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Research Article

**Domestic gender equality and childbearing in
Sweden**

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Domestic gender equality and childbearing in Sweden

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Abstract

BACKGROUND

Sweden, which is among the most gender-equal societies in the world, combines 'modern' family patterns such as unmarried cohabitation, delayed parenthood, high maternal labor force participation, and high break-up rates - all usually linked with low birth rates - with relatively high fertility. Sweden also has a high level of shared parental responsibility for home and children.

OBJECTIVE

After decades of late 20th century research showing that increasing gender equality in the workplace was linked with lower fertility, might gender equality in the home increase fertility?

METHODS

Using data from the Swedish Young Adult Panel Study (YAPS), we use Cox regression to examine the effects on first, second, and third births of 1) holding attitudes about sharing equally in the care of the home and children, and 2) actual sharing in these domestic tasks.

RESULTS

Our analysis shows that, measuring attitudes before the transition to parenthood and actual practice four years later, it is inconsistency between sharing attitudes and the actual division of housework that reduces the likelihood of continued childbearing, especially on second births among women.

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CONCLUSIONS

As women are most likely to confront an inconsistent situation, with egalitarian ideals in a household without equal sharing, it is clear that having a partner who does not share housework is depressing Swedish fertility.

1. Introduction

Sweden, followed by the rest of Scandinavia, has been in the forefront of the gender revolution, with high proportions of women sharing the providing role (Sainsbury 1999; Haas, Steiber, and Wallace 2006) and of men sharing the caring role (Hook 2006). Sweden is also one of the leaders in maintaining near replacement fertility in Europe, (Frejka 2008), with a total fertility rate (TFR) of 2.0 in 2010 (Statistics Sweden 2011).

Most recent research on the relationship between gender equality and fertility has focused on the role of the state in reducing the conflict between women's employment and family responsibilities (e.g., Hoem 2005; McDonald 2000a; Oláh and Bernhardt 2008). Specific studies support this argument, indicating that relatively high fertility is likely to be the result of powerful state policies that provide parents with job security, quality childcare, and paid family leave (Kjeldstad 2001; Skrede 2004; Kaufman and Bernhardt 2012). A few studies, however, have suggested that an additional factor encouraging higher fertility lies in the home, in that gender equality at the family level supports increased childbearing (Oláh 2003; Duvander and Andersson 2006; Neyer, Lappégaard, and Vignoli 2013). McDonald (2000a) has proposed that low fertility is explained by high levels of gender equity in the public sphere combined with low levels of equity in the family, an important statement in that it pointed to problems in the private sphere as a source of very low fertility. However, he never seems to suggest that men increase their involvement; just that states do more to ease women's burdens.

The possibility that gender equality in the family could lead to increased fertility appears at first to be implausible, as increased gender equality has been linked with low fertility for a long time (e.g., Espenshade 1972). More recent studies have reached conflicting conclusions, with some linking measures of gender equality with higher fertility, e.g., in the United States (Kaufman 2000; Torr and Short 2004) and some finding a negative relationship (Philipov 2008; Westoff and Higgins 2009).

These inconsistencies may reflect differences in the way fertility is measured (expectations vs. actual childbearing), and whether parity is distinguished. Also, as mentioned, different measures of gender equality have been used, some focusing on sharing financial support and others examining sharing home-based tasks, with some measuring attitudes, and others sharing behavior. Further, when attitudes and behavior

have been included in the same model (e.g., Torr and Short 2004; Neyer, Lappégaard, and Vignoli 2013) they have been tested additively; a negative effect on fertility might only emerge in the case of inconsistency between attitudes and behavior.

In this paper we investigate how inconsistency between sharing attitudes and actual sharing affects transitions to first, second, and third births in Sweden. The longitudinal panel database YAPS (Young Adult Panel Study) follows young adults during the early family-building years. We address the central research question of whether and under what circumstances shared responsibility for the domestic sphere contributes to increased fertility, even in a country in which the state provides substantial support to working families with children. Balbo, Billari, and Mills (2013), in their recent review of fertility research in advanced societies, assert that empirical evidence still is lacking for the assumption that women/couples are more likely to have children when work and parenthood can be reconciled. The aim of this paper is to contribute to this increasingly important field of research with a Swedish case study, and to go beyond the vague notion of “gender equity in the family”, suggested by McDonald (2000a, 2000b), to address the effects of gender equality in home tasks on childbearing.

2. Background: Gender and fertility

Analyses of the relationship between gender equality and fertility occupy clearly contested territory. Although early research on the subject consistently found that increased gender equality was linked with low fertility, relationships have been changing rapidly at the macro level (Brewster and Rindfuss 2000). It is possible, but not yet established, that these relationships might be changing at the family level as well (Balbo, Billari, and Mills 2013). Existing studies are confusing, not just based on their theoretical orientation but also in their measurement of both gender equality and fertility. This confusion may be the result of the uneven progress of the gender revolution.

The gender revolution has clearly proceeded unevenly, with more rapid acceptance of women providing financial support than of men engaging in household tasks (Goldscheider and Waite 1991). This suggests that it is useful to consider the gender revolution as having two halves: 1) in the public sphere of employment and earnings and 2) in the private sphere of the family (Goldscheider 2012). Hence, in the first half of the gender revolution the family is under pressure as women reduce their availability for housework and caregiving. Therefore, questions that focus attention on women’s employment roles are likely to tap the reality of these pressures, and be linked with lower fertility. In the second half of the gender revolution, however, families are

strengthened, as men contribute directly to domestic labor, creating time for more children. Based on this understanding, the disparate findings of Puur et al. (2008) and Westoff and Higgins (2009), linking egalitarian attitudes about gender with higher and lower fertility respectively, can be reconciled. Although these two studies examined nearly the same countries using the same datasets, the first study used measures that focused on men's roles in the private sphere as engaged fathers, while the second used measures focusing on women's inclusion in the public sphere (Goldscheider, Oláh, and Puur 2010).

2.1 Gender equality and fertility: Reversing?

With industrialization and the move away from a household-based subsistence economy, work-family role conflict emerged for those with responsibilities for both economic support and family care, i.e., employed women (Stycos and Weller 1967). In the early decades of industrialization this conflict was resolved by the creation of 'separate spheres', which depended on having two adults, each specializing in his/her sphere. However, the fundamental conflict remained, and as pressures grew on women to increase their participation in the public sphere in order to contribute to the financial support of their families, the only way to manage this conflict was to reduce family responsibilities, e.g., children, creating the negative relationship between female labor force participation and fertility. This relationship was found in the vast majority of studies that examined the issue in developed countries during the period of rapid increase in female labor force participation (van der Lippe and van Dijk 2002), and this is still the case in nearly all contemporary European-origin societies, as well as many Asian industrialized countries (Brewster and Rindfuss 2000; Billari 2004; Frejka, Hoem, and Toulemon 2008). Nevertheless, this relationship is no longer so universal (Matysiak and Vignoli 2008).

The concept 'gender equality' is complex (Neyer, Lappégård, and Vignoli 2013). Many different concepts and definitions have been used (e.g., Arpino and Tavares 2013; Mason 2001; Mills 2010; Neyer, Lappégård, and Vignoli 2013). Neyer, Lappégård, and Vignoli (2013) distinguish four different dimensions that capture gender equality in employment, financial resources, care, and family work, and conclude from their analysis of ten European countries that there is no simple answer to the question of which equality matters for fertility. Mills (2010) presents an exploratory analysis of the effect of five different macro-level gender-related indices on fertility in 24 European countries, concluding that societal gender equity does not seem to have a very strong impact on fertility intentions and behavior at an individual level.

Nevertheless, there is some evidence that a more gender-equal home is ‘pro-family’, and some studies provide a theoretical basis for this. It seems that men sharing housework is important for women’s satisfaction with their domestic labor arrangements. Baxter and Western (1998) showed that Australian women reported higher levels of satisfaction when their husbands were involved in non-traditionally male activities (such as cooking and cleaning). Kamp-Dush and Taylor (2012) similarly showed that respondents in the United States with egalitarian marriages were more likely over the following 20 years to stay more happily married and to experience relatively little conflict. Mencarini and Sironi (2012), analyzing European Social Survey data for 26 European countries, also find that a large share of housework affects women’s happiness negatively.

Strengthening relationships seems likely to contribute to increased fertility, although the issue is far from settled. Several studies of fertility show that more egalitarian men transition more rapidly to a second birth (Kaufman 2000; Oláh 2003; Torr and Short 2004; Duvander and Andersson 2006), although this has not been a consistent finding (i.e., Westoff and Higgins 2009) even in Sweden (Nilsson 2010); the answer may lie in which measures of gender equality and of fertility are used, as well as in the (in)consistency between sharing attitudes and behavior, as suggested by the “violated expectations” framework (Kalmuss, Davidson, and Cushman 1992; Proulx, Inzlicht, and Harmon-Jones 2012).

2.2 Measuring gender equality

The study of men’s share of housework and childcare is now a sizeable and growing area of research, both for specific countries, e.g., the United States (Mason, Czajka, and Arber 1976; Bianchi, Milkie, and Robinson 2000) and Sweden (Roman 1999; Björnberg 2004; Evertsson and Nermo 2004; Evertsson 2013), and comparatively (e.g., Baxter 1997; Hook 2006; Cooke 2010). Many studies linking egalitarian roles with fertility have used gender-related attitudes (Kaufman 2000; Puur et al. 2008; Westoff and Higgins 2009; Miettinen, Basten, and Rotkirch 2011). Unfortunately, most gender attitude scales focus primarily on women’s roles in the public sphere of work, or on global ideas about power in gender relationships (e.g., Philipov 2008; Westoff and Higgins 2009), rather than on men’s roles in the private sphere of the home. Our theoretical approach stressing the uneven progress of the gender revolution implies that it is men’s roles in the home that should affect fertility positively.

Although many find little change in men’s participation in domestic work (Goode 1982; Hochschild 1989; Breen and Cooke 2005), Esping-Andersen (2009:34) argues that “a genuine process of equalization is under way”, and other recent studies have

found growth in men's sharing of home-based tasks (Kan, Sullivan, and Gershuny 2011). This seems to be more true, however, for men's involvement with childcare than for men's involvement with housework (Bianchi et al. 2000; Bonke and Esping-Andersen 2008). Many of the studies of the relationship between domestic gender equality and childbearing focus on sharing childcare (e.g., Brodman, Esping-Andersen, and Güell 2007; Cooke 2008), although others measure participation in household tasks (Torr and Short 2006; Nilsson 2010). Cooke (2004) measured each separately, and found greater pronatal effects of sharing childcare than housework in Germany. An additional set of studies examining the link between men's participation in domestic tasks and childbearing has taken an indirect measure (parental leave). Two studies on Sweden (Oláh 2003; Duvander and Andersson 2006) and one also including Norwegian data (Duvander, Lappgård, and Andersson 2010) have linked father's uptake of parental leave to continued childbearing.

2.3 Consistency between attitudes and behavior

None of these studies has examined consistency between attitudes and behavior. Inconsistency is likely because men's attitudes about sharing are often more egalitarian than their actual behavior (e.g., Press and Townsley 1998; Bernhardt, Noack, and Lyngstad 2008). Kjeldstad and Lappgård (2012) find in their study of gender values and household practices in Norway that about half of the respondents report incoherent configurations, with women more likely to report egalitarian values and inegalitarian practice while for men the situation is reversed. However, their gender value measure is more focussed on public sphere equality; moreover, they measure values and practice at the same time. Couples commonly reduce sharing after children come (Gershuny and Sullivan 2003; Sayer 2005), although Dribe and Stanfors (2009) show this may not be true of Sweden. This means that the correlation between early attitudes towards household sharing and later actual sharing might not be very high, particularly after the first birth.

Further, most studies have found that women are more likely to endorse sharing home tasks than men (Baxter 1997), even in Sweden (Bernhardt and Goldscheider 2006). This suggests that when it comes to decisions about having (additional) children, any gap between attitudes and couples' sharing behavior might have an impact. Unfulfilled expectations normally lead to disappointment (Robinson and Rousseau 1994), while consistency between expectations and later experiences seems to be a prerequisite for a positive evaluation of one's life situation (Easterlin 2003; Kaare Christensen, Herskind, and Vaupel 2006). This appears to be the case in many realms of life, including the household division of labor (Kaufman and Taniguchi 2006; Claffey

and Mickelson 2009). Hence, in our study of gender equality and childbearing, we will use longitudinal data to distinguish consistency between sharing behavior and previously measured attitudes, advancing research on gender roles and fertility.

2.4 Fertility: Expectations and parity progression

Previous studies of the relationship between domestic sharing and childbearing have also been inconsistent about measures of fertility. Studies finding a positive link have used both fertility expectations and actual fertility (e.g., Kaufman 2000; Pinnelli and Fiori 2008; Neyer, Lappégård, and Vignoli 2013), but not distinguishing parity appears more problematic. Most of the studies that have positively linked gender equality with fertility have focused on second births (e.g., Oláh 2003; Torr and Short 2004; Pinnelli and Fiori 2008; Neyer, Lappégård, and Vignoli 2013). This is a key decision point, because the two-child family is the foundation of replacement fertility. Even more than complete childlessness, there has been a rapid rise of one-child families in Europe (Frejka 2008). Neither the Nilsson (2010) nor the Westoff and Higgins (2009) studies distinguish parity, and found either no or a negative relationship (respectively) between attitudes towards gender equality and childbearing. This suggests that the second parity is a critical decision point.

2.5 Why Sweden?

Decisions about having children are very sensitive to the contexts in which individuals and couples find themselves. In Sweden, although childlessness is increasing slightly (Persson 2007), most young adults expect to become parents, and there is a strong two-child ideal (Bernhardt and Goldscheider 2012). The Swedish state's provision of extensive paid parental leave, high quality subsidized childcare, and child allowances allows most families to realize this ideal.

The decisions of individual couples, however, must take into account their own resources of time and money, as well as their level of commitment to take on the long-term responsibilities of parenthood. They also need to be clear about who will do the additional domestic labor children bring, not just childcare but also the household tasks that normally become more extensive. Given the very high level of female labor force participation in Sweden (Bernhardt 1993; van der Lippe and van Dijk 2002) and the encouragement the state provides for paternal involvement in childcare, it is likely that this issue might be particularly salient in Sweden. Young couples in Sweden expecting

their first child express high commitment to an egalitarian division of paid and unpaid work, as they do after the arrival of their first child (Al sarve and Boye 2011).

In this paper we model the transition to first, second, and third births using comparable models, including measures of the division of actual housework and prior egalitarian ideals. Taking advantage of longitudinal data from the Young Adult Panel Study (YAPS) database, we measure attitudes about sharing in 1999 (while the respondents were childless) and actual sharing of housework four years later, followed by parity change for the ensuing six years. We know of no other study with this design. We hypothesize that respondents who experience a household division of labor consistent with their ideals will experience higher transition rates to additional children, particularly to a second birth and particularly among women.

3. Data and methods

3.1 Data

The Young Adult Panel Study (YAPS) was designed to enable studies of complex interrelationships between attitudes and demographic behavior (see www.suda.su.se/yaps). Designed from the beginning to be longitudinal, there were three waves of survey data collection (1999, 2003, and 2009), of which we only used the first two (1999 and 2003). These have been combined with register data from the mid-1980s onwards, including births up to 2008.

3.2 Sample

The original target sample consisted of 4,360 persons who were born in Sweden in 1968, 1972, and 1976 and surveyed in 1999; the cohort born in Sweden in 1980 was added in 2003. This resulted in 2,820 respondents (65% response rate) whose identities have been kept by Statistics Sweden. For the 2003 round of the survey a new group of 1,194 22-year olds (1980 cohort) was added, with an overall response rate of 70%, which we include in the analysis. Hence, we include in our analysis respondents who were childless at the time of their first interview and who were cohabiting or married in 2003. Thus, we observe persons who were childless at ages 23, 27, and 31 in 1999 and in a co-residential partnership in 2003, four years later; together with persons who were childless but partnered at age 23 in 2003. Of course, in our analysis of later births, we restrict the sample to those who had reached the previous parity. Thus, our analysis

focuses on the 71% of the sample who had not had a child prior to being observed in 1999, and who had not given birth to a third child at the time of the 2003 wave.

The same respondent (couple) could be included more than once in our regressions, those at risk of more than one birth in the observation period 2003 to 2008. The figures presented in Table 1 are therefore based on 1,826 ‘person observations’, (767 male and 1,059 female), while our analytic sample consisted of 1,094 respondents. The couple variables are based on the information given by the respondents about themselves and reported for their partners.

Of the initial 1,846 person observations, 20 are excluded for having missing values on both attitudes and behavior (n=12) or on age of female partner (n=8). Otherwise, missing values were imputed with mean substitution (289 cases). The major source of nonresponse was the labor market variable (130 cases), mainly because respondents answered that their partner works but not how many hours; 81 cases were missing on either their own education or their partner’s. The other variables had smaller numbers of missings, which were imputed using mean substitution.

3.3 Method

The transition to a next child is analysed with Cox regression, using monthly register information on births between 2003 and 2008. We use Cox regression because it requires no assumption as to functional form and is not biased by right censoring, which is important because a substantial proportion (~25%) of the females were aged 30 or less at the end of the observation period. There is less left censoring: few had attained three births prior to the beginning of the period of observation (less than 10%), although more had begun family building (in our analytic sample of 1,094 respondents, in 2003 701 were childless, 290 had one child, and 103 had two children). The observation period starts at the time of the 2003 survey round, except for those cases whose first or second child was born after 2003, allowing the possibility of predicting another birth prior to 2008.

Table 1: Characteristics of respondents and couples in the analysis of first, second, and third births

	All person observations			Parity-specific observations		
	Total Rs	Male Rs	Female Rs	1st birth	2nd birth	3rd birth
Egalitarian attitude/housework behavior						
Consistently egalitarian	53.18	52.02	54.01	59.20	51.09	47.19
Egalitarian-inconsistent	26.94	22.43	30.22	22.97	28.11	31.19
Consistently non-egalitarian	8.65	10.95	6.99	7.42	9.01	9.98
Non-egalitarian-inconsistent	11.23	14.60	8.78	10.41	11.80	11.64
Egalitarian attitude/childcare behavior						
Consistently egalitarian	57.45	57.37	57.51	61.77	56.68	52.18
Egalitarian-inconsistent	22.67	17.08	26.72	20.40	22.52	26.20
Consistently non-egalitarian	6.52	8.21	5.29	5.14	6.68	8.32
Non-egalitarian-inconsistent	13.36	17.34	10.48	12.70	14.13	13.31
Age of female partner in 2003						
<24	22.29	18.38	25.12	34.09	18.01	10.81
24-27	33.24	30.64	35.13	34.09	34.32	30.56
28-31	29.24	30.77	28.14	22.25	31.68	36.17
32-35	13.09	15.12	11.61	7.42	13.66	20.58
36+	2.14	5.08	na	2.14	2.33	1.87
Work status of female partner, 2003						
Full-time employment	54.93	54.50	55.24	62.77	54.50	44.07
Student	11.88	12.78	11.24	19.83	8.70	4.57
Other	33.19	32.72	33.52	17.40	36.80	51.35
Partners' education 2003						
Both high	17.69	16.56	18.51	14.98	17.86	21.41
His high, hers low	8.43	6.91	9.54	8.27	8.54	8.52
Hers high, his low	17.47	21.77	14.35	17.12	18.48	16.63
Both low	56.41	54.76	57.60	59.63	55.12	53.43
Relationship 2003						
Cohabiting	79.52	80.57	78.75	89.87	78.42	65.90
Married	20.48	19.43	21.25	10.13	21.58	34.10
Child status 2003						
No first/second child	78.48	79.66	77.62	na	54.97	78.59
Child's age 0-11 months	8.82	7.95	9.44	na	15.53	12.68
Child's age 12-35 months	10.90	10.43	11.24	na	24.53	8.52
Child's age 36+ months	1.81	1.96	1.70	na	4.97	0.21
No break up plans, R	80.56	81.49	79.89	75.61	81.37	86.69
N (person observations)	1826	767	1059	701	644	481

3.4 Measures

We used information from the 1999 survey on expectations about domestic gender equality before the transition to parenthood. The respondents were asked a single question that includes both housework and childcare: “What do you think would be the best arrangement for a family with pre-school children?” with these response alternatives:

- Only the man works and the woman takes primary responsibility for home and children (non-egalitarian)
- Both work, but the woman works part-time and takes primary responsibility for home and children (non-egalitarian)
- Both parents work roughly the same hours and share the responsibility for home and children equally (egalitarian)

The few (<1%) who chose a fourth alternative (both work but he takes home responsibility) were placed in the egalitarian category. We combined the first two, indicating a “non-egalitarian” attitude towards the balance of work and family. Among those partnered in 1999, only 5% of men and 4% of women chose the truly traditional alternative, supporting Esping-Andersen’s argument that “traditional gender norms have largely disappeared from Swedish society” (2009:50). The substantial majority (80%) had egalitarian attitudes. More women than men (85% vs. 74%) expected to share the responsibility for home and children equally with their partner.

We examine actual sharing four years later, in 2003. This temporal separation allows us to avoid common method bias by not using items from the same source (Siemsen, Roth, and Oliveira 2010); it also reduces reverse causality, which would be more likely if the attitudes measured at the same time as the behavior were shaped by that behavior.⁴ Our measures of actual sharing derive from the answers to two separate questions about how the respondents shared housework and childcare with their partners, each with three responses: a) I do more, b) We share equally, and c) My partner does more. If the male partner did more housework/childcare, we grouped these few couples with those reporting that they shared these chores equally. In our analytic sample 63% reported that they shared housework while somewhat more (74%) reported

⁴ For the 1980 cohort, first interviewed in 2003, of course we did not have this temporal separation, because they were asked about their sharing attitudes and behavior at the time. We examined our results on household-sharing attitudes and behavior both with and without this cohort and there were no differences in our key results in terms of effect size: some dropped a level of significance due to the smaller number of cases but none to below the .10 level.

that they shared childcare. This appears to be a common pattern in Europe (Esping-Andersen 2009).

To examine how the fit between attitudes and behavior affects subsequent childbearing, we constructed two domestic gender-equality variables that combine 1999 sharing attitudes and 2003 sharing behavior re housework and childcare. As these variables were dichotomous (egalitarian and non-egalitarian), their combination produced four categories: 1) consistently egalitarian (respondent reported an egalitarian attitude in 1999 and sharing housework/childcare in 2003) and 2) consistently non-egalitarian (respondent reported a 1999 non-egalitarian attitude and the woman did most of the housework/childcare in 2003). For both housework and childcare we label the two inconsistent cases by their attitudes in 1999: 3) egalitarian-inconsistent (those with egalitarian attitudes but non-egalitarian behavior) and 4) non-egalitarian-inconsistent (the reverse).⁵

As can be seen from Table 1, more than half the couples are “consistently egalitarian” vis-à-vis housework, while about 9% were “consistently non-egalitarian”; more respondents were classified as “egalitarian-inconsistent” than “non-egalitarian-inconsistent” (27% and 11%, respectively). Women were somewhat more likely to be classified as “egalitarian-inconsistent” while more male respondents reported their sharing of domestic tasks as egalitarian despite having expected a non-egalitarian division.

The pattern with regard to childcare is generally similar. More than 70% of those expecting to share childcare did so, and among those who had not expected such sharing, nearly 70 actually reported sharing childcare. Sharing is clearly an important characteristic of these couples, particularly for childcare, but nearly as much for housework.

We included several control variables in the analysis. Two concern the characteristics of the female member of the couple most related to childbearing, age, and employment status. Not surprisingly, the partners of male respondents were younger than they were, and hence younger than female respondents (who by design were the same age as the male respondents).

To capture time availability at the time of the 2003 survey we constructed a female work variable with the following three categories: 1) employed full-time, 2) student, and 3) "other", which includes those on parental leave, those employed part-time and

⁵ We were concerned that our behavioral measure of sharing might also consider how these couples were sharing paid work. We found that for our key finding, second births, the distinction between whether women were working full-time or less (nearly all men were working full-time) made no difference in the results (the odds ratios in this case were .71 if sharing paid work and .70 if the woman were working less), perhaps as a result of the high proportions of Swedish women who work part-time in the period following a birth.

those unemployed.⁶ Roughly half of the women were employed full-time in 2003, declining with parity.

Among our other control variables, all except gender, breakup plans, and the measures of egalitarian attitudes and sharing housework/childcare are on the couple level. We calculated a ‘couple education’ measure, indicating the possible combinations of his and hers, approximately dichotomized in each case between those who had attained at least an upper secondary education (two years or more) and those who had attained less education: both high; his high, hers low; hers high, his low; and both low (the reference category). The other ‘couple’ variables are relationship status in 2003 (cohabiting, married), and child status in 2003 (parity and child age, which indicates the length of the potential birth interval).

Controlling for partnership breakups after the 2003 survey, we find, as would be expected, that ending the co-residential relationship has a strongly negative effect on subsequent childbearing (results available on request). However, actual breakups and restricting (further) childbearing can be seen as two alternative ways of responding to a less than satisfactory sharing (but otherwise positive) relationship. Hence, instead of restricting the analysis to those who did not experience a partnership breakup, which would have cut the sample substantially (as only respondents who participated in 2009 could be included), we retained all the available cases as of 2003 and constructed a variable measuring whether the respondent indicated any plans to end the relationship. Among the childless, nearly 25% reported that they had breakup plans (75.6% did not), but among those with two children this was barely 13%. The correlation between breakup plans in 2003 and actually having separated before 2009 was only moderate, so it seems that the “plans” measure is also capturing other qualities of the relationship, which, we argue, are likely to affect the desire to have (another) child with this partner.

4. Results

The results of our analyses of how our combined attitude-behavior measures affect the transition to first, second, and third births in Sweden are presented for each transition, for the total group of respondents, and separately by sex.

⁶ We realize that these categories are extremely heterogeneous, with potentially very different implications for parity progression. Each is quite small, however, and in none of the specifications we tried did we find any effects that differed either from each other or from the other categories.

4.1 Sharing housework

There is no effect of our housework attitude-behavior measure on the first birth transition (Table 2), except for a positive effect for egalitarian-inconsistent men that is significant at .10. Our regression tables provide relative odds, which have been transformed from the original regression coefficients, with indicators of various levels of significance. Untransformed coefficients and the full range of standard errors can be found in Appendix Tables 1 and 2.

Table 2: Effects of housework attitudes and behavior on the transition to first, second, and third births

Predictors	First births			Second births			Third births		
	All	Men	Women	All	Men	Women	All	Men	Women
Egalitarian attitude/behavior									
Consistently egalitarian	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Egalitarian-inconsistent	1.21	1.38 (*)	1.05	0.73 **	0.76	0.67 **	0.90	0.97	1.11
Consistently non-egalitarian	0.94	1.00	0.88	0.96	1.17	0.72	0.92	0.42	1.56
Non-egalitarian-inconsistent	1.07	1.42	0.87	0.74 (*)	0.96	0.58 *	1.35	1.39	1.15
Married	1.50 **	1.79 *	1.41 (*)	1.27 (*)	1.17	1.38 *	1.52	1.77	1.51
Partners' education 2003									
Both high	1.31 (*)	1.23	1.32	1.30 (*)	1.42	1.22	3.17 ***	1.71	4.85 ***
Man high, woman low	1.23	1.58	1.09	1.38 (*)	1.29	1.52 (*)	1.45	0.38	1.84
Woman high, man low	1.39 *	1.58 *	1.27	1.08	1.12	1.11	1.97 (*)	0.94	2.85 (*)
Both low	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work status of female partner									
Full-time employment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Student	0.49 ***	0.35 **	0.64 **	0.68 (*)	0.68	0.66	0.77	0.73	0.98
Other	0.73 *	0.94	0.63 *	0.93	0.89	0.99	1.39	2.02	1.28
No break-up plans, R	1.44 **	1.78 **	1.30	1.55 **	1.69 *	1.39 (*)	2.17 (*)	2.50	2.37
Log likelihood	-1984	-789	-1084	-1725	-668	-966	-372	-122	-209
Number of events	415	178	237	432	178	254	77	30	47
N	701	306	395	644	267	377	481	194	287

Models also include controls for the woman's age, child status 2003, and gender (for the 'All' regression)

(*) 0.10 * 0.05 ** 0.01 *** 0.001

For the second birth, however, there are effects that signal that this is a key parity transition. The dominant effects are for inconsistency among women, which slows this transition, whether they had expected an egalitarian division of labor but not experienced it or had expected to have the main responsibilities for home and children but found themselves sharing these responsibilities. There were no significant effects on second births for men, although the pattern of odds was similar, if much weaker. The pattern for the third birth transition shows no significant effects either for women or men.

Thus it seems that for women it is those with inconsistency between their attitudes and their home situation who are less likely to achieve replacement fertility. As Table 1 shows that, by far, those most likely to confront an inconsistent situation are those with egalitarian ideals in a household without equal sharing (27% vs. 11% overall and 30% vs. 9% for women), it is clear that having a partner who does not share housework is depressing Swedish fertility, although it is only inconsistencies between the couple's behavior and the woman's expectations that make a difference. Evidently, this is less of an issue for men, who are only 50% more likely to experience this type of inconsistency (22% vs. 15%), while women's difference is more than 300%. It may be that women's preferences about having additional children dominate those of men; unfortunately, we have no measure of partners' attitudes.

We tested the gender differences among those in the non-egalitarian/inconsistent group, and found that for both second and third births the differences were significant ($p < .10$, results not shown); when we pooled parities, the differences were significant at more conventional levels. For men, having held gender-differentiated attitudes towards housework but then finding themselves sharing the task equally apparently makes them more rather than less likely to continue to father additional children, without such an effect for women. This suggests that sharing the home is pro-family even for originally traditionally oriented young men.

The basic pattern of delay among those who did not experience as much sharing as expected is driven primarily by those who would ordinarily be having a second child following a 'normal' birth interval (those whose first child was 1-3 years in 2003). Among those at risk of having a child earlier or later, the pattern does not hold (results not presented). Interacting the combined attitude-behavior measure with age of the youngest child in 2003 gave a significantly better model fit for second births if the first child was 12-35 months at the time of the 2003 survey, although only for women and for the total. Further, in a model including only women whose first child was 12-35 months in 2003, it emerges that it is consistently egalitarian women who are the most likely to have the normative second birth. They are twice as likely as consistently non-egalitarian women to reach replacement level fertility.

We present the results for the control variables (except for women's age, child's age, and gender), which basically show the expected patterns. The controls we present characterize either the couple (whether they are married and what their educational pattern is) or the female member of the couple (activity status). Although these respondents are not in the same partnerships, it is reassuring that for both couple-level variables the results are similar for male and female respondents. Respondents who are married are more likely to have a(nother) child. This suggests that although childbearing in Sweden is common in cohabiting unions, at least some cohabitators are delaying (continued) childbearing until they marry. Unfortunately, because our measure of union status is not time varying, we cannot confirm this interpretation, although the result is consistent with that of Holland (2013).

Couples in which both have relatively low educational levels begin childbearing most slowly, while couples with highly educated women, whether their partners also have a high level of education or not, begin childbearing faster than other couples, although the results are significant for male but not female respondents. Couples in which the man has more education than the woman are intermediate. Low couple education continues to have a delaying effect on the transition to second and third births, and high couple education continues to have an accelerating effect on these two transitions, especially for a third birth. This pattern of a positive relationship between education and childbearing is even more extreme than that found in Norway among more recent cohorts (Kravdal and Rindfuss 2008), a study that documented a partial reversal of the negative relationship among older cohorts (born in the 1940s), although some part of our result may reflect less educated couples being more likely to have children prior to our window of observation.

Women who are students or "other" (and men whose partners are students) before beginning childbearing make the transition to the first birth significantly less rapidly. This suggests that couples try to wait until the woman has a reasonable income to be able to claim the parental leave income benefit, whose level is based on their pre-birth incomes (currently 80%). Women who are students also significantly delay the transition to a second birth.

Having no expectation about ending the union as of the 2003 survey always speeds respondents' transitions to a first/next birth. Women confident in the stability of their union make the transition both to a first and second birth significantly more rapidly than those less confident, which is also the case for first births among men.

Finally, as we mentioned when we defined this variable, because the question on the ideal situation for a family with preschool children also referred to the actual paid work situation of the couple, we constructed an alternative variable linking attitudes and behavior that also took into account the couples' actual paid work situation in 2003. We found that for women with egalitarian attitudes it is the division of housework in 2003

that is decisive for the transition to a second birth, not whether the couple has an egalitarian or non-egalitarian paid work situation at that time. Thus it seems that our combined attitude-behavior variable does in fact capture the aspect of how the couple organizes their division of paid and unpaid work that is the most crucial for their decisions about (continued) childbearing, namely how the couples share household chores.

4.2 Sharing childcare

We constructed a parallel variable that substitutes childcare for housework, and examined its impact on the transition to second and third births for those couples that already had a child in 2003 (see Appendix Table 2). These results are quite similar to those we obtained in the analysis of sharing housework, although considerably attenuated (none is significant). This suggests that it is not men's greater experience of participation in childcare that leads to their having larger families, but perhaps it reflects their partner's greater willingness to have another child as a result of having a partner who shares housework, as was shown in the previous analysis. This may reflect the general finding that childcare is considered less onerous and more enjoyable than housework (Sullivan 1996) and the greater emphasis in Sweden on men's involvement in childcare than in housework.

5. Discussion

In this paper we analyzed the effects of domestic gender equality on fertility in Sweden. We measured attitudes held prior to the beginning of childbearing and sharing behavior normally after the first child was born, distinguishing sharing household tasks from childcare. We considered each parity separately, i.e. first, second and third, which no previous study has done. We find that it is inconsistency between 'ideals' and 'reality' that significantly delays continued childbearing, that the major impact of inconsistency is on second births, particularly for women, with no impact on the timing of first or later births, and that the key inconsistency was over sharing household tasks rather than sharing childcare.

Women who had expected an egalitarian balance between work and family life but found themselves doing most of the housework delayed (perhaps indefinitely) having a second child more than those whose expectations matched their experiences. More surprisingly, the relatively few women who had expected to be primarily responsible

for home and family but found themselves sharing that responsibility equally also delayed further childbearing, a pattern we had expected for men, but did not find.

These results contribute to studies of the effects of the gender revolution on fertility. Sweden is a country far enough along towards gender equality that nearly all women make significant contributions to the financial support of their families, if not fully commensurate with those of men, and men increasingly contribute to the care of home and children. Studies of the gender-fertility relationship have been all over the map, with disparate findings depending on whether the context being studied is one in which women provide nearly all care for the home and family but are beginning to make contributions to financial support, or one in which women experience substantial support in meeting ‘their’ responsibilities, at least from the state and perhaps from employers. Context, at least in terms of the two halves of the gender revolution (Goldscheider 2012), which might be thought of as first ‘anti-family’ and later ‘pro-family’, surely matters.

Other strengths of this analysis include 1) the systematic use of longitudinal data, so that information on sharing attitudes and behavior, collected prospectively, can be examined in terms of fertility measured even later; 2) the careful distinguishing of attitudes and behavior and their consistency, 3) the separation of the analysis by parity, and 4) the separation of sharing housework from childcare. The use of Sweden is a strength, because although it is in the forefront of the gender revolution, it still has many couples who expect to follow an ‘egalitarian’ division of labor but who encounter non-egalitarian partners, providing sufficient heterogeneity to be able to examine this question.

In addition to its focus on a single country, the analysis has several weaknesses. Many of these young adults still have additional childbearing years to continue their family-building, and those who begin quite late might differ from those studied here. The sample is small, the attitude measures are not time-varying, and the measures of sharing are simple, not using detailed time diaries (Hofferth 2001), although such measures are usually highly correlated with those obtained with time diaries (Kan 2008). Measurement is not continuous, so that intermediate changes in attitudes and behavior cannot be tracked; some respondents might actually be having their next child with a different partner. Moreover, there is no information on attitudes of the partner. The ideal model would include the attitudes of both partners, measured before children are born, with measures of actual sharing following each birth, to best understand parity transitions.

Clearly, this analysis needs replicating in different contexts. It may be that Sweden’s extensive state policies that allow workers to care for families (Myrdal 1968; Oláh and Bernhardt 2008), and that also press employers to implement them by allowing parental part- and full-time leave and guaranteeing jobs on return (Kaufman

and Bernhardt 2012), make family support less essential. Perhaps support from the partner has its greatest impact in the absence of other supports, as in Italy and the United States (Torr and Short 2004; Mills et al. 2008). Thus, one might expect an even greater impact of discrepancies between ‘ideals’ and ‘reality’ in less egalitarian countries. Geist and Cohen (2011), using ISSP data for 13 countries in 1994 and 2002, found that more gender-traditional countries moved more rapidly toward egalitarianism over this time period than more gender-egalitarian countries.

The empirical results from our study indicate, however, that it is essential to take into account whether the sharing of household tasks and childcare is in accordance with prior expectations. If there is no discrepancy between ‘ideals’ and ‘reality’, if an egalitarian household situation is not expected, lack of support from a partner may not have a fertility-depressing effect. It is therefore difficult to say whether the absence of domestic gender equality can be expected to have the same effect in other areas where fertility is very low (such as Southern Europe and East Asia) but are generally characterized by non-egalitarian gender attitudes.

If the gender revolution evolves in these countries, the crucial issue for fertility might be how much delay there is between the development of gender-egalitarian attitudes (particularly among women) and an egalitarian division of labor. This underscores the importance of studying the relationship between domestic gender equality and actual childbearing, especially after the first child is born. Our paper is an important first step in attempting to elucidate the ways in which the ongoing gender revolution is affecting the family in Sweden, and perhaps elsewhere as well.

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Appendix

Table A-1: Effects of housework attitudes and behavior on the transition to first, second, and third births

Predictors	First births						Second births						Third births						
	All		Men		Women		All		Men		Women		All		Men		Women		
	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	
Egalitarian attitude/behavior																			
Consistently egalitarian	ref.		ref.		ref.		ref.		ref.		ref.		ref.		ref.		ref.		
Egalitarian-inconsistent	0.189	0.122	0.322	0.192	0.048	0.162	-0.319	0.121	-0.278	0.202	-0.406	0.154	-0.105	0.298	-0.035	0.526	0.100	0.381	
Consistently non-egalitarian	-0.057	0.211	0.004	0.286	-0.126	0.324	-0.040	0.184	0.159	0.262	-0.331	0.274	-0.081	0.385	-0.858	0.700	0.443	0.498	
Non-egalitarian-inconsistent	0.068	0.168	0.353	0.234	-0.138	0.252	-0.301	0.164	-0.038	0.233	-0.549	0.239	0.298	0.376	0.328	0.570	0.137	0.584	
Married	0.406	0.157	0.581	0.264	0.344	0.198	0.240	0.123	0.160	0.203	0.322	0.161	0.417	0.260	0.571	0.449	0.415	0.332	
Partners' education 2003																			
Both high	0.272	0.147	0.207	0.230	0.274	0.194	0.262	0.143	0.348	0.238	0.202	0.181	1.153	0.322	0.537	0.559	1.578	0.423	
His high, hers low	0.206	0.186	0.456	0.314	0.087	0.236	0.323	0.183	0.255	0.338	0.416	0.224	0.370	0.412	-0.956	1.099	0.610	0.493	
Hers high, his low	0.331	0.138	0.458	0.202	0.241	0.194	0.076	0.141	0.110	0.213	0.103	0.197	0.680	0.382	-0.057	0.551	1.049	0.554	
Both low		ref.		ref.		ref.		ref.		ref.		ref.		ref.		ref.		ref.	
Work status of female partner																			
Full-time employment		ref.		ref.		ref.		ref.		ref.		ref.		ref.		ref.		ref.	
Student	-0.705	0.155	-1.037	0.249	-0.440	0.199	-0.390	0.233	-0.380	0.371	-0.422	0.304	-0.264	0.759	-0.314	1.115	-0.018	1.053	
Other	-0.314	0.141	-0.057	0.205	-0.470	0.200	-0.072	0.135	-0.118	0.221	-0.006	0.174	0.331	0.273	0.703	0.484	0.245	0.348	
No break-up plans, R	0.363	0.126	0.577	0.202	0.265	0.162	0.436	0.140	0.527	0.231	0.330	0.179	0.774	0.437	0.918	0.659	0.863	0.613	
Log likelihood	-1984	-789	-1084	-1725					-688		-966		-372		-122		-209		
N	701	306	395	644	267	377	481	194	287										

Models also include controls for the woman's age, childstatus 2003, and gender (for the 'All' regression)
(*) 0.10 * 0.05 ** 0.01 *** 0.001

Table 2: Effects of housework attitudes and child care behavior on the transition to second and third births

Predictors	All		Second births		Women		All		Third births		Women	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE
Sharing attitudes/behavior												
Consistently egalitarian	ref.		ref.		ref.		ref.		ref.		ref.	
Egalitarian-inconsistent	-0.165	0.122	-0.299	0.221	-0.115	0.149	0.072	0.293	-0.350	0.553	0.371	0.368
Consistently nonegalitarian	0.050	0.198	0.398	0.274	-0.414	0.305	-0.200	0.468	-0.660	0.728	0.112	0.665
Nonegalitarian-inconsistent	-0.195	0.152	-0.126	0.225	-0.239	0.214	0.372	0.333	-0.163	0.563	0.558	0.436
Married	0.271	0.122	0.129	0.201	0.387	0.159	0.419	0.261	0.495	0.454	0.436	0.340
Partners' education 2003												
Both high	0.298	0.142	0.372	0.232	0.238	0.180	1.144	0.319	0.585	0.574	1.612	0.417
Man high, woman low	0.359	0.183	0.242	0.338	0.481	0.223	0.346	0.408	-0.748	1.088	0.690	0.469
Woman high, man low	0.143	0.141	0.221	0.215	0.164	0.196	0.634	0.383	0.085	0.554	1.071	0.550
Both low	ref.		ref.		ref.		ref.		ref.		ref.	
Work status of female partner												
Full-time employment	ref.		ref.		ref.		ref.		ref.		ref.	
Student	-0.386	0.233	-0.312	0.370	-0.390	0.302	-0.229	0.761	-0.206	1.162	-0.009	1.047
Other	-0.075	0.135	-0.092	0.222	-0.007	0.174	0.284	0.275	0.787	0.509	0.184	0.342
No break-up plans, R	0.417	0.140	0.500	0.232	0.293	0.179	0.720	0.434	0.911	0.689	0.887	0.607
Log likelihood	-1728		-667		-969		-372		-122		-208	
Number of events	432		178		254		77		30		47	
N	644		267		377		194		287			

Models also include controls for the woman's age, childstatus 2003, and gender (for the 'All' regression)
(*) 0.10 * 0.05 ** 0.01 *** 0.001

