amount of unpaid work childless women do. The exception is Italian mothers, who experience a comparatively low unpaid time impact attendant upon parenthood. They do 139% of the unpaid workload of childless Italian women. While still substantial, this is by far the least change in the four countries in the amount of unpaid work associated with motherhood.

Surprisingly, for men the difference in unpaid work is most between Italian fathers and childless Italian men (195%), although because this is from a very low base, Italian fathers still have the lowest absolute amount of unpaid work in the sample (see Table 4). The biggest difference between mothers and non-mothers in the amount of time devoted to unpaid work within one country is in Australia. Conversely, the least difference between fathers and non-fathers in this measure is in Australia. This suggests that it is in Australia that the impact of becoming a parent differs most profoundly by sex.

With a youngest over 5, no fathers spend a greater time in unpaid work than childless men do. Norwegian mothers with a youngest over 5 years old spend 120% of the time their childless compatriots do in unpaid work; Italian women 108%, and Australian mothers a hefty 138%.

Division of domestic labour

Table 6: Female unpaid work as a proportion (%) of male unpaid work

	No children	Youngest child under 5	Youngest child 5 to 11
Nationality			
Italy	454	324	493
Germany	185	194	n.a
Australia	178	258	247
Norway	150	168	181

Source: MTUS World 5.1

Turning to the issue of how parenthood affects the division of domestic labour within households, I calculate female unpaid work as a percentage of male unpaid work (based on the figures in Table 4). Column 1 of Table 6 shows, for example, that childless Italian women do 454% of the amount of unpaid work Italian men do, and German women do 185% of the unpaid work German men do. The second and third columns show whether the division of labour by sex is affected by the presence of children under 5 and aged between 5 and 11, respectively.

In Italy, the presence of young children does not initially deepen the division of unpaid labour. It is already very unequal. It actually gets a little better when there is a child under 5 (the proportion of female to male unpaid work goes from 454% to 324%). It is still, however, the deepest division of domestic labour cross-nationally, and with a youngest child of school age, the division is deeper still. In such families, Italian mothers are averaging nearly 500% more time in unpaid work that are Italian fathers.

In all the other countries the division of unpaid labour by sex is deepened by the presence of children but to different degrees. Norway is the most equitable in childless households, with women doing 150% of the amount of unpaid work that men do. There is not too much change associated with parenthood (mothers of children under 5 do 168% of fathers' unpaid work). This is largely because the contribution of Norwegian fathers is high compared to that of fathers in other countries.

German ratios of male to female unpaid labour also don't alter very much following parenthood. They go from childless women doing 185% of male unpaid labour to mothers with a youngest under 5 doing 194% of fathers' unpaid labour. The impact of parenthood on equity of unpaid work is the most profound in Australia. It is in Australia that parents show the biggest difference in this measure from that of childless people. Childless Australian women do 178% of the unpaid labour childless Australian men do, while Australian mothers with children under 5 do 258% of the unpaid labour that fathers of children that age do. Australia also continues to show a relatively big inequity in unpaid work as children mature.

Work-family balance

Table 7: Proportion (%) of men and women's total work time that is paid by nationality

	No Children		Youngest Child Under 5		Youngest Child 5-11	
	Women	Men	Women	Men	Women	Men
Nationality						
Italy	44	90	32	80	39	93
Germany	50	79	26	69	n.a.	n.a.
Australia	51	76	22	71	35	79
Norway	61	74	34	62	44	78

Source: MTUS World 5.1

I now look at how parenthood affects the allocation of time between paid and unpaid work responsibilities. Table 7 shows the proportion of total work time that is paid (for childless people, for parents with a youngest child under 5 and for parents with a youngest child 5 to 11). This is an indicator of how people balance employment and home commitments before and after becoming parents. There are differences in degree in the impact that children have on a person's proportional allocation to paid and unpaid work both between the sexes and across the welfare regimes.

In all countries, men spend a much higher proportion of their total work time in activities for which they are paid than do women. This is the case even for the childless. Gender alone has a strong impact on the way people apportion their labour cross-nationally. However, parenthood has an independent additional effect. Fathers spend a higher proportion of their total work time in unpaid labour than childless men do. But the effect upon men is not only very modest compared with that upon women. It is also of shorter duration. Fathers of under-5-year-olds allocate proportionately more time to unpaid labour than do either childless men or fathers of 5- to 11-year-olds. Indeed in all countries studied, the latter group has an even lower ratio of unpaid to paid work than do childless men.

Having a child in either age group is associated with women spending a lower proportion of their total work time in remunerative labour and a higher proportion in unpaid work, though the impact is weaker as the children mature. Cross-nationally mothers spend a much higher proportion of their total work time in unpaid labour than childless women do, but the change after becoming a mother does vary between countries.

It is in the liberal state of Australia that having a child under 5 is associated with the biggest impact on women's relative time allocation to paid and unpaid work. Childless Australian women spend over half their total work time in paid labour. When Australian women have a child under 5, the average of their total work time that is paid is only 22 per cent. This proportion rises to 35 per cent when the youngest child is aged 5 to 11. This is the lowest proportion of paid to unpaid work found in my sample. On this measure, the impact of children is in this study most profound upon women in Australia.

The paid to unpaid work ratio of childless German women is slightly lower than for childless Australian women (50%), but the impact of children upon the proportional allocation by German women to paid and unpaid labour is slightly less pronounced than in Australia. It is in the social democratic country of Norway that mothers have the highest proportion of paid to unpaid work of all the mothers in the sample (34%), though it is substantially lower than that of their childless compatriots (61%). It reduces in association with the presence of a youngest child by 27 percentage points and of a youngest child aged 5 to 11 by 17 percentage points. These are very similar relative reductions to those found in both corporatist Germany, and in liberal Australia, suggesting that the gap in time allocation between childless women and mothers, though different in absolute amount across welfare regimes, remains similar in relative terms.

Unexpectedly, it is in the highly familialistic corporatist state of Italy that having children least alters the relative allocation of female time to paid and unpaid work. Childless Italian women have the lowest proportional allocation of time to paid work (44%), but this goes down by only 8 percentage points to 32% following motherhood. Of all the countries studied, motherhood has the least effect on the relative allocation of paid and unpaid work in Italy. Again it is apparent that the time-penalty of being female in Italy outweighs that of motherhood.

Speculations on fertility

The findings give rise to speculation as to whether the time impacts of children encourage or inhibit becoming parents at all. Birth rates are falling worldwide. This is of concern to policy makers because, inter alia, a below replacement birth rate means an aging population in which there are insufficient workers to maintain an adequate tax base (Barnes 2001; Beaujot 2001; Betts 1998; Chesnais 1998; Esping-Andersen 1999; McDonald and Kippen 2001). Some suggest that the falling birth rate results from the difficulties women face in meeting the conflicting demands of work and family (Bryson et al. 1999; Chesnais 1996; Esping-Andersen 1999; McDonald 1997; Weston and Qu 2001). Whereas historically it was assumed that having children was negatively associated with female work force participation, now the causality appears to run the other way. Fertility rates and female participation and employment have since the 1980s become positively correlated (Bonke and Koch-Weser 2004; Brewster and Rindfuss 2000; Castles 2002; Chesnais 1996; Chesnais 1998). It is suggested that this is particularly relevant to regimes in which childless women have equal educational and work opportunities with males, but in which, following parenthood, women retain the major responsibility for the care of their children (McDonald 2000). Faced with a choice between work and children, women are increasingly choosing work.

Another suggestion is that the degree to which couples share the burden of children is also critical to sustaining fertility levels (Henneck 2003; Ronsen 1998). Elsewhere, I found that bargaining theory is of limited use in understanding how the labour of parenthood is divided between men and women (Craig 2004). However, the theory may provide some insight into to whether people are likely to become parents in the first place. Widmalm (1998) suggests that the failure to strike a fair bargain over the distribution of labour can mean not that certain household tasks will fall by gender default, but will not be undertaken at all. ‘In a non-cooperative equilibrium, the household public good produced as a result of domestic labour is under

provided'(Widmalm 1998: 26). The argument is that if the domestic labour of partners is very unequal, women will withdraw their contribution to the provision of household public goods that are created by unpaid work, even at the cost of not having something they value, such as a clean house. Of interest here is whether non-cooperation and withdrawal from household undertakings extends to decisions about having children. In other words, where the domestic division of labour is particularly inequitable, if the household public good 'children' is withheld, fewer children are born and national birth rates are low.

While acknowledging that time impacts of gender and parenthood are only one of many factors that will impact upon fertility decisions, the results of this paper can provide a speculative test for the contentions above. In 1995 (close to the Time Use Survey years) the countries in this study had birth rates as follows:

Table 8: Average number of children per 15-49 year old woman 1995

	Average Number of Children
Country	
Australia	1.82
Germany	1.25
Italy	1.18
Norway	1.87

Source: The Clearinghouse on International Developments in Child, Youth and Family Policies at Columbia University

It is the countries that I found to have the least marked gender division of labour among childless people (Norway and Australia) that have the highest birth rates. Italy has both the most marked gender division of labour and the lowest birth rate. Italy and Norway represent the extremes of birth rates in this study, as well as the extremes of absolute unpaid work and the division of labour.

Figure 1 is a scatter plot showing the correlation between the 1995 average number of children and the division of labour of childless couples in each of the four countries. It shows some evidence to support the idea that the countries in which the gender division of labour is least pronounced have the highest birth rates and the countries in which the gender division of labour is most pronounced will have the lowest. With the exception of Germany, there is a relationship between the two factors. The sample is too small to be statistically robust, but these results suggest that the issue is worth further investigation. More research, using a larger number of countries, is indicated.

Figure 1: Correlation of fertility rate and division of domestic labour

Some contend that that low fertility rates are associated with the degree to which becoming a mother erodes women's equality (Castles 2002; McDonald 2000). At first glance, the findings in this study show little support for this view. The time impact of children is highest in relative terms for Australian women (biggest increase in total workload, biggest increase in unpaid work, biggest downward impact on workforce participation, biggest impact on domestic division of labour), but near the survey year it had the second highest birth rate in the sample. This would seem to imply that this change in circumstances is not an impediment to fertility.

However, a closer look at the results does find some support for the idea that that low birth rates may relate to gender inequity. Increasingly fewer Australian women are having a second or third child (McDonald 2000). Italy has a high number of women remaining childless. Having regard to their high total workload, relatively low work force participation and the high domestic time demand upon them, this arguably reflects the fact that they are already fully stretched. Also arguably, Australian women limit subsequent births as a result of the profound impact upon the gender division of labour concomitant with the first. These findings raise the possibility that if women receive insufficient domestic assistance they will limit their fertility.

1.5 Conclusion

In this paper I investigate the time impact of becoming a parent in four different countries. I categorise the countries according to a welfare regime typology which acknowledges the position of women, and in which the social conceptualisation of children is at different points along the continuum from private good to public responsibility.

There are some effects that transcend national boundaries. Gender is a far more significant predictor of the amount of work done and the proportion of it that is unpaid than is any variation between nations. In all the countries the presence of children brings extra work, both in total and in the proportion that is unpaid, and the effect is stronger the younger the child. However, there are significant cross-national differences in the impact of children on adult time, and how it is divided by gender, which are arguably related to the policy regime that pertains.

Market-oriented (or liberal) regimes broadly conceptualise children as a private good. In my example of this regime (Australia), becoming a parent is accompanied by the most change in lifestyle for women and the least for men. Market-oriented countries do not actively facilitate women's independence from caring duties or their access to paid work, though they are theoretically gender blind, and open to private market arrangements that would have these outcomes. In this study, it is in Australia, where women have relatively good market opportunities and relatively little social assistance is given for caring, that the time impact of children upon women is most profound. Motherhood brings with it marked changes in magnitude of workload, marked accentuation of the gender division of domestic labour, and marked changes in the allocation of female time from paid to unpaid work.

In dual-earner regimes the public good aspect of children is more acknowledged through greater socialisation of their care. These countries actively promote women's access to the workforce both before and after motherhood, parental leave is generous, and day care is subsidised or provided by the state. In this study, the example of this regime, Norway, showed the least marked time impacts upon men and women who become parents compared to the childless, and also the most equitable division of these impacts by sex (though they were by no means completely so). The general family support regime, exemplified by Germany, fell into the middle impact range. In the highly familialistic state of Italy where children are a private family responsibility the time effects of becoming a parent are overshadowed by the influence of gender. The division of domestic labour, and the gap between men and women's total workloads, are by far the most extreme of all the countries looked at but are not accentuated by parenthood. This result, combined with the very low birth rates, may indicate that relatively few Italian women take on the responsibilities of motherhood because the burdens of being female are already so heavy.

These findings offer exploratory insight into how parenthood affects the paid and unpaid workload (and its distribution by gender) of citizens in countries with different policy-settings, and raise questions about the consequences for national fertility. However, any conclusions must be tentative, because the study is so small, the MTUS data is so limited and because policy environments are so multi-factorial. Further research of more countries with improved data would test and build on these early speculative results.

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Appendix A

Table A. 1: Cross-national regression models (predictor variables)

	Model 1		Model 2		Model 3		Model 4	
	Total Work	Unpaid Work	Total Work	Unpaid Work	Total Work	Unpaid Work	Total Work	Unpaid Work
Constant	9.16	1.59	9.70	1.90	9.64	1.78	9.63	2.12
Country Effects								
Norway	-0.36***	-0.32***						
	(0.08)	(0.07)						
Germany	0.16**	0.12*						
	(0.06)	(0.05)						
Italy	-0.33***	-0.42***						
	(0.06)	(0.05)						
Sex								
Female	0.65***	3.08***						
	(0.04)	(0.04)						
Sex and country								
Female								
Australian			-0.36***	2.51***	-0.34***	2.56***	-0.48***	1.66***
			(0.08)	(0.07)	(0.08)	(0.07)	(0.12)	(0.10)
German			-0.22**	2.59***	-0.32***	2.46***	-0.37**	1.80***
			(0.08)	(0.07)	(0.08)	(0.07)	(0.11)	(0.10)
Norwegian			-0.71***	1.76***	-0.76***	1.70***	-0.41*	1.08***
			(0.11)	(0.09)	(0.11)	(0.09)	(0.16)	(0.10)
Italian			0.46***	2.84***	0.47***	2.87***	0.52***	2.65***
			(0.08)	(0.07)	(0.08)	(0.07)	(0.12)	(0.10)
Male								
German			0.23**	0.13	0.13	-0.04	0.12	-0.04
			(0.08)	(0.07)	(0.08)	(0.07)	(0.12)	(0.14)
Norwegian			-0.26*	0.19*	-0.29**	0.14	-0.46*	0.03
			(0.11)	(0.09)	(0.11)	(0.09)	(0.17)	(0.10)
Italian			-1.67***	-1.23***	-1.67***	-1.24***	-1.52***	-1.08***
			(0.08)	(0.07)	(0.08)	(0.07)	(0.12)	(0.10)
Age of youngest child								
< 5					0.73***	1.24***	0.66**	0.61***
					(0.07)	(0.06)		(0.12)
5-11					0.20**	0.38***	0.49***	-0.02
					(0.07)	(0.06)	(0.17)	(0.14)
Female and youngest child under 5								
Australian							1.07***	2.67***
							(0.14)	(0.12)
Italian							0.71***	1.25***
							(0.12)	(0.10)
Norwegian							0.28	2.11***
							(0.20)	(0.16)
German							0.87***	2.18***
							(0.11)	(0.10)

Table A.1 continued: Cross-national regression models (predictor variables)

	Model 1		Model 2		Model 3		Model 4	
	Total Work	Unpaid Work	Total Work	Unpaid Work	Total Work	Unpaid Work	Total Work	Unpaid Work
Male and youngest child under 5								
Australian							0.66***	
							(0.15)	
Italian							0.51***	0.39***
							(0.12)	(0.10)
Norwegian							1.17***	0.95***
							(0.20)	(0.17)
German							0.79***	0.72***
							(0.12)	(0.10)
Female and youngest child 5 to 11								
Australian							0.52**	1.45***
							(0.17)	(0.14)
Italian							0.16	0.41***
							(0.10)	(0.09)
Norwegian							-0.41	0.64**
							(0.22)	(0.19)
Male and youngest child 5 to 11								
Australian							0.50**	-0.02
							(0.17)	
Italian							0.08	-0.11
							(0.11)	(0.09)
Norwegian							0.31	0.04
							(0.26)	(0.21)

MTUS World 5.1   * P-value<0.05 ** P-value<0.01 ***P-value<0.001

Table A.1 continued: Cross-national regression models (control variables)

	Model 1		Model 2		Model 3		Model 4	
	Total Work	Unpaid Work	Total Work	Unpaid Work	Total Work	Unpaid Work	Total Work	Unpaid Work
Age								
25 to 34	0.11*	0.16***	0.08	0.14***	-0.09***	-0.14***	-0.10*	-0.23***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)
45 to 54	0.02	0.15**	-0.02	0.13**	0.10	0.34***	0.10	0.33***
	(0.05)	(0.04)	(0.05)	(0.04)	(0.05)	(0.05)	(0.06)	(0.05)
Education								
Above secondary	0.11	0.03	0.05	0.00	0.01	-0.07	0.00	-0.09*
	(0.06)	(0.05)	(0.06)	(0.05)	(0.06)	(0.05)	(0.06)	(0.05)
No of children under 18	0.34***	0.51***	0.34***	0.51***	0.19	0.25***	0.18***	0.23***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)
Day of week								
Saturday	-2.21***	0.73***	-2.22***	0.72***	-2.21***	0.73***	-2.22***	0.73***
	(0.05)	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)
Sunday	-4.91***	-0.34***	-4.91***	-0.35***	-4.91***	-0.34***	-4.91***	-0.34***
	(0.05)	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)
Work Status								
Part time		0.76***		1.15***		1.12***		0.95***
		(0.06)		(0.06)		(0.06)		(0.06)
Not employed		2.34***		2.20***	***	2.17***		2.06***
		(0.04)		(0.04)		(0.04)		(0.04)
Income								
Lowest quartile	-0.72***	-0.20**	-0.75***	-0.18*	-0.75	-0.16*	-0.73***	-0.14
	(0.09)	(0.07)	(0.09)	(0.07)	(0.09)	(0.07)	(0.09)	(0.07)
Highest quartile	0.14*	-0.23***	0.18**	-0.23***	0.22***	-0.16***	0.23***	-0.13**
	(0.06)	(0.05)	(0.06)	(0.05)	(0.06)	(0.05)	(0.06)	(0.05)
Spouse's Work								
Part time	0.26***	0.30***	0.07	0.06	-0.01	-0.08	-0.05	-0.03
	(0.07)	(0.06)	(0.07)	(0.06)	(0.07)	(0.06)	(0.07)	(0.06)
Not in labour force	-0.71***	-0.45***	-0.47***	-0.28***	-0.52***	-0.37***	-0.54***	-0.31 ***
	(0.05)	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)
R square	.342	.446	.370	.478	.373	.489	.374	.364

MTUS World 5.1 * P-value<0.05 ** P-value<0.01 ***P-value<0.001 N=29767