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Research Article

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Abstract

The development of modern family patterns of the past decades has been accompanied by substantial changes in social norms, values and gender relations. There is theoretical support for the assumption that the persistence of low fertility levels across Europe is likely to be linked to the incomplete gender revolution, more specifically to the lack of, or only limited changes in the male gender role as opposed to the women's role. In order to have a deeper understanding of the development of fertility, we aim to shed more light on the impact of men's role orientation on their fertility intentions in this study. Our analyses include men aged 20-44 years in eight countries: Austria, Estonia, East Germany, West Germany, Italy, Lithuania, the Netherlands and Poland. The data are extracted from the Population Policy Acceptance Study of the early 2000s. Examining within-country differences, we find that men with egalitarian attitudes seem to have higher fertility aspirations than their traditional counterparts in contemporary Europe. This is supported by both the descriptive and the multivariate analyses. The picture is somewhat less conclusive though when we focus on country-rankings by intended family size and by the prevalence of egalitarian versus traditional attitudes.

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1. Introduction

Since the onset of the Second Demographic Transition in the 1960s, family patterns have changed substantially in Europe along with the norms and attitudes regarding family life and childbearing (Frejka et al. 2008). High marriage and birth rates at relatively young ages, as well as low divorce rates and rareness of non-traditional family forms belong to the past. The present, the early 21st century shows a different picture. Fertility rates are below the replacement level, having declined in a number of countries to previously unimaginable lowest-low levels (Kohler, Billari, Ortega 2002). Postponement of, or even refrainment from parenthood, and the growing proportion of out-of-wedlock births are another important features of childbearing trends (Frejka, Sobotka 2008). Less committing forms of couple relationships, such as cohabitation and LAT-relationships, have become more and more common in the past decades. The prevalence of marriages decreased and they are formed at later ages, while divorce and separation rates, even among couples with children, increased dramatically. As a result, an ever-growing proportion of children have experiences of living with a single parent, usually the mother, or with a stepparent (Sobotka, Toulemon 2008).

The development of modern family patterns has been accompanied by dramatic changes in gender relations, also known as the gender revolution (Goldscheider 2000). Women entered the public sphere, approaching participation rates of men in education, even at higher levels, and in the labour market. As their horizons expanded anticipating a long and continuous work life, and their bargaining position within the family improved, the role of the economic provider has become part of women's identity (Goldin 2006). At the same time, there have been few signs from men's side to acquire a share of family responsibilities, i.e. childcare and domestic tasks that would equal that of women (Bernhardt 2004; Neuwirth, Wernhart 2008). Thus, gender relations within the family have changed very little (Blossfeld, Drobnic 2001). This has led to incoherence in the levels of gender equity in what McDonald (2000) calls the individual-oriented institutions of the public sphere and family-oriented institutions of the private sphere. As a result, fertility declined and has remained at the present low levels.

Substantial changes in norms and values have also facilitated the spread of new family patterns. Individualisation of the life course has opened the way for low fertility. As self-fulfilment and self-realisation have been increasingly emphasised, parenthood has become one of many possible but competing choices, which may be passed upon without any sanctions (van de Kaa 1987, 2004). Yet, the aim of self-realisation also allows for the increase of fertility levels, if the members of couples perceive parenthood to be compatible with their other goals and aspirations in the particular social context. These aspirations and the sense of their (in)compatibility with parental obligations are

closely linked to gender relations. Gender role attitudes, that also shape the sharing of tasks in the private sphere, are in turn likely to influence both individual aspirations and gender relations (Kaufman 2000; Bernhardt et. al 2008).

Most research on modern demographic trends, especially fertility, and linked to that, on changes in norms and gender relations, has focused on women. However, if the development of fertility is to be understood, we need to study men as well, and not necessarily as member of a couple given modern partnership patterns as well as possible gender differences in parental and other aspirations (Greene, Biddlecom 2000; Neyer 2000). Aiming to predict reproductive trends better, fertility intentions are an important aspect to look at (Hagewen, Morgan 2005). There are differences among women and men in attaining such intentions as certain structural constraints weigh more heavily on women (Quesnel-Vallée, Morgan 2003). At the same time, studies have shown that men's childbearing desires and intentions influence births in couples with equal force to that of women's desires and intentions (Thomson et al. 1990; Thomson 1997; Thomson, Hoem 1998). As a recent analysis of data from the Eurobarometer 2006 demonstrated a strong positive relationship between ideal family size and egalitarian attitudes among young women in 25 European Union countries (Testa 2007), it is reasonable to assume that men's fertility intentions and gender role attitudes are also associated.

Thus, in the present article we aim to study the impact of men's views on the male role on their childbearing desires in Europe at the dawn of the 21st century, relying on a comparative research design. In the followings, we present the theoretical framework, and thereafter the empirical data and our analytical approach. The next section focuses on the results of the descriptive and the multivariate analyses. A discussion and concluding remarks round up the study.

2. Theoretical perspectives

A number of theories address the relationship between gender roles and fertility behaviour, and their logics may equally apply to childbearing intentions. First of all, much attention has been paid to women's new role in the New-Home-Economics framework, frequently referred to in studies on fertility. A consequence of the new female role is women's increasing economic independence, which has been seen as a main force of raising the cost of childbearing and thereby reducing fertility to its current low levels (Becker 1991). It is true, that the opportunity cost of women's time spent on childcare was negligible in the traditional male-breadwinner model, which has been based on the gendered division of labour in the family, where men were the sole earners. This has changed as women increasingly sustained their labour-market

engagement even after marriage and the birth of a first child. Along with their rising educational level and thereby improved earning power, the cost of women's time spent on other activities but paid work has multiplied in the past decades (Joshi 1998).

However, as pointed out by Oppenheimer (1994), overlapping gender roles can also strengthen a family. In fact, it is role specialization that makes a family vulnerable, if the abilities of the adult partners to provide their particular contribution, i.e. earnings or care, diminish. Hence, low fertility levels are not an inevitable consequence of changes in the female role, but rather of the incomplete gender revolution, as suggested by McDonald (2000). According to his gender equity theory, fertility is low because the equal opportunities in education and employment for women and men have not been met by similarly equal rights and obligations for them within the family. Indeed, women continue to carry all, or nearly all, the burden of domestic responsibilities (childcare and household work). This, in turn, constrains their opportunities in the public sphere of life, as compared to men (Bernhardt 2004). To limit fertility is an option for the individual women to follow. In this way, they can minimize the negative effects of the lack of gender equality in the private sphere on their chances at the public domain. This reasoning also indicates that if men increase their engagement in family responsibilities to comparable levels with women's, fertility is likely to increase. Thus, a change in the male role seems to be the missing piece in the fertility puzzle in the developed world, as women are obviously unlikely to give up their new roles and restrict their aspirations to the home (Blossfeld 1995; Blossfeld, Drobnic 2001). Also, the accomplishment of the gender revolution needs to be accompanied by a policy environment that facilitates the reconciliation of paid work and parenthood for both women and men, to keep fertility close to the replacement level (Hobson, Oláh 2006; Hoem 2008).

What is the reason then of men being so slow to adopt new roles beyond that of the provider? According to the "doing gender"-approach, the allocation of women's and men's time to employment and domestic tasks is determined by the structure of work imperatives and the structure of normative expectations attached to particular tasks as gendered (Fenstermaker, West 2002). To engage in family responsibilities is considered as part of the feminine "nature", whereas not to engage in them has been seen as part of the male identity. The gender division of work is determined by the gender system, constituted by common beliefs, norms and practices that define the meaning of being a man or a woman, as well as the rights and obligations of males and females (Mason 2001). Thus, the gender system is a social construction that will change only through long-term persistent accumulation of everyday challenges to it (Ridgeway, Correll 2004). Men, who increase their participation in family tasks to approach the share of women, challenge both the male and the female identities as defined by the gender system in a society. Such aspirations will be influenced then by

the support, or lack of it, men receive from their immediate family members and the community (Goldscheider 2000).

It is easy to understand that men's engagement in family responsibilities is likely to increase their partners' childbearing desires. But what about their own fertility intentions, how will those be affected by the extension of men's tasks? Taking men's views on the 'proper' male role as a signal of their willingness to acquire responsibilities also in the private sphere, one may argue that having children is important for traditional men in as much as they confirm the male identity, and the tasks of active parenting are carried out by their wives, in line with the "doing gender" approach. For men with egalitarian views, the costs of children should be higher than for their traditional counterparts, as they will invest more time and energy in the care of their offsprings, which may reduce the number of children they desire. Yet, empirical evidence shows that egalitarian men are, in fact, less concerned with the costs of parenthood than traditional men. The main concern of the traditional group seems to be that children will limit their personal freedom, rather than the economic costs one could expect given their obligations as the sole or main earner in the family (Bernhardt, Goldscheider 2006). In line with this, the few empirical studies addressing men's gender role attitudes and childbearing desires in the developed world suggest that egalitarian men are more, rather than less likely to intend to have a(nother) child compared to men with traditional views (Kaufman 2000; Tazi-Preve et. al. 2004). Clearly, egalitarian men appreciate the joy of fatherhood more than the latter group, probably because they are more interested in "doing family", as Kaufman (2000) has put it, than in "doing gender". Being more active participants in their children's lives, they benefit from the relationship with them more directly than do traditional men, whose contacts with their offsprings are rather superficial. Also, traditional men may perceive children as "competitors" for their wives' attention. They may be therefore less interested to have more than a very limited number of children. In contrast, egalitarian men are pro-family, which can increase their intended fertility. And finally, it might also be that more egalitarian husbands are more inclined to share domestic chores.

The relationship between gender equity and childbearing however, does not necessarily follow a linear pattern. In a study on second births among dual-earner couples in the US, Torr and Short (2004) found that, at the individual level, the relationship between gender equity, as indicated by the division of housework, and fertility is U-shaped. "Modern" couples, who shared domestic tasks relatively equally, were the most likely to have another child. "Traditional" couples, where women did the bulk of the housework, also proceeded relatively quickly to a second birth. The probability to have a second child was lowest for the intermediate group, who might have to struggle most to balance work and family. In addition, a recent study on the link

between gender role attitudes and fertility among women in nine European countries also found some signs of non-linearity (Ruckdeschel 2008).

Based on these theoretical and empirical considerations, our main hypothesis in this study is that men with egalitarian views have higher fertility aspirations than men with more traditional male role orientation. We are somewhat uncertain though of how this relationship may be modified by societal gender systems, in which the ideal of gender equality has been incorporated in varying degrees, if at all, in different countries. By the same token, we are not certain of the (non-)linearity of the relationship between gender equity and childbearing intentions. We expect that our comparative research design will help us to illuminate the mechanisms at stake.

3. Data and analytical approach

3.1 Data

Our empirical analyses are based on data extracted from the Population Policy Acceptance Study (PPAS). This is a comparative research programme aimed at analyses of attitudes, opinions and practices on a broad range of population-related issues.[5] The Study addresses the perception of contemporary demographic trends, meaning of the family, advantages and disadvantages of having children, reconciliation of employment and parenthood, attitudes towards gender roles, the acceptance of various population policy measures and related topics. In addition, the programme aims to provide a knowledge base for constructing integrated population policies and to promote a dialogue between the general public, decision-makers and the research community.

In the frame of the programme, quantitative surveys of national populations were carried out in 14 European countries — Austria, Belgium (Flanders), Cyprus, the Czech Republic, Estonia, Finland, Germany, Hungary, Italy, Lithuania, the Netherlands, Poland, Romania and Slovenia — in 2000-2003, based on a common core questionnaire. The standardised microdata were later merged into the International Population Policy Acceptance Survey (IPPAS) database, suitable for comparative analyses. For all participant countries, the samples covered men and women in adult age groups. The basic characteristics of each national survey are reported in the Appendix (see Table I).

[5] The predecessor of PPAS is the PPA1, a study on population policy acceptance in the early 1990s (Moors, Palomba 1995, 1998). Compared to its follow-up, PPA1 was thematically more restricted and covered only seven countries.

With support from the European Commission under the Fifth Framework Programme, the partner institutes from participant countries formed a consortium, coordinated by the Federal Institute for Population Research in Germany. [6] The analyses produced by the members of the consortium have been disseminated in a number of articles, working papers and conference papers. The main results have been published recently in a monograph edited by Höhn, Avramov and Kotowska (2008) in the series of *European Population Studies.* The volume provides a detailed account of the methodology of the programme.

3.2 Main variables used in the analysis and statistical methods

As mentioned, our empirical analysis on the relationship between the views on the male role and men's fertility intentions is based on the IPPAS data. The variables we use are derived from several modules of the database.

Fertility intentions constitute our dependent variable, following a scheme, which has become rather common in demographically oriented surveys (Bongaarts 1990; van Peer 2002). In the PPA survey, respondents (with the exception of women aged 50 or over) were asked "Do you intend to have a(nother) child in the future?" (CF1). Alongside definite answers 'yes' and 'no', the questionnaire included a separate category of 'don't know/uncertain'.[7] Based on the results of an exploratory analysis, we decided to merge the latter category with the negative intentions. In case of a positive answer (i.e. 'yes'), respondents were asked about the number of (additional) children they expect to have (CF1a). Based on these two items, 'desired family size'[8] can be computed by adding the 'number of children expected (additionally)' to the 'achieved parity'. In the following sections, both the intent for at least one additional child and the total number of children expected are used in the role of dependent variable.

For the main independent variable, we rely on information from the gender module, which includes specialised batteries of questions about the attitudes towards sharing provider- as well as family roles between men and women. Several items of the module have been repeatedly used in other social surveys (e.g. World/European Value

[6] The DIALOG project 2002-2005 ("Population Policy Acceptance Study - The Viewpoint of Citizens and Policy Actors Regarding the Management" of Population Related Change", no.HPSE-CT-2002-00153). Further information on the project and its outputs is available at the website of the Federal Institute for Population Research (http://www.bib-demographie.de/ppa/main.htm).

[7] On average, 17.3 percent of male respondents aged 20-44 years were not certain of their intentions whether to have a(nother) child in the future. The proportion is somewhat higher among childless men and decreases towards higher parity, except in Estonia and Lithuania. For all countries included in the analysis, the distribution is presented in the Appendix (Table II).

[8] The measure is called also 'ultimately intended family size' (see Testa 2007).

Survey, International Social Survey Programme). A general discussion of the PPAS gender module and analysis of gender role attitudes based on it is available from Philipov (2005, 2008). For the purposes of the present study, the following three questionnaire items pertaining to the role of men and fatherhood were applied:

- G2c. It is not good if the man stays at home and cares for the children and the woman goes out to work.
- G2d. Family life often suffers because men concentrate too much on their work.
- G2e. For a man the job should be more important than the family.

These items represent different aspects of gender role attitudes with regard to men.[9] The first statement addresses the acceptance of the reversal of male and female roles compared to the traditional breadwinner-homemaker model. The second statement focuses on the awareness about the negative consequences of men's insufficient involvement in family life. The third item relates to gender ideology and compares the relative importance of work and family from men's perspective.

For each item, respondents were asked to express their acceptance or non-acceptance. The answers were recorded on the five-grade Likert scale, where 1 stands for a strong agreement and 5 corresponds to a strong disagreement with a statement. The statements, with the exception of G2d, were presented so that higher values represent a greater support to a more symmetrical sharing of income provision and family responsibilities, as opposed to gender roles characteristic of the breadwinner-homemaker model. It should be noted that these statements have a general, impersonal character. Thus, they are to a smaller extent influenced by the diversity of life situations, which allows for better comparability across population groups. Moreover, general attitudes are less likely to be biased, than are personal attitudes, towards social desirability (Turner, Martin 1984; Hakim 2005). The frequency distributions of the selected items are presented in the Appendix (see Table III).

In constructing an independent variable, we attempted to synthesise the above dimensions of the male role attitudes. In doing so, responses to the three questionnaire items (G2c-G2e) have been summarised into a composite index. The minimal score on the index is 3 points, which means that respondents have expressed their strong agreement with a separation of women's and men's roles in all statements.[10] The

[9] In the exploratory stage, we run analyses also for items pertaining to female role. The results are not reported here given the focus of the article on fathers.

[10] In order to allow for consistent aggregation of individual items into composite indices, the scale of G2d has been reversed. The values of Cronbach's alphas are for Austria 0.27, Estonia 0.16, East Germany 0.30, West Germany 0.30, Italy 0.42, Lithuania 0.07, the Netherlands 0.34, and Poland 0.09.

maximum score on the index accounts for 15 points, which represents complete disagreement with the traditional split of gender roles on all counts.

The analysis presented in the following sections draws on the PPAS data from eight countries — Austria, Estonia, East Germany, West Germany, Italy, Lithuania, the Netherlands, and Poland.[11] East and West Germany are treated as separate states given noticeable within-country variation if analysed together. We focus on men aged 20-44 years, whose childbearing decisions are of great importance for contemporary fertility levels in Europe. Given the set of countries and the age range, a working sample comprising 5,435 men was formed. In a preliminary analysis, we also experimented with a sub-sample of men currently in partnership but as this specification added nothing substantive to the results, these models are not presented here. The data used throughout the analyses are weighed to account for the sampling schemes applied in national surveys.

In the working sample, the male role index revealed a fairly symmetrical spread of attitudes that resembles normal distribution. In other words, the index captures a considerable amount of variation in the attitudes of men towards gender roles and fatherhood. Taking into account findings from other studies, discussed in our theory section (e.g. Torr and Short 2004; Ruckdeschel 2008), also a categorised version of the independent variable was developed, based on the cumulative agreement or disagreement with different role models.[12] On the one hand, the prevailing acceptance of a strict segregation between men's and women's roles was classified as *traditional* orientation. On the other hand, strong support to more symmetrical division of roles and greater involvement of men in the family was classified as *egalitarian* orientation. Respondents, who were neither strongly for the separation of men's and women's roles, nor strongly against it, were included in the residual category of *intermediate* orientation.

Table 1 presents the distribution of men aged 20-44 years by their role orientation. The data reveal noticeable differences between the countries included in the analysis. Not surprisingly, the pattern of cross-country variation indicates that traditional attitudes have a stronger hold in countries with persistent influence of Catholicism. Judging from the mean score of the index, the adherence to traditional views is the most prevalent among Lithuanian men, followed by Poles and Italians. In contrast, the

[11] Belgium and the Czech Republic did not implement gender module in their national surveys. Cyprus Finland and Slovenia did not implement the questionnaire items pertaining to male roles. The Romanian survey missed the number of already born children which prevented the calculation of desired fertility measures. Hungary was excluded due to frequent occurrence of missing data for the dependent variable among male respondents.

[12] The cut-off levels applied in defining the categories were the same for all countries. The respondents were classified as having egalitarian attitudes if they scored at least 12 points. If they scored 8 points or less, they were classified as having traditional views.

Netherlands and Austria rank highest with respect to egalitarian attitudes. In these countries, more than two fifths of men were classified as having views supportive to more symmetrical division of gender roles and greater involvement of men in family responsibilities. Estonia, East Germany and West Germany hold intermediate positions.

Table 1: Distribution of men (%) aged 20-44 years according to male role orientation

Country	Traditional	Intermediate	Egalitarian	Mean score
Austria	12.1	44.0	43.9	11.2
Estonia	6.7	58.4	34.9	11.0
East Germany	15.3	52.5	32.2	10.6
West Germany	12.1	50.3	37.6	10.8
Italy	24.8	47.3	27.9	10.4
Lithuania	16.9	69.1	14.0	9.9
The Netherlands	5.2	44.2	50.6	11.4
Poland	16.3	64.6	19.1	10.0

Source: IPPAS database

The reasons of this pattern will not be studied here. Instead, we turn our attention to our main topic, which is the association between these attitudes and fertility intentions. In the followings, we study the relationship first by descriptive methods, by comparing the desired number of children of men with traditional, intermediate and egalitarian views on gender roles. Thereafter, a series of multivariate logistic regression models are applied to examine the association between male role attitudes and the intention to have a(nother) child by controlling for the effects of other factors that are known to influence childbearing decisions (age, current parity, partnership status, educational attainment, labour market status). To reveal the influence of context-specific factors, such as the gender system, on the relationship between desired fertility and male role orientation, the analysis is country-specific throughout. The details of model specification are discussed in the sections that follow.

4. Results

4.1 Expected and achieved number of children: descriptive analysis

Looking at the differences in fertility levels associated with attitudes towards the male role among men aged 20-44 years, one should keep in mind that this age range includes

men at very different stages of their family career. Young men in their early twenties are usually still childless or have just entered parenthood, while older men in their late thirties and early forties are about to finish their reproductive career. Also, the timing of childbearing varies significantly across different sub-groups of the population as well as countries. For these reasons, the number of children born is a less suitable measure for comparison. Thus, the analysis draws on the concept of desired fertility that merges the number of children already born and the number of children expected. As the expected number of children is anchored to a specific life situation of an individual, it may be considered more realistic than the ideal family size, the latter reflecting a normative context in which fertility intentions are formed and expressed (Hagewen, Morgan 2005). However, numerous studies have documented a tendency of desired fertility often substantially exceeding actual fertility in post-transitional settings. On the micro-level, this discrepancy may be explained by unrealistic optimism at early stages of the life course, which gradually decreases towards older age (Noack, Østby 2002). On the macro-level, explanations have pointed to the postponement of childbearing (Bongaarts 2001), alternatively to the lagged adjustment of childbearing preferences to contemporary fertility levels (Goldstein et al. 2003).

Table 2 presents the average expected number of children for men aged 20-44 years for the eight PPAS countries included in the analysis. As expected, the number universally exceeds the levels documented by period fertility measures (Council of Europe 2006). In addition, the data reveal a noticeable variation across the countries. The level of desired fertility is highest for Estonia, followed by Lithuania and Poland, where the expected number of children (slightly) exceeds the replacement level. Turning to the other end of the scale, the results resemble the findings of Goldstein *et al*. (2003) based on Eurobarometer surveys as desired fertility appears to be lowest, i.e. 1.5-1.6 in German-speaking countries (Austria, East and West Germany). Italy and the Netherlands occupy an intermediate position with desired fertility slightly below replacement. The general profile of fertility intentions in the PPAS countries has been further analysed by van Peer and Rabusic (2008). Here, we address the variation according to the prevailing views on men's role.

The results presented in Table 2 generally support the hypothesis that, in contemporary Europe, the acceptance of more symmetrical gender roles and men's greater involvement in family life tends to be associated with higher levels of desired fertility. Starting with all parities combined, six countries out of eight display a pattern that fully meets this theoretical expectation. In Estonia, East and West Germany, Italy, Lithuania and Poland, men with egalitarian views desire the highest number of children, whereas those disfavouring men's greater involvement in family issues have the lowest fertility intentions. Unlike in other settings, the relationship between father role orientation and fertility is not completely linear in Austria and the Netherlands, as

intended fertility in the intermediate group slightly exceeds that of men with egalitarian role orientation. In any case, men with traditional views on fatherhood have the lowest number of children expected in all eight countries included in the analysis.

Regarding the scale of difference in the expected number of children, egalitarian men exceed their more traditional counterparts by at least 25 per cent in six countries out of eight. The difference according to male role orientation is most pronounced in Germany, particularly in its western part, where the number of children expected by egalitarian men is nearly two-thirds (57 per cent) higher than among their counterparts with traditional orientation. In contrast, male role attitudes seem to have relatively modest influence in Italy and Poland (15 and 7 per cent differences respectively). In Austria, Estonia, Lithuania and the Netherlands, the scale of differences ranges between 26 and 34 per cent.

From the methodological point of view, the concept of desired fertility has a shortcoming, as it combines behavioural outcomes (children already born) with intentions (children expected). For men aged 20-44 years in the PPAS countries, on average both components made an approximately equal contribution to the number of expected children. However, the second additive embeds uncertainty, and as noted earlier, the stated fertility intentions are only partially materialised in contemporary societies. Thus, the question may arise of whether the higher intentions declared by men who favour more active involvement in the family will be transformed into childbearing decisions, or remain aspirations with hardly noticeable differences in fertility outcomes between men with traditional versus egalitarian role orientation.

Parity-specific data presented in Table 2 indicate that in most of the countries included in the analysis, the differences according to role orientation are, indeed, more pronounced among childless men, with the exception of Estonia and Lithuania, where the scale of difference appears somewhat greater among men with at least one child. For childless men, particularly large differences can be observed for East Germany and the Netherlands, where men with egalitarian views desire twice the number of children expected by their counterparts with traditional attitudes.

Table 2: Expected number of children by male role orientation, men aged 20-44 years

Country	Total	Male role orientation		
		Traditional	Intermediate	Egalitarian
All parities				
Austria	1.60	1.29	1.66	1.62
Estonia	2.33	1.95	2.27	2.52
East Germany	1.50	1.20	1.47	1.70
West Germany	1.56	1.11	1.53	1.74
Italy	1.89	1.76	1.90	2.03
Lithuania	2.20	2.00	2.16	2.59
The Netherlands	1.92	1.42	1.96	1.90
Poland	2.19	2.13	2.17	2.28
Parity 0				
Austria	0.76	0.57	0.76	0.81
Estonia	2.12	1.88	1.91	2.42
East Germany	1.06	0.62	1.05	1.32
West Germany	1.08	0.79	1.05	1.28
Italy	1.75	1.62	1.73	1.95
Lithuania	1.85	1.88	1.79	2.15
The Netherlands	1.47	0.71	1.59	1.43
Poland	1.49	1.30	1.43	1.76
Parity 1+				
Austria	2.34	2.12	2.38	2.35
Estonia	2.52	2.00	2.53	2.65
East Germany	1.95	1.96	1.87	2.08
West Germany	2.21	1.93	2.32	2.16
Italy	2.11	2.00	2.16	2.12
Lithuania	2.36	2.03	2.35	2.81
The Netherlands	2.43	2.27	2.42	2.45
Poland	2.62	2.60	2.59	2.72

Source: IPPAS database

To elaborate our descriptive findings from another angle, Table 3 compares the number of children born and additionally expected by men aged 35-44 years with traditional, intermediate and egalitarian attitudes. Men in this age group are well advanced in their reproductive career, which reduces the influence of varying fertility timing and provides more conclusive evidence. Analysing the PPAS data, Philipov (2005, 2008) has demonstrated that egalitarian gender role attitudes are associated with higher educational attainment and hence a later entry into parenthood, which we take into account by focusing at this older age group.

Table 3: Number of children born and additionally expected, by male role orientation, for men aged 35-44 years

Country	Children born			Children additionally expected		
	Traditional	Intermediate	Egalitarian	Traditional	Intermediate	Egalitarian
Austria	1.37	1.72	1.87	0.12	0.27	0.29
Estonia	1.14	1.87	2.00	0.26	0.58	0.75
East Germany	1.12	1.27	1.13	0.27	0.19	0.52
West Germany	0.82	1.07	1.31	0.14	0.58	0.43
Italy	1.25	1.24	1.47	0.55	0.64	0.54
Lithuania	1.81	1.83	2.23	0.15	0.32	0.45
The Netherlands	1.06	1.52	1.33	0.30	0.46	0.53
Poland	1.85	2.07	2.26	0.41	0.40	0.37

Source: IPPAS database

Table 3 shows that a higher level of desired fertility among men favouring an active father role is definitely not limited to aspirations. On the contrary, as men in that age group had on average accomplished 70-85 per cent of their childbearing plans by the time of data collection, the considerable part of variation in desired fertility pertains to the number of children already born. In seven countries out of eight, men with traditional orientation show the lowest fertility among the three groups compared. The only exception is Italy, where the intermediate group has a marginally lower number of children. On the other hand, men with egalitarian views have the highest number of children already born in all countries except for East Germany and the Netherlands, where the intermediate group shows the highest fertility. Comparing men with traditional and egalitarian role orientations, we see that the latter group fathered a higher number of children in all countries in the analysis. This suggests that the differences observed in fertility intentions will be transformed into fertility outcomes.

To sum up the descriptive results, the acceptance of more symmetrical gender roles and men's greater involvement in the family tends to be associated with higher fertility, both in terms of intentions and behavioural outcomes. Although there are minor deviations from the described general pattern, and the strength of relationship varies across countries and subgroups of men, the association seems to be nearly universal, applying to all major regions of contemporary Europe, independently of gender systems and state support to working parents. Before the implications of these findings can be discussed, we study the relationship also in a multivariate framework.

4.2 Fertility intentions and men's views of fatherhood: a multivariate analysis

Before drawing conclusions based on the bivariate association between men's role orientations and desired fertility, it is important to check whether the relationship could be spurious. The effects of attitudes may be overstated in cross-tabulations, for example, because external factors simultaneously influence both attitudes and fertility. To address the issue, we estimate a series of binomial logistic regression models.

Similarly to other studies on desired fertility, intention to have a(nother) child is our dependent variable, set to 1 if the respondent expected to have at least one (additional) child, and 0 if the opposite was the case. As mentioned above, uncertainty of childbearing plans is merged with negative intentions (coded 0), following a rather conservative approach in the operationalisation of fertility intentions.

The male role index, discussed in the previous sections, is our main independent variable. It is operationalised in two ways, used alternately in the models. The first specification is based on the metric score of the index. In the alternative specification, a categorical covariate with three levels (traditional, intermediate and egalitarian) is used. Our control variables consist of a set of demographic and socio-economic characteristics, which are known to influence childbearing plans, such as age, current parity, partnership status, educational attainment and labour market status. As in the descriptive section, our working sample is limited to men aged 20-44 years (see Table IV in the Appendix for the distribution of respondents over the dependent, independent and control variables for all countries included in the analysis).

The modelling strategy applied is straightforward. For both specifications of the key independent variable, i.e. the male role index, two sets of main effects models are fitted. The first set produces non-adjusted estimates for the effects of the independent variable, whereas estimates adjusted for the effects of control variables are obtained via the second set of models. To reveal the contextual variation in the relationship, the models are fitted separately for each country. The model estimates are presented in Table 4, which displays the main results from 32 country-specific models. In the table,

the modelling results are presented in terms of odds ratios with significance levels associated with them.

In general, the multivariate analysis confirms the validity of findings obtained by descriptive methods. The model estimates reveal that, in the majority of countries, egalitarian attitudes tend to be associated with higher fertility intentions. After controlling for the influence of demographic and socio-economic variables, the overall effect, captured by the metric score of the index as independent variable, is statistically significant in five countries — Austria, East Germany, Italy, Lithuania and Poland. In the other countries, the effects associated with the score of the index do not reach the level of statistical significance, although the gradients remain marginally positive.

Table 4: Intention to have a(nother) child, men aged 20-44 years. Estimates of logistic regression models (odds ratios)

Country	Category	Non-adjusted	Adjusted
Austria	*Metric score*	1.12***	1.17***
	Egalitarian	2.22***	3.21***
	Intermediate	1.82**	2.58***
Estonia	*Metric score*	1.13*	1.08
	Egalitarian	1.56	0.98
	Intermediate	0.92	0.52
East Germany	*Metric score*	1.17***	1.22***
	Egalitarian	2.97***	4.40***
	Intermediate	2.08***	2.64***
West Germany	*Metric score*	1.03	1.05
	Egalitarian	1.40	1.69
	Intermediate	1.39	1.55
Italy	*Metric score*	1.02	1.09***
	Egalitarian	1.19	1.83***
	Intermediate	1.09	1.31
Lithuania	*Metric score*	1.20**	1.41***
	Egalitarian	2.80**	8.27***
	Intermediate	2.43***	4.50***
The Netherlands	*Metric score*	1.00	1.03
	Egalitarian	4.39**	4.64**
	Intermediate	3.79**	2.66
Poland	*Metric score*	1.24***	1.21***
	Egalitarian	3.63**	3.26**
	Intermediate	1.71**	1.58*

*** p<0.01, ** p<0.05, * p<0.1, reference category 'traditional' is not shown in the table.

In a parallel set of models, we use a categorical specification of the main independent variable with three levels: traditional, intermediate and egalitarian (for which the cut-off points have been discussed earlier in the article). The estimates based on these models are also presented in Table 4. From the analytical point of view, this specification allows us to highlight some further details in the general pattern with respect to the shape of the relationship between men's role orientation and fertility intentions. The models reveal that the metric score failed to capture a statistically significant effect of male role attitudes in the Netherlands, due to the prevailing non-linearity of the relationship. With our categorised independent variable, we see that egalitarian views make a statistically significant difference in the odds of having a(nother) child also in the Netherlands.

Among the remaining countries, West Germany also displays the hypothesised effect but it fails to reach the level of statistical significance. Regarding Estonia, the positive and statistically significant effect displayed for the metric score of the index in the non-adjusted model disappears in the adjusted model. A closer examination reveals that this occurs mainly due to a strong correlation between the dependent and independent variables, and the age of the respondent.

The main conclusion we can draw from the comparison of adjusted and non-adjusted models is that the relationship between men's role orientation and fertility intentions is to a significant extent independent of age, parity, partnership status, educational attainment and labour market status.[13] Among the 16 pairs of models fitted, the effect ceased to be statistically significant only in one case when the controls were introduced. The persistence of the effects after the adjustment for control variables indicates that attitudes towards the male role have direct effects and that the association between attitudes and fertility intentions is not spurious due to a common association with the exogenous control variable.

To sum up the findings with respect to contextual variation, the results of the multivariate modelling confirm that role orientation makes a noticeable difference in countries with persistent Catholic influence (Poland, Lithuania and Italy). In fact, after adjusting for the effects of control variables, Lithuanian men demonstrate the strongest effect of male role attitudes on fertility intentions. The relationship appears quite pronounced also in German-speaking countries. Within this group, the multivariate models revealed the strongest and statistically significant association in East Germany, followed by Austria. For West Germany, however, we find more modest effects, that do not reach the level of statistical significance whatever the model specification. This may be explained partly by the non-linearity of the relationship between men's role orientation and the number of children additionally expected (see 'parity 1+' in Table

[13] The model estimates for control variables are not discussed here, but are presented in Table V in the Appendix.

2) given that our models focus specifically on the latter component of desired fertility. Non-linearity of the relationship reduces the consistency of modelling results also for the Netherlands, as noted earlier, but the influence of egalitarian role orientation is similar to that in the countries discussed above. The pattern for Estonia is, however, less clear in the multivariate analysis.

5. Discussion and concluding remarks

In this paper, we addressed the relationship between men's views on the male role and their childbearing desires in contemporary Europe. Eight countries from all the major regions of Europe except for Scandinavia (given data limitations), where the societal gender system is the most egalitarian in the world, were included in the analysis. These eight societies are clearly different in respect to the prevalence of egalitarian versus traditional role orientation among men at ages 20-44 years, whose attitudes and fertility intentions we studied. The three countries with persistent influence of Catholicism, Lithuania, Poland and Italy have the smallest proportion of men with egalitarian views. The Netherlands with only 5 percent of men advocating traditional roles, along with Austria, where twice as many have such orientation, rank highest regarding egalitarian attitudes. In contrast, about one-third of the men in East- and West Germany and in Estonia support such views.

First, we examined cross-country differences by the expected number of children, which is the sum of children already born and those planned (additionally). The former state socialist countries, Estonia, Lithuania and Poland show expectations slightly above the replacement level echoing birth rates achieved there up to the recent past, i.e. the early 1990s, unlike in other regions of Europe. The German-speaking countries, Austria, East and West Germany demonstrate the lowest expectations (about 1.5-1.6 children), slightly exceeding their fertility levels of the past decades.[14] Italy and the Netherlands are located in-between with an expected family size of 1.9. We can not connect directly the ranking of countries by expected number of children and by the prevalence of egalitarian and/or traditional views among men in these societies, as the former seems to support the socialization argument linking the social context and family size desires as presented by Goldstein et al. (2003), while the latter points to the influence of other norms and values, especially for the Catholic societies. Indeed, in two of the four countries with the highest expected number of children we find the smallest proportion of men with traditional values and a high proportion of egalitarian

[14] Total fertility rates were though above that level in East Germany up until the late 1980s (Council of Europe 2006).

men (Estonia and the Netherlands), whereas the other two countries (Lithuania and Poland) have top-ranking regarding the share of traditionally-oriented men and the smallest share of those with egalitarian views.

We also looked at within-country differences by the expected number of children among men with different role orientations. We found that men with traditional attitudes have the lowest expected fertility in all the eight countries in the analysis. Distinguishing by parity revealed a similar picture with a few exceptions: among childless men in Lithuania, those with intermediate attitudes have the lowest expectation, followed by men with traditional views, and among fathers, such pattern applies to East Germany and Poland. In any case, comparing the expected family sizes of men with egalitarian and those with traditional views, we found that the latter desire fewer children than their egalitarian counterparts in these eight societies. Focusing on men aged 35-44 years, who have already realized 70-85 percent of their childbearing plans, we noticed the same pattern with egalitarian men having fathered a larger number of children compared to traditional men in all countries included in the analysis.

Thereafter, we analyzed men's intentions to have a(nother) child using logistic regression models. When we controlled for other factors known to influence childbearing plans, the categorical specification of role orientation revealed a significant positive relationship between egalitarian attitudes and fertility intentions in six out of the eight countries, with the same pattern displayed also for West Germany but not reaching statistical significance. Estonia was the only country with no apparent difference between egalitarian and traditional men's fertility intentions.

What conclusion can we draw based on these results? Overall, the findings seem to support the hypothesis that men with egalitarian views have higher fertility aspirations than men with traditional role orientation in contemporary Europe. This was confirmed by both the descriptive and the multivariate analyses, as seen for within-country differences, both for childless men and for fathers. In addition, we found that egalitarian men not only desire a higher number of children, but they also realize these plans by their late 30s and early- and mid-40s, fathering more children on average than do traditional men. At the same time, when it comes to cross-country differences, we could not detect a direct link between country rankings by the expected number of children and by the prevalence of egalitarian versus traditional attitudes in the different countries. However, macro- and micro-level relationships do not always coincide, as seen for example for the association between female employment and fertility.[15] The conclusion of this study is then that egalitarian men seem to be pro-family indeed,

[15] A positive relationship between female employment and fertility was noticed from the late 1980s onwards at the macro-level (Ahn, Mira 2002; Castles 2003), whereas non-employed women were frequently shown to have higher fertility than women in career (Hakim 2003).

notwithstanding the lack of correspondence in country-rankings by attitudes and by family size. Egalitarian men are clearly interested in "doing family" rather than in "doing gender", as suggested by Kaufman (2000). In the long run, this may indicate some positive prospects for Europe's fertility development, depending on the accomplishment of the gender revolution.

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Appendix

Table I: Basic characteristics of PPAS surveys

Country	Survey year	Age range	Sample size	Working sample size (men 20-44)
Austria	2001	20-65	2000	616
Belgium (Flanders)	2003	20-65	3957	—
Czech Republic	2001	18-75	1073	—
Estonia	2003	17-79	1681	245
Finland	2002	18-69	3806	—
East Germany	2003	20-65	2052	525
West Germany	2003	20-65	2058	583
Hungary	2000	18+	3057	—
Italy	2002	20-50	3500	1446
Lithuania	2001	18-75	1400	343
The Netherlands	2002	16+	1989	473
Poland	2001	18-65	4653	1204
Romania	2001	18+	1556	—
Slovenia	2000	20-65	1550	—
Cyprus	2001	18-59	1163	—

Source: IPPAS database

Table II: Intention to have a(nother) child, men aged 20-44 (%)

	Austria	Estonia	East Germany	West Germany	Italy	Lithuania	The Nether-lands	Poland
All parities								
Yes	48.0	45.5	29.6	31.8	58.1	33.8	39.5	28.7
No	52.0	28.1	51.7	46.8	34.4	40.6	40.4	40.8
Don't know, uncertain	0.0	26.4	18.7	21.4	7.5	25.4	20.1	30.5
Total	100	100	100	100	100	100	100	100
Parity 0								
Yes	75.0	76.0	43.5	39.3	79.3	68.6	51.8	46.0
No	25.0	6.0	32.4	33.7	12.7	11.8	24.5	15.8
Don't know, uncertain	0.0	18.0	24.1	27.0	8.0	19.6	23.7	38.2
Total	100	100	100	100	100	100	100	100
Parity 1+								
Yes	23.9	24.5	13.0	19.6	27.5	19.0	22.5	15.5
No	76.1	43.3	74.8	67.6	65.5	53.2	62.5	59.8
Don't know, uncertain	0.0	32.2	12.2	12.8	7.0	27.8	15.0	24.7
Total	100	100	100	100	100	100	100	100

Source: IPPAS database

Table III: Items included in the male role index, men aged 20-44 (%)

	Austria	Estonia	East Germany	West Germany	Italy	Lithuania	The Nether-lands	Poland
G2C. It is not good if the man stays at home and cares for the children and the woman goes out to work								
Strongly agree	16.6	16.3	11.6	9.0	16.2	13.1	2.5	12.9
Agree	13.7	23.3	17.4	17.0	23.9	30.6	6.7	33.2
Neither agree nor disagree	21.7	30.0	30.9	30.5	n.a.	32.1	17.0	30.9
Disagree	24.1	20.8	21.0	26.3	31	21.6	42.2	20.2
Strongly disagree	23.9	9.6	19.1	17.2	28.9	2.6	31.6	2.8
Total	100	100	100	100	100	100	100	100
G2D. Family life often suffers because men concentrate too much on their work								
Strongly agree	17.9	27.2	8.6	11.2	21.8	6.7	3.0	9.7
Agree	50.1	58.0	43.5	50.9	51.5	47.5	37.3	47.8
Neither agree nor disagree	17.7	10.7	28.1	23.4	n.a.	30.0	32.1	26.5
Disagree	10.2	3.3	15.6	10.4	19.0	14.6	24.9	13.8
Strongly disagree	4.1	0.8	4.2	4.1	7.7	1.2	2.7	2.2
Total	100	100	100	100	100	100	100	100
G2E. For a man the job should be more important than the family								
Strongly agree	0.5	1.2	1.3	2.1	9.7	1.7	1.0	1.7
Agree	3.6	3.3	5.5	6.0	27.9	5.8	1.0	4.8
Neither agree nor disagree	17.1	14.4	19.1	18.6	n.a.	20.7	11.4	16.9
Disagree	30.7	48.6	35.9	33.3	30.1	60.7	34.3	55.5
Strongly disagree	48.1	32.5	38.2	40.0	32.3	11.1	52.3	21.1
Total	100	100	100	100	100	100	100	100

Source: IPPAS database

Table IV: Descriptive statistics of control variables used in logistic regression models, men aged 20-44 (%)

	Austria	Estonia	East Germany	West Germany	Italy	Lithuania	The Nether lands	Poland
Age								
Mean age (years)	32.8	32.6	33.9	33.2	32.1	33.3	33.5	31.8
Educational attainment								
Primary or lower secondary education	6.7	11.8	5.2	9.7	26.3	5.8	20.6	15.0
Upper secondary or non-university education	85.6	68.6	73.7	60.7	63.1	77.6	54.7	77.8
University education	7.7	19.6	21.1	29.6	10.6	16.6	24.7	7.2
Total	100	100	100	100	100	100	100	100
Labour market status								
Full-time	84.9	80	66.1	78	75.2	67.1	81.9	69
Part-time	4.4	4.1	4.2	3.8	4.1	7.6	9.3	4.3
Not employed	10.7	15.9	29.7	18.2	20.7	25.3	8.8	26.7
Total	100	100	100	100	100	100	100	100
Number of children								
Childless	46.6	41.6	53.9	62.0	59.2	29.7	57.8	43.7
One child	14.3	20.0	20.5	14.3	18.5	22.2	11.4	16.1
Two+ children	39.1	38.4	25.6	23.7	22.3	48.1	30.8	40.2
Total	100	100	100	100	100	100	100	100
Partnership status								
With partner	68.0	67.8	61.7	60.7	72.5	78.7	72.7	62.2
No partner	32.0	32.2	38.3	39.3	27.5	21.3	27.3	37.8
Total	100	100	100	100	100	100	100	100

Source: IPPAS database

Table V: Intention to have a(nother) child, men aged 20-44. Estimates of logistic regression models for control variables (odds ratios)

	Austria	Estonia	East Germany	West Germany	Italy	Lithuania	The Netherlands	Poland
Independent variable: male role index (3 levels)								
Age	0.90***	0.88***	0.87***	0.92***	0.90***	0.81***	0.80*	0.86***
Educational attainment								
Primary or lower secondary education	0.76	0.69	0.35*	1.47	0.72**	0.39***	0.65	1.04
Upper secondary or non-university education[a]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
University education	1.22	1.31	1.53	1.20	1.36	1.65	0.96	1.76*
Labour market status								
Full-time[a]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Part-time	0.45	0.85	0.51	1.62	0.67	2.51	1.42	0.32**
Not employed	1.18	0.71	1.02	1.67*	0.87	0.92	0.06***	0.69**
Number of children								
Childless	15.0***	9.82***	4.28	4.09***	43.1***	9.36***	2.66**	11.7***
One child	7.34***	4.39***	1.01	3.82***	15.7***	5.88***	6.48***	4.03***
Two+ children[a]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Partnership status								
With partner	1.66*	1.22	2.98	2.32***	2.81***	1.78	0.73	4.35***
No partner[a]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

*** p<0.01, ** p<0.05, * p<0.1, [a] reference category
Source: IPPAS database