

Religiousness And Fertility Among Muslims In Europe

Does Islam Influence Fertility?

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ABSTRACT

There seems to exist a concern over and a belief that fertility among Muslims in Europe is much higher than among non-Muslims, and that this together with Muslim immigration will create a Muslim majority Europe. Furthermore, there is an assumption that Islam is essentially pronatalist and that this causes higher fertility among Muslims. The hypotheses that are investigated in this study are: (1) *Muslim fertility rates in Europe are higher than non-Muslim fertility rates*, (2) *Muslims in Europe are more religious than non-Muslims*, (3) *Muslims' higher levels of religiousness correlates with higher fertility rates*, and that (4) *Islam influences fertility rates*.

The thesis combines qualitative and quantitative methodological approaches. The aim of this study is to investigate the relationship between Islam and fertility, with an emphasis on the fertility behavior of Muslims in Europe.

Core findings of this study are that (1) Fertility of Muslims is higher than that of non-Muslims, (2) Muslim women are much more religious and subscribe more to family values than do non-Muslim women, and (3) More religious women have more children than those less religious. The study finds (4) The odds of having at least two children are significantly greater for women who are religious and who hold strong family values, with the strongest associations among Muslim women.

The study also finds that the textual ambiguity of the sacred scriptures, and the lack of a recognized central authority in Islam result in the possibility of simultaneously justifying opposite stands on issues regarding reproductive health. Using the Islamic Republic of Iran as an example, I demonstrate that (5) Islamic scholars can adjust their teachings to either a pronatalist or an antinatalist stance, and thereby can choose to influence fertility behavior of the faithful accordingly; given that they have access to communication institutions that enables them to enforce their teachings. This is a complex debate with need for accurate knowledge and scientific evidence for claims. This study is hopefully such a contribution.

Key words: Muslim fertility, Islam, Religiousness, Demography, Europe, Eurabia, Iran

Link to thesis: <http://goo.gl/CRpLS>

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The research process has reminded me of the unending need for critical scientific thinking to avoid traps of ignorance that the existence of myth-based ideologies are evidence for; sadly some even able to inspire fanatics to use violence.

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BACKGROUND AND INTRODUCTION

Concern over the presence and demography of Muslims in Europe is not a new theme. Pope Clement V (Pope from 1305-1314) who promulgated one of many crusades issued a decree saying that the presence of Muslims on Christian soil is “an insult to the Creator” (McManners 1990, 186). Huntington (1996) in his best-selling book *The Clash of Civilizations* argues that Muslim immigrants and their offspring revive old fears in European minds that Islam “has put the survival of the West in doubt, and it has done that at least twice” referring to seventh century’s Moors and fourteenth century’s Ottomans in Europe (ibid., 210). Islamic proponents such as worldwide popular Islamic scholar and activist al-Qaradawi confirm Islam’s desire and plan to return by preaching and predicting that:

Islam will return to Europe as a conqueror and victor, after being expelled from it twice - once from the South, from Andalusia, and a second time from the East, when it knocked several times on the door of Athens. I maintain that the conquest this time will not be by the sword but by preaching and ideology (cited in Munster 2009, 7).

In 2009 a YouTube clip called “Muslim Demographics”¹ became a viral clip as it was watched over 10 million times within two month. The word “Islamic Demographic Warfare” was used over 70 times by the Norwegian militant nationalist and self proclaimed crusader commander, Anders Behring Breivik, in his “2083 - A European Declaration of Independence”² he distributed online few hours before his ideological motivated attacks in Oslo and Utøya on 22.07.2011.

Islam, Muslims and Muslim demography are debate topics both scholarly and popular. There seems to exist a concern over and a popular belief that fertility³ among Muslims in Europe is much higher than among others, and that this together with Muslim immigration will create a Muslim majority Europe. Furthermore, that Islam is essentially pronatalist and that this causes higher fertility among Muslims. These assumptions are among central pillars of “Eurabia”⁴ arguments. As interesting as it is to reflect over a possible future “Islamic Republic of Europe” or background for Europeans’ concern over Muslim fertility, this study’s focus is on present situation of Muslim fertility in Europe and role of Islam as fertility determinant in general. There is need for accurate knowledge and scientific evidence for claims in the ongoing debate about

¹ Source: YouTube <http://goo.gl/xca2R> Accessed: May 2012.

² Breivik has stated that his attacks and killings of youth were a marketing tool for this “manifesto”. Thus no link to this document is provided here. Word counting through the file is done by me and is documentable.

³ Fertility refers to reproductive performance rather than capacity, and is used according to whether there was actual childbearing during the period under review. Source: <http://en-ii.demopaedia.org/wiki/Fertility> Accessed: May 2012.

⁴ The term was originally coined by Bat Ye’or to describe what she identified as a secret project between European politicians and the Arab world for the “Islamicization” of Europe (Carr 2006, 6; see also Kaufmann 2010, 167-168).

Muslims and Islam in the relevant fields such as politics, social and health policy, immigration and demography; this in order to avoid biased generalizations, which can cause prejudice and discrimination⁵. After all, attitudes are shaped by knowledge or the lack of such.

THE AIMS AND STRUCTURE OF THE STUDY

The aim of this study is to investigate the relationship between Islam and fertility, with an emphasis on the fertility behavior of Muslims living in Europe. The eventual relationship between religious faiths and fertility is complex, thus I approach the relationship from several angles. The study is divided into four parts. In the first part and based on existing demographic studies I investigate if Muslim fertility rates in Europe are higher than of non-Muslim fertility. Second, I investigate if the intensity of religious feelings and family values influences fertility. Based on the findings, in part three I investigate main strands of Islamic doctrines, to determine if Islam gives its followers clear guidance regarding reproductive behavior, or if doctrines can be interpreted in different ways. In part four, I do a case study of how Islamic doctrines has been interpreted in the Islamic Republic of Iran with a focus on the years after Islamic clerics gained control over state apparatus in the Iranian revolution in 1979. Finally, and after a discussion of the findings, I suggest further research.

Iran is chosen as a case study since it is one of few countries where Islamic law is formally pronounced as national law and a society based on “true” Islam as its aim and slogan. In addition, the Islamic Republic has the lowest total fertility rate⁶ among the Muslim majority countries in the world (Pew Research Center 2011, 28). An investigation of how Islamic law has been interpreted in a formally Islamic country supplements the theoretical presentation in part three. This analysis aims to show how Islamic doctrines are in fact implemented “on the ground” and how Islamic scholars adjust Islamic teachings to their social, political and economical context, what I refer to as “de facto Islam”.

Taken together, the four parts investigate the relationship between Islam and fertility both with regard to statistical data on demographic studies of actual fertility behavior and with regard to the "meaning-context" of fertility within an Islamic frame of reference. The underlying idea is that this combined methodological approach provides a better understanding of the relationship than if relying *only* on the demographic empirical literature or *only* on the study of the

⁵ Amnesty International's report *Choice and prejudice: discrimination against Muslims in Europe* exposes the impact of discrimination on the ground of religion or belief on Muslims in several aspects of their lives, including employment and education. Source: Amnesty International <http://goo.gl/UXsh5> Accessed: May 2012.

⁶ Total fertility for a given year represents the number of children that would be born per 1,000 women if they experienced no mortality and were subject to the age-specific fertility rates observed for that year. Source: http://en-ii.demopaedia.org/wiki/Total_fertility Accessed: May 2012.

"meaning" of fertility within an Islamic worldview. Following hypotheses⁷ are to be investigated in this study:

Hypothesis 1: *Muslim fertility rates in Europe are higher than non-Muslim fertility rates.*

Hypothesis 2: *Muslims in Europe are more religious than non-Muslims.*

Hypothesis 3: *Muslims' higher levels of religiousness correlates with higher fertility rates.*

Hypothesis 4: *Islam influences fertility rates.*

In order to investigate the relationship between Islam and fertility, I first need to establish that Muslims really have a different fertility pattern than non-Muslims; including investigating within-group variation among Muslims living in various European countries. Thus hypothesis 1 comes first. Depending on the findings related to hypothesis 1, the question becomes if an eventual difference is connected to Islam (the faith as such) rather than to other characteristics of Muslims living in Europe. This is partly a question if other aspects of European Muslims are the important ones - such as education levels or their present age structure. Partly it is also a question if the level or intensity of religiousness is higher among Muslims than among non-Muslims, and finally it is a question if Islam as such is a particularly pronatalist faith. These issues constitute the subject matter related to hypotheses 2 and 3.

The final question concerns if Islam is consistently and essentially a pronatalist religion, or if there is room for different interpretations. If the latter is the case, it would suggest that even if there are today clear correlations between self-identifying as a Muslim and fertility behavior that can be connected to Islam as such, this could change under other circumstances and context; and may also dominate to a varying extent the different Muslim European communities at any point in time. Hence Islam as an "independent variable" influencing fertility behavior might possibly not be a constant, but rather something that depends on interpretation - including the ability to make the interpretation hegemonic within a cultural setting and during a specific time period. To investigate if there is an eventual flexibility in how Islamic doctrines are interpreted, the last part of the study moves on to a presentation of how fertility as such and factors known to influence fertility, such as family planning are expressed in the sacred scriptures. Finally, the issue if such interpretations can change over time including conditions for such change is investigated through a case study of Iran. These issues relate to hypothesis 4.

⁷ Hypotheses are "tentative statements about empirical reality involving a relationship between two or more variables" (Chambliss & Schutt 2010, 26).

CLARIFICATIONS AND LIMITATIONS

This study, being a literature review, is based on secondary data and academic papers. This approach is chosen because there exist many popular and politicized discourses on the role of Islam in fertility behavior of its followers. The literature chosen for the study is therefore based on scientific discourse and academic texts, although it must be noted that science is not always free from politics. Reliance on scientific discourse does not imply an exclusion of academic disagreements, but rather an exclusion of theological differences of opinion on theology's role. Neither does the study include science's approach to theology and religion as such.

The theme can be sensitive for a variety of reasons. First, decision on how many children one wishes to have is seen as a private matter. Most people would like to think that this very choice is not only private, but also highly individual. Second, discussing a particular religious group's fertility can be stigmatizing and/or its findings misused. Third, some can find analyzing Islam that might reveal differences of opinion within Islam offensive, and inconsistent with the idea and assumption of a united and monolithic or "true" Islam. Religions are after all about people's beliefs and value systems, which believers may not wish to be scrutinized. Nevertheless, I argue for need for science-based knowledge about Islam and Muslims among health and social workers, as well as policy makers, politicians, ordinary citizens, including Muslims. Furthermore, Islam, as well as other belief systems and ideologies are in principal open for scientific scrutiny. Last, but not least, demography of Muslims in Europe can have such religious political implications that it should not be a taboo.

The quantitative part of this study is limited to present time and is not concerned with projections or indications of the future Muslim population in Europe. Neither does it address immigration from Muslim countries and its possible effect on fertility rates. The part is limited to female Muslims unless there is a specific reference to male Muslims. It addresses fertility behavior and does not contain data on fertility ideals or intentions.

METHODOLOGY

This study is based on library research involving no fieldwork - what anthropologists call an "armchair research". It is based on both quantitative and qualitative data analysis, as the process consists both using numbers to discover and describe patterns, and analyzing and interpreting texts (Chambliss & Schutt 2010, 191 & 250). "The basis of qualitative research lies in the interpretive approach to social reality", underlines Holloway (1997, 2).

This study is an attempt to combine empirical data and “meaning” of fertility. It describes a social phenomenon, and is thereby descriptive research (Chambliss & Schutt 2010, 8). The study seeks to identify causes and effects of a social phenomenon and to predict how this phenomenon change or vary in response to variation in another phenomenon, also called explanatory research (ibid., 11).

Searching And Literature Selection

I have used valid, reliable and authentic literature for this study, though discussion of reliability and lack of secondary evidence regarding sacred scriptures are out of the scope of this study. According to Chambliss and Schutt (2010), valid research should be supported by indicators measuring or observing what is intended, while reliability refers to measurement procedures yielding consistent scores (ibid., 93-96). This study relies on literature that is directly related to the hypotheses. The findings have their authenticity and foundation in the literature.

Searching and selecting literature was done systematically by using the search engines: Google Scholar, Google Books, Bibsys, EBSCOhost through the databases Academic Search Premier and SocINDEX, Wiley InterScience, Web of Science, Campbell Collaboration, Demographic Research, The Cochrane Library, Open Digital Archive with different combinations of the keywords Islam, Muslim, fertility, contraceptive, demography, religion, religiosity, religiousness, Europe, Iran. In addition websites of among others Pew Research Center, Guttmacher Institute, United Nations Population Division, World Health Organization, Population Reference Bureau, PROMINSTAT, Council of Europe, Statistics Norway, Institute for Social Research, World Fatwa Management and Research Institute, European Council For Fatwa and Research, and Hadith Collections were searched for relevant information, though not every data appears in the study.

A more in-depth revision of the sources mentioned in the literature lists of cited articles and books was done to both broaden the search and discover appropriate literature; similar to the snowball sampling of informants in social research, where elements are selected as they are identified by successive informants or interviewees (Chambliss & Schutt 2010, 124). The same search was done several times until I repeatedly returned to the same results. In order to make sure I have covered the relevant field of literature I consulted a librarian at our Learning Centre and Library, Oslo and Akershus University College of Applied Sciences.

In selecting literature I have put emphasis on selecting studies directly related to the theme, and rather recent - though referring to some classical studies have been necessary and relevant. With

very few exceptions, such as books, all literature used has been peer reviewed. Scholars referred to here are to be found frequently referred to and quoted in their respective fields. However, being often referred to in itself does not make an argument more valid or reliable. It has been an aim to actively find literature countermanding presumptions.

Based on an assumption that the United States is more religious than Europe, I have been reluctant using findings from there, though such searches gave many hits. Frejka and Westoff (2006) conclude that “the evidence supports the notion that US religiousness is relatively high, higher than in most European countries” (ibid., 7). Philipov and Berghammer (2007) argue that “While in many European countries religious institutions take monopolistic or duopolistic positions, the religious structure in the United States is marked by the existence of a large variety of denominations” (ibid., 273-274). The authors discourage “a straightforward transfer of US-related findings to European countries without adequate testing or replication”, because they “can be misleading” (ibid.).

According to Hart (2005), a literature review can be conducted in several ways. To analyze the literature you can critically assess definitions and concepts, evaluate methodology, consider agreements and disagreements, develop new understandings through deconstructing categories, and draw up conclusions (ibid., 153). Hart’s approach was found as a relevant framework for this study.

Quantitative Data

Choosing to use secondary data rather than collecting my own quantitative data is an acknowledgment of a challenge realized during my research process. Collecting raw data on fertility differential by religious affiliation across European countries is out of scope for this study due to the lack of availability of specific standardized comparable data. I noticed early that several authors use the same set of secondary data.

The numerical data used in this study are mainly based on data collected and organized by Charles F. Westoff and Tomas Frejka in their paper *Religiousness and Fertility among European Muslims* published in *Population and Development Review* in 2007. Sources are specifically mentioned whenever other data set is used. Figures and tables are based on these authors’ paper.

Westoff and Frejka (2007) have used various measures of fertility in their data set: children ever born (CEB)⁸, total fertility rate (TFR), and completed cohort fertility⁹. Total fertility rate, which is the main measure used is defined as the number of children that would be born per woman if she were to live to the end of her childbearing years and bear children at each age in accordance with the prevailing age-specific fertility rates (Lindstrand et al. 2006, 111). This is a hypothetical measure with several drawbacks that I will get back to in part one.

Westoff and Frejka's (2007) simplified assumption that all women who emigrated from countries with overwhelmingly Muslim population are Muslims, is followed in presentation and analysis of quantitative data. Furthermore, mortality rates are assumed equal to that of the native populations in the respective countries.

THEORETICAL FRAMEWORK

In the following, I will present the theoretical framework, before getting back to the quantitative part of the study. The theoretical framework aims to account for literature on approaches to religion's role on demographic behavior.

As McQuillan (2004) puts it, "the starting point for addressing the role of religion is the classic analysis by Calvin Goldscheider (1971), whose ideas still represent the point of departure in studies of religious differences in demographic behavior" (ibid., 26, referring to Agadjanian 2001, and Knodel et al. 1999). Goldscheider (1971) urges to expand the view of religion beyond specific teachings and to include "the total content of that social organization, of which the particular theology is but one part and often not the most significant" (ibid., 274). In his more recent publication, he has directed attention to what he terms "broadly based norms of family control and gender relationships" such as values regarding gender, sexuality and family life in addition to fertility regulation (Goldscheider 1999, 312, cited in McQuillan 2004, 26). Goldscheider (1971) also suggests "minority-group status might play an important role in shaping the demographic patterns of a religious or ethnic group" (ibid., 270-298).

In the following, I present four theories that are developed concerning fertility trends and determinants among adherents of diverse religions before returning to McQuillan's extension of these approaches, namely: (1) the particularized theology theory, (2) the interaction theory (3)

⁸ Number of children born to enumerated women or couples, either during the current marriage or overall.
Source: http://en-ii.demopaedia.org/wiki/Mean_number_of_children_ever_born_per_woman
Accessed: May 2012.

⁹ Cumulative fertility until the date when all members of the cohort have reached the end of the reproductive period.
Source: http://en-ii.demopaedia.org/wiki/Completed_fertility Accessed: May 2012.

the minority status theory, and (4) the characteristics theory (McQuillan 2004, 26-27; Zhang 2008, 23; see also Hosseini & Haghshenas 2009, 4).

The Particularized Theology Theory

The particularized theology theory explains fertility differentials as a result of specific doctrinal differences among religions. Among religious groups where the doctrines are against contraception and abortion and value large families one should expect higher fertility rates. Goldscheider (1971) is critical of the “particularized theology approach”, describing it as “superficial” and “inadequate” (ibid., 293; see also McQuillan 2004, 26). In the same vein, Chamie (1981) is critical of explaining individual believer’s fertility behavior by generalizing official religious doctrines (ibid., 79). McQuillan (1999) warns of rejecting religious doctrines altogether and states that “religious teachings touching on demographic issues form an important part of a religious world-view, and are a necessary, though not sufficient, condition for the formation and continuation of a distinctive demographic pattern” (ibid., 8). He argues that such a world-view goes beyond specific instructions on fertility, but more generally includes the perceptions of a religious organization, notably on gender relations and parent-child relationships (McQuillan 1999, 10 & 2004, 26; see Philipov & Berghammer 2007). The particularized theology theory finds support in several empirical findings (Zhang 2008, 234).

The Interaction Theory

According to the interaction theory religious institutions are major sources of social exposure for the religious doctrine that members adopt their teachings. Furthermore, members of the group are impacted by other members’ fertility behavior. According to Ryder (1974), “fertility is an aggregated property, a characteristic of the group to which the couple belong and not directly of the couple themselves” (ibid., 76). This approach is, according to Zhang (2008), in line with the social networks theory and the “diffusion theory” of fertility emphasizing “the role of interaction in shaping behavior and the diffusion effect of family planning ideology in influencing fertility” (ibid., 235, referring to Coale & Watkins 1986; Watkins 1991). Recent research shows more and more support for this theory (Zhang 2008, 235).

The Minority Group Status Theory

The minority group status theory contends that insecurity and marginalization connected to minority status play a role in depressing fertility of religious groups below that of majority. The fertility reduction is to overcome barriers to full social and economic integration into the dominant society. Goldscheider and Uhlenberg (1969) argue for three prerequisites for this mechanism to operate: (1) acculturation of minority group members has occurred in conjunction

with the desire for acculturation, (2) equalization of social and economics occurs, particularly at middle and upper social class levels, and/or there is a desire for social and economic mobility, and (3) there is no pronatalist ideology associated with the minority group and no norm discouraging the use of efficient contraceptives (ibid., 372; Goldscheider 1971, 297). McQuillan (2004) points out that groups that prefer separation from the larger society or are committed to norms encouraging large families or prohibiting fertility control might in fact have higher fertility rates than those of the majority (ibid., 27). The minority group status theory also finds its support in empirical findings (Zhang 2008, 235).

The Characteristics Theory

According to the characteristics theory the fertility differentials among religious groups are a result of socioeconomic differentials and religious doctrines have not significant independent effect on fertility behavior. In Petersen's (1969) words, "What may seem to be a religious influence often reflects the fact that the members of any denomination are typically concentrated in a very few places in the social structure as defined by occupation, education, income, or any other of the usual indices" (ibid., 538). According to this theory, fertility differentials would disappear when controlling for socioeconomic status or as a result of modernization and socioeconomic assimilation. The characteristics theory, however, does not include any specific minority effect or any cultural or ideological effect such as religious commitment or level of religiosity. Similar to previous theories, this theory is supported by several empirical findings (Zhang 2008, 234).

When Does Religion Influence Fertility?

Several researchers have indicated that religion and religious beliefs affect fertility rates even after controlling for socioeconomic factors such as age, marital status, income and education (Coleman 1994; McQuillan 2004; Frejka & Westoff 2006; Berghammer 2009; Zhang 2008; Philipov & Berghammer 2007). Lutz (1987) analyzes the effect of religion and culture on national fertility levels after accounting for the societies' socioeconomic standing using national time-series data from 128 countries on various demographic and socioeconomic indicators. He finds that "across cultures Catholicism has a fertility-increasing effect but it - like the effect of all religions except Islam - is diminishing over time" (ibid., 34). Islam's influence, as I will come back to in part four, is a focus of continuing debated.

In his widely cited article *When does religion influence fertility?*, McQuillan (2004) extends and specifies the above mentioned four approaches to the link between religion and fertility behavior by directing attention to three elements: (1) the nature of religious values and norms, (2) the role

of religious institutions and (3) the issue of religious identity. First, the religion has to articulate behavioral norms regarding fertility behavior such as norms or rules regarding proximate determinants, i.e. contraception, sterilization, and abortion, but also guidelines on entry into sexual unions and the promotion of large families. Broader issues of social organization, such as the segregation of Muslim women signify a limitation of pursuits other than motherhood. Second, the religion has to have the means to communicate these values and norms and to promote compliance. Third, the religion forms a central component of the social identity of its followers.

While parts three and four are dedicated to elaboration of McQuillan's approach, I will return to the four theories under Discussion and Conclusions part to comment their applicability. However it is not the aim of this study to fully test the applicability of them. Each of them explains fertility of religious groups from different viewpoint; they are not mutually exclusive.

The Demographic Transition

When studying fertility differential among Muslims and non-Muslims in Europe, a related issue is whether one should take into consideration that Muslims for the most originate from a so called pre-fertility transition setting. To explain this further, the study here gives a summary of the demographic transition without discussion of interrelated factors involved.

Demography is a science short on theory, but rich in quantification, Kirk (1996) notes, and the demographic transition being "one of the best-documented generalizations" produced in the social science. Kirk (1996), referring to the demographic transition's founding fathers Warren Thompson (1929), Adolphe Landry (1934), Kingsley Davis (1945), and Frank Notestein (1953), writes that the demographic transition essentially states that societies progress from a pre-modern regime of high fertility and high mortality to a post-modern one in which both are low (ibid. 361; see also Lindstrand et al. 2006, 126). Transition consists of four stages. Stage one describes a pre-modern state, in which high fertility and mortality rates are relatively stable. Stage four describes a post-industrial state that marks the conclusion of the transition and return to stability with low levels of both mortality and fertility. Stages two and three are intermediate transitional stages. Stage two reflects the industrializing state when mortality begins to fall while fertility rates are unchanged or rising. Stage three reflects the maturation of the industrialization and the start of a decline in fertility.

This transition occurs at different rates and in different time periods among societies (Kirk 1996, 361; Lindstrand et al. 2006, 126). Fertility level before the demographic transition is often referred to as natural fertility, which would have fluctuated around a high level - six to eight births per woman - though there is no agreement on how high were these high levels (Hirschman 2001, 120; see also 1994, 208). Regarding Muslim countries, Fargues (1989) asserts that it “seems probable that around 1960 total fertility was of the order of seven to eight children per woman in all of them (except Lebanon)” (ibid., 151).

Today, with a few exceptions of countries with no functioning state, such as Somalia and Afghanistan, countries around the world have entered the transition and can be placed on a continuum of progress in the transition. Some Western European countries with low levels of fertility, in some cases well below replacement level, have reached a post-transition situation (see Kirk 1996, 386-387). Total fertility rate at 2.1 is called replacement level, which means “one man and one woman replace themselves with the same number of individuals in the course of their reproductive career” (Lindstrand et al. 2006, 112).

The demographic transition was originally based on relatively few empirical data and not least on historical experiences of Western Europe and North America. Notestein (1953, cited in Hirschman 1994) emphasizes institutional fabric of urban industrial society, emergence of new ideal in matters of family size, reduced pressure toward traditional behavior, education and rational point of view, increase in cost of child-rearing, decline in children’s economical contribution and women’s independence from household obligations among incentive for birth restrictions that increased use of contraceptive among married couples. Bulatao’s (2001) diverse array of explanations for the fertility transition touches upon many aspects mentioned in the above classical work; they include (1) mortality reduction, (2) reduced economic contributions from children, (3) opportunity costs of childbearing, (4) family transformation, (5) vanishing cultural props for childbearing, (6) improved access to effective fertility regulation, (7) marriage delay, and (8) diffusion.

The demographic transition will be referred to throughout the study. This is to point out that in comparing different groups’ fertility levels with each other, we may as well be pinpointing respective groups’ position on a continuum of progress in the transition.

Concluding Remarks

Broad empirical generalizations and theory construction were simpler tasks in an age with little empirical data. Researchers in search of causality are dealing with a complex and highly interrelated structure of causation that at time seems nebulous, as Kirk (1996, 386) puts it. It might not be possible to isolate one single factor as the main fertility cause, since socioeconomic, sociological and cultural factors are far too closely intertwined, not to mention evolutionary or for that matter psychological motivations for childbearing. This study is concerned with religion's, specifically Islam's influence on fertility.

While in part one, I investigate demographic patterns of Muslims in Europe, in part two the association between fertility behavior, family values, intensity of religious beliefs and practices are investigated. This choice is in line with Goldscheider's (2006), McQuillan's (2004) and Lesthaeghe's (1983) argument for a broad approach in understanding influence of religious ideologies that should also include norms related to gender and family life and not only religious doctrines (Goldscheider 2006, 56; McQuillan 2004, 49; Lesthaeghe 1983, referred in Kirk 1996, 372). Part three deals with Islamic doctrines regarding reproductive behavior, and in part four, I investigate how these doctrines are in fact adapted and changed included their influence on fertility behavior.

PART ONE: MUSLIM FERTILITY IN EUROPE

The study here investigates Muslims' fertility in Europe. This and next part of the study, as mentioned earlier, draw heavily on Westoff and Frejka's (2007) work. In the following I present and analyze fertility data on Muslims in Europe, investigating **hypothesis 1: *Muslim fertility rates in Europe are higher than non-Muslim fertility rates.***

According to Pew Research Center's (2011) publication "The future of the Global Muslim Population" estimates, Muslims accounted for about 6 % of Europe's total population in 2010; that is about 44.1 million of a total population of 692.8 million. The majority of the Muslims, about 18.3 million live in Eastern Europe¹⁰ and count for 6.2 % of the total population. The Muslim share of the population in Southern Europe¹¹ is 6.9 % and is about 10.6 million people. In Western Europe¹² there are about 11.2 million Muslims, which is 6 % of the population, and there are about 3.7 million Muslims living in Northern Europe¹³, which makes up 3.8 % of the population.

The majority of Muslims in Western and Northern Europe are immigrants after the Second World War, while Muslims in Eastern Europe and the eastern part of Southern Europe including the two Muslim majority countries in Europe, namely Kosovo (91.7 %) and Albania (82.1 %) are centuries old. According to Pew Research Center (2011), "a major factor in the growth of Europe's Muslim population in recent decades has been the large influx of immigrants from South Asia, North Africa, Turkey and other parts of the developing world" (ibid., 133).

The countries' data¹⁴ here are presented and organized as done by Westoff and Frejka (2007). They chose to present the data according to the respective countries' data collection method, namely (a) those with data on religious affiliation, followed by (b) those with data on foreign-born immigrants and those of foreign citizenship or nationality, and finally (c) countries with data on foreign citizenship or foreign nationality. The category foreign-born immigrants contains all immigrants from those countries, while the category foreign citizens or nationals does not

¹⁰ Eastern Europe includes 11 countries and territories: Belarus, Bulgaria, Czech Republic, Georgia, Hungary, Moldova, Poland, Romania, Russia, Slovakia and Ukraine (Pew Research Center 2011, 124).

¹¹ Southern Europe includes 17 countries and territories: Albania, Andorra, Bosnia-Herzegovina, Croatia, Gibraltar, Greece, Italy, Kosovo, Malta, Montenegro, Portugal, Republic of Macedonia, San Marino, Serbia, Slovenia, Spain and Vatican City (Pew Research Center 2011, 124).

¹² Western Europe includes nine countries and territories: Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, Netherlands and Switzerland (Pew Research Center 2011, 124).

¹³ Northern Europe includes 13 countries and territories: Channel Islands, Denmark, Estonia, Faeroe Islands, Finland, Iceland, Ireland, Latvia, Lithuania, Isle of Man, Norway, Sweden and United Kingdom (Pew Research Center 2011, 124).

¹⁴ Data source Westoff and Frejka (2007). DOI: 10.1111/j.1728-4457.2007.00197.x Accessed: March 2011.

contain those that have been naturalized¹⁵. According to Westoff and Frejka (2007), the descendants of immigrants tend to be included in the estimates of immigrants in practically all countries (ibid., 787). With a couple of exceptions total fertility rate is the measure used in the following. I will under Data Quality section get back to drawbacks regarding using this measure. At this sage, one should keep in mind that we do not know the fertility behavior of any age cohort of women until they have reached the end of their reproductive cycle.

Countries With Data On Religious Affiliation

In 2001, Muslim women in Austria (Table 1) had 4.6 % of the total share of female population with a total fertility rate of 2.3 births per women, while the Roman Catholic women comprising 74.5 % of the total share of female population had a total fertility rate of 1.2 births per women.

Muslim women's total fertility rate declined from 3.1 in 1981 to 2.3 in 2001, while their share of female population increased from 0.9 % from 1981 to 4.6 % in 2001. In 2001, Muslim women had on average one child more than women from other religious groups and 1.4 children more than the "No religion" group.

Table 1 Total fertility rate by religion in Austria 1981 to 2003.

Religion	1981		1991		2001		Difference between Islam and other religions		
	TFR	Share of total	TFR	Share of total	TFR	Share of total	1981	1991	2001
Roman Catholic	1.70	85.7	1.52	78.8	1.32	74.5	1.39	1.25	1.02
Protestant	1.51	5.8	1.37	5.1	1.21	4.5	1.58	1.40	1.13
Islam	3.09	0.9	2.77	1.9	2.34	4.6			
Other religion	1.70	3.4	1.61	7.1	1.44	6.2	1.39	1.16	0.90
No religion	1.12	4.2	1.04	7.1	0.86	10.2	1.97	1.73	1.48
Total	1.67	100.0	1.51	100.0	1.33	100.0			

Source: Goujon et al. 2006, referred in Westoff and Frejka (2007, 788).

Muslim women in Bulgaria (Table 2) comprising 11.9 % of the total female population in 2001 census had 1.5 children ever born, while Orthodox women with a total share of the population of 83.2 % had 1.2 children ever born. Orthodox women born around 1940, 1950 and 1960 had completed fertility around 1.8 births per woman, while completed fertility for Muslim women born in the same period declined from 2.8 to 2.3, narrowing the differential from around 1.1 to 0.5.

¹⁵ Naturalization refers to the act of investing an alien with the status of a national in a given state.
Source: <http://www.britannica.com/EBchecked/topic/406487/naturalization> Accessed: May 2012.

Table 2 Children ever born by religion in Bulgaria - 2001 census.

Religion	Age group	Children ever born (women 15+)	Share of total	Difference between Muslims and Orthodox
Orthodox	All	1.26	83.2	0.31
Muslim	All	1.57	11.9	
Orthodox	40–44	1.77	82.4	0.53
	50–54	1.82	86.7	0.74
	60–64	1.76	87.6	1.09
Muslim	40–44	2.30	12.5	
	50–54	2.56	9.5	
	60–64	2.85	9.3	

Source: National Statistical Institute 2003, referred in Westoff and Frejka (2007, 789).

According to 2001 Census in Croatia (Table 3) Muslim women comprising 1.1 % of the total population had children ever born of 1.7, while Roman Catholic women comprising 87.6 % of total female share of population had 1.6 children ever born.

Table 3 Children ever born by religion in Croatia - 2001 census.

Religion	Children ever born (women 15+)	Share of total	Difference between Muslims and other religions
Roman Catholic	1.63	87.6	0.12
Orthodox	1.36	5.0	0.39
Muslim	1.75	1.1	

Source: Central Bureau of Statistics 2002, referred in Westoff and Frejka (2007, 789).

In Slovenia (Table 4), completed fertility of Muslim women cohort born around 1930 declined from 4.6 births per woman to about 2.1 births per woman of the 1960s cohorts, while completed fertility of Roman Catholic women in the same cohorts were 2.1 births and 1.8 births. The difference in completed fertility between Roman Catholics, the principal religion, and the Muslims fell from 2.5 in 1930s cohort to about 0.2 in 1950s and 1960s cohort.

Table 4 Completed fertility of birth cohort by religion in Slovenia - 2002 population census.

Birth cohort	Islamic	Catholic	Difference
1927–31	4.68	2.18	2.50
1932–36	3.89	2.17	1.72
1937–41	2.96	2.12	0.84
1942–46	2.76	2.07	0.69
1947–51	2.59	2.04	0.55
1952–56	2.28	1.97	0.31
1957–61	2.15	1.95	0.20
1962–66	2.04	1.85	0.19

Source: Šircelj 2006, referred in Westoff and Frejka (2007, 789).

In Ukraine (Table 5) in 2003, Muslim female share of the population was less than 1% and they had about 1.8 children ever born per woman, while Orthodox women comprising 68.6 % of the female population had 1.5 children ever born per woman. Muslim's children ever born compared with the other minority group namely Protestants who compromise about 1.2 % of the female population was 0.08.

Table 5 Children ever born by religion in Ukraine - 2003 Survey.

Religion	Children ever born (women 15+)	Share of total	Difference between Muslims and other religions
Orthodox	1.51	68.6	0.26
Catholic	1.61	9.6	0.16
Protestant	1.69	1.2	0.08
Islam	1.77	0.6	

Source: Kyiv International Institute of Sociology 2003, referred in Westoff and Frejka (2007, 789).

We may in this section observe a higher fertility among Muslim women that is declining.

Countries With Data On Foreign-born Immigrants And Those Of Foreign Citizenship Or Nationality

In France (Table 6), the total fertility rate of women born in Algeria, Morocco, Tunisia and Turkey¹⁶ in 1990s was respectively about 2.6, 3.0, 2.9 and 3.2 births per women compared with an average total fertility rate of 1.7 of native French women. That is a difference of 0.9 to 1.5 births per woman.

Table 6 Total fertility rates by country of origin in France 1991- 1998.

Period	TFR of women born in				
	France	Algeria	Morocco	Tunisia	Turkey
1991-98	1.70	2.57	2.97	2.90	3.21
	Fertility difference between French and immigrants				
1991-98		0.87	1.27	1.20	1.51

Source: Toulemon 2004, referred in Westoff and Frejka (2007, 791).

In the Netherlands (Table 7), the total fertility rate of women born in Morocco fell from 4.9 in 1990 to about 2.9 births per woman in 2005, and the total fertility rate of women born in Turkey fell from 3.1 to about 1.9 births per woman in the same period. The differential between total fertility rate of women born in Turkey and the native Dutch fell from 1.6 to 0.2 births per woman in the same period, while the differential between total fertility rate of women born in Morocco and the native Dutch declined from 3.3 to about 1.2 births per woman in the same period.

¹⁶ Under Discussion and Conclusions part I suggest an explanation for higher-than-country-of-origin fertility levels of Turkish born women, that I noticed was commented by some in the literature as “puzzling”.

Table 7 Total fertility rates by country of origin in Netherlands 1990-2005.

Year	TFR by country of birth			Difference between natives and foreign-born	
	Netherlands	Morocco	Turkey	Morocco	Turkey
1990	1.55	4.90	3.15	3.35	1.60
1995	1.47	3.37	2.46	1.90	0.99
2000	1.65	3.22	2.18	1.57	0.53
2005	1.68	2.87	1.88	1.19	0.20

Source: Statistics Netherlands, referred in Westoff and Frejka (2007, 791).

In Norway (Table 8), in the period 1997-1998 the total fertility rate of women born in Somalia was 5.2, women born in Iraq had a total fertility rate of 4.8, women born in Morocco had a total fertility rate of 3.8, women born in Pakistan had a total fertility rate of 3.6, women born in Turkey had a total fertility rate of 3.1, women born in Iran had a total fertility rate of 1.9 and women born in Bosnia and Herzegovina had a total fertility rate of 1.6 births per woman, while the native Norwegian women had a total fertility rate of 1.8 births per woman.

Table 8 Total fertility rates by country of origin in Norway 1994-1998.

Period	TFR of women born in							
	Norway	Somalia	Iraq	Morocco	Pakistan	Turkey	Iran	Bosnia and Herzegovina
1994-95	1.8	5.5	4.0	3.8	3.6	2.8	1.9	2.2
1997-98	1.8	5.2	4.8	3.8	3.6	3.1	1.9	1.6
Fertility difference between Norwegians and immigrants								
1994-95	—	3.7	2.2	2.0	1.8	1.0	0.1	0.4
1997-98	—	3.4	3.0	2.0	1.8	1.3	0.1	-0.2

Source: Byberg 2002, referred in Westoff and Frejka (2007, 791).

In the case of England and Wales (Table 9), Brown (2000) estimates that 7 % of Indians living in Britain and 96 % of Pakistanis and Bangladeshis are Muslims (referred in Westoff & Frejka 2007, 6).

In 1971 the total fertility rate of women born in Pakistan and Bangladesh was 9.3 falling to 4.9 births per woman in 1996, while Indian born women had a total fertility rate of 4.3 and 2.2 births per woman and native-born women had a total fertility rate of 2.3 and about 1.7 in the same years. The differential between the total fertility rate of Pakistani and Bangladeshi women and native-born women fell from 7.0 to 3.2 births per woman from 1971 to 1996.

Table 9 Total fertility rates by country of origin in England and Wales 1971-1996.

Year	TFR by country of birth			Difference between natives and foreign-born	
	England and Wales	India	Pakistan and Bangladesh	India	Pakistan and Bangladesh
1971	2.30	4.30	9.30	2.00	7.00
1981	1.70	3.10	6.50	1.40	4.80
1991	1.80	2.60	5.00	0.80	3.20
1996	1.67	2.21	4.90	0.54	3.23

Source: Coleman et al. 2002, referred in Westoff and Frejka (2007, 791).

We may in this section note a widely fertility differential between immigrants from Muslim countries, depending on the country of origin.

Countries With Data On Foreign Citizenship Or Foreign Nationality

In Belgium (Table 10), the total fertility rate of women of Turkish and Moroccan nationality fell respectively from about 5.0 and 5.7 in 1981 to 3.3 and 3.9 births per woman in 1994, while the total fertility rate of women with Belgian nationality was about 1.5 in the same period.

Table 10 Total fertility rates by nationality in Belgium 1981-1994.

Year	TFR by nationality			Difference between natives and foreign-born	
	Belgian	Turkish	Moroccan	Turks	Moroccans
1981	1.57	4.95	5.72	3.38	4.15
1991	1.60	3.50	4.17	1.90	2.57
1994	1.50	3.30	3.91	1.80	2.41

Source: Poulain and Perrin 2002, referred in Westoff and Frejka (2007, 793).

In Germany (Table 11), the total fertility rate of women with Turkish citizenship fell from 4.4 in 1970 to 2.4 births per woman in 1996, while the native-born women had a total fertility rate of 2.0 and about 1.4 births per woman in the same period.

Table 11 Total fertility rates by citizenship in West Germany 1970-1996.

Year	TFR by citizenship		Difference between natives and foreign-born
	German	Turkish	
1970	2.01	4.40	2.39
1980	1.44	3.60	2.16
1985	1.28	2.53	1.25
1996	1.39	2.40	1.01

Source: Mammey and Schwarz 2002, referred in Westoff and Frejka (2007, 793).

In Switzerland (Table 12), the total fertility rate of women with Turkish nationality fell from about 3.4 in 1981 to 1.9 births per woman in 1997, while the total fertility rate of women with Swiss nationality was 1.5 and 1.3 births per woman in the same period. The total fertility rate of

women with Former Yugoslav nationality increased from 2.0 in 1983 to 2.4 in 1997, but their Muslim proportion is unclear, though they comprise meaningful part of Swiss immigrants (Westoff & Frejka 2007, 792).

Table 12 Total fertility rates by nationality in Switzerland 1981-1997.

Year	TFR by nationality			Difference between natives and foreign born	
	Swiss	Former Yugoslavia	Turkish	Former Yugoslavia	Turkish
1981	1.52	—	3.36	—	1.84
1983	1.51	2.08	3.04	0.57	1.53
1990	1.55	2.92	2.76	1.37	1.21
1997	1.34	2.41	1.91	1.07	0.57

Source: Wanner 2002, referred in Westoff and Frejka (2007, 793).

In Italy (Table 13) in 1999, the total fertility rate of women with Moroccan citizenship was 3.4, women with Albanian citizenship 2.6, women with Tunisian citizenship 3.3, and women with Egyptian citizenship 3.4 births per women, while the total fertility rate of women with Italian citizenship was about 1.3 births per woman.

Table 13 Total fertility rates by citizenship in Italy 1999.

Year	TFR by citizenship				
	Italy	Morocco	Albania	Tunisia	Egypt
1999	1.26	3.40	2.60	3.30	3.40
	Fertility difference between Italians and immigrants				
1999	—	2.14	1.34	2.04	2.14

Source: National Institute of Statistics 2002, referred in Westoff and Frejka (2007, 793).

By and large, the most visible observation in this section seems to be a higher Muslim fertility that is declining.

Albania differs from other countries in Europe studied by Westoff and Frejka (2007) as it is one of the least developed countries in Europe and it is a country with a Muslim majority in contrast to other countries in their study. The authors report that the fertility of the Muslim majority is similar to the Catholics who comprise 11 percent of the countries population (ibid., 806). The total fertility rate estimate for 2004 was 1.8 births per woman.

Westoff and Frejka (2007), based on European Values Study described later, find that the average number of children ever born to the Muslim women ages 18-44 is 1.6 births and for non-Muslim women 1.3 births. Furthermore, toward the end of the reproductive age span, ages 35-44, Muslim women have 2.4 births compared to 1.9 for other women (ibid., 796).

The authors, based on European Social Surveys of 2002 and 2004, report finding that Muslim fertility, measured as the children ever born, is about 15 percent higher than fertility of non-Muslims (Westoff & Frejka 2007, 800).

Other studies confirm higher fertility, measured as in total fertility rate, among Muslim women in Europe. Coleman (1994), studying total fertility rate trends among several immigrant populations in Europe, finds that “throughout Europe the highest fertility, and its slowest decline, is shown by Muslim population (ibid., 124; see also Kaufmann 2009 & 2010). Based on data from Lappegård (2000), Østby (2004) observes slow adaptation of fertility behavior to Norway’s population by immigrant women originating from Muslim countries compared with immigrant women from non-Muslim countries (ibid., 127). He concludes though that second generation immigrants share important elements of their fertility behavior with the rest of the population, drawing attention to changes from a generation to next and thereby effect of length of stay in host country (ibid., 132; see also Lappegård 2000, 38).

The higher total fertility rate of Muslim women is also confirmed by the recent estimates by Pew Research Center (2011), based on trends in 25 European countries for which data are available. The report states that “Muslim women today will have an average of 2.2 children each, compared with an estimated average of 1.5 children each for non-Muslim women in Europe” (ibid., 132). The report projects that the fertility gap between Muslims and non-Muslims in Europe is expected to narrow in the coming years. By 2025-30, the average fertility rate for Muslim women in the 25 countries for which data are available is expected to drop to 2.0 children per woman and the report also projects, that the average fertility rate for non-Muslim women will increase slightly to 1.6 children per woman (ibid.).

The heterogeneity of the general term “Muslim women” is clearly evident when considering the high fertility of women from country of origin such as Somalia, Iraq, Morocco and Pakistan (Østby 2002, 342; Lappegård 2000, 10), and the low fertility of women from Iran and Indonesia (Sobotka 2008, 234; see Table 8 as example).

Data Quality

The main measure of fertility used here is total fertility rate. This hypothetical measure has several drawbacks when used on a foreign population since “some age groups are over-represented and others are under-represented compared to the total population and this becomes more problematic the smaller the groups are”, points Østby (2002, 341). Schoorl (1995) referring to migrants’ total fertility rate and underlines that total fertility rate reflects “various aspects of

the migration process: selective migration and migration policies, disruption of the process of family formation due to migration, the degree to which migration is marriage migration, and - in time - adaptation or assimilation” (ibid., 103). In Westoff and Frejka’s (2007) data set, the authors state that total fertility rate is calculated and estimated in different ways, some more reliable than others (ibid., 787). Data on children ever born are based on population censuses and “are of reasonably good quality”, state the authors (ibid.).

We do not know with absolute certainty whether differences in total fertility rate or children ever born in data reflect differences in the timing of fertility between different religious denominations or countries of origin, or differences in completed fertility once all the women in the data sets reach the end of their reproductive cycles.

Analysis of fertility differential by religious affiliation relies on crude estimates and “data are not as detailed as needed for a thorough analysis over time and by cohort and age of mother”, according to Westoff and Frejka (2007, 787). Data on religious affiliation are rare to find in populations censuses and vital registration systems, and it is “even more exceptional to find fertility data by religious denominations”, authors state in their study (ibid.; see also Philipov & Berghammer 2007, 272). Comparability of groups of immigrants between countries, due to different practices of immigrants’ classification and naturalization laws, may be compromised, mention the authors, and state, “but it is not possible to determine the extent of the bias” (Westoff & Frejka 2007, 787).

Concluding Remarks

The above-mentioned quantitative data on fertility of Muslims in Europe reflect the heterogeneity of a population. Some are born on the continent in recent years, some having lived in Europe for generations and some for centuries. The data also reflect information about cultures and family norms in countries Muslims originate from as well as their host countries, and interaction between these. The data also reflect migration from pre-demographic transition settings to low fertility settings. They reflect health and reproductive systems people migrate from, and the systems they migrate to.

The data further reflect their social, economical and overall living conditions, education level, un-/employment levels, level of integration, rate of intermarriages, use of contraceptives, sex ratio, marriage and childbearing practices, rates of unplanned pregnancies, level of social mobility, level of ethnic consciousness to mention some other factors effecting fertility

differentials and trends described above, in addition to role of religiousness which is analyzed in the next part here. All these other factors are “hidden” in these data.

The main findings of the study done by Westoff and Frejka (2007) are that (a) fertility of Muslims in practically all the countries with available data is higher than that of members of the dominant religion; and that (b) fertility of immigrants from Muslim countries is higher than that of the native European population (ibid., 794). But the extent to which Muslim fertility exceeds that of non-Muslims is, by and large, uncertain and “probably less than assumed in the press and by some other observers” (ibid., 798).

Other findings are that (c) the effect of higher fertility of Muslim women on overall national fertility tends to be relatively small, because the proportions of Muslim women in most countries are small. Furthermore that (d) the fertility of Muslim women is declining in all countries for which data are available, and that with the passage of time Muslim fertility moves closer to the fertility of the majority of the population in the respective countries (Westoff & Frejka 2007, 795). The authors also observe that (e) where immigrants originate from a number of Muslim countries there is a range of fertility levels; and that (f) women of the same country of origin tend to have similar levels of fertility in different countries of destination (ibid.).

Having established that Muslims have a different fertility pattern than non-Muslims the study in the coming part investigates the importance of religion and intensity of religious values among Muslims and its possible link to higher Muslim fertility.

PART TWO: RELIGIOUSNESS AND FERTILITY

In the following, I present and analyze data on religiousness and family values in relation with fertility in order to investigate **hypothesis 2**: *Muslims in Europe are more religious than non-Muslims*, and **hypothesis 3**: *Muslims' higher levels of religiousness correlates with higher fertility rates*.

According to Lesthaeghe (1983), among essential components related to understanding interrelations of religion and fertility are value items such as religious belief and practices and in the degree of secularism, materialism, and individuation (referred in Kirk 1996, 372). To avoid the trap of circularity of basic logic, i.e. behavioral patterns are explained in terms of cultural preferences for that behavior, mentioned by Davis (1963), studies should include clear measures of values and norms that are independent of the behavior being studied (referred in McQuillan 2004, 49; Hirschman 1994, 216).

Islamic doctrines, as it will be elaborated on later, emphasize traditional family values. In order to measure the importance of religion among Muslims, Westoff and Frejka (2007), using combined data from European Value Study 1990, 1995-97, 1999-2000, conduct a comparative analysis of religiousness¹⁷. Comparing religiousness among women according to their religious affiliation by measures¹⁸ such as those who: (1) think religion is important, (2) are raised religious, (3) attend religious services at least once a month, (4) feel they are religious, (5) believe in God, (6) find comfort in religion, (7) believe in heaven, (8) believe in hell, (9) believe in the devil, (10) believe in sin, (11) believe in a soul, (12) who pray at least weekly, and (13) believe in importance of God, Muslim women show the highest proportion with the exception of variables being raised religious and attending religious services at least once a month. The latter can be due to the fact that in some communities Muslim women are not allowed to attend religious services in mosques. Muslim women are more religious, by almost every measure, than women of other religions, report the authors (*ibid.*, 798-799).

Westoff and Frejka's (2007) findings are similar when using data from European Social Surveys of 2002 and 2004 (Figure 2); when added frequency of prayer and a self-rating scale of religious self-image, Muslim women are found as the most religious (*ibid.*, 799).

¹⁷ Data shown in Figure 1 in Appendix.

¹⁸ It is unknown to me if there are respondents from non-Abrahamic religions (e.g. Hinduism, Buddhism & Sikhism) as these measures seem to mainly capture followers of Abrahamic religions (Christianity, Islam & Judaism). Furthermore, as Seltzer underlines, measuring intensity of religious belief is always a big problem for social scientists (Seltzer, e-mail to author, August 8, 2012).

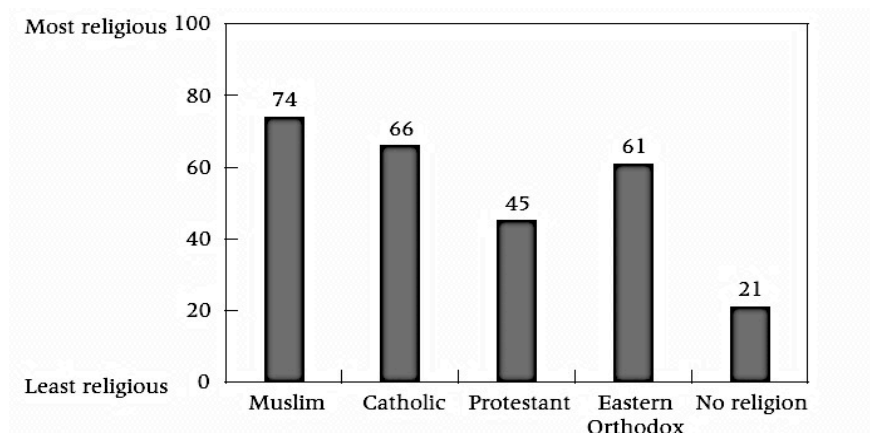


Figure 2 Mean score of European women aged 15-44 according to a summary measure indicating level of religious belief. Source: Combined samples of the European Value Study, 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007, 799).

Muslim men, though less religious than Muslim women, are also found to be more religious than men with other religious affiliations in a European Value Study (Westoff and Frejka 2007, 799).

The manifestation of traditional values in marital behavior could help understanding higher Muslim fertility. According to Westoff and Frejka (2007), Muslim women aged 18-44 in Europe have a higher proportion currently married (65 %) than the European average of 57 % (ibid., 796). The differences in fertility by religion are shown in Figure 3 for all women and for currently married women. Fertility, measured by mean number of children ever born, among married Muslims is similar to that of married Catholics and Protestants, and lowest among category “No religion”, while fertility for all women is highest for Muslims.

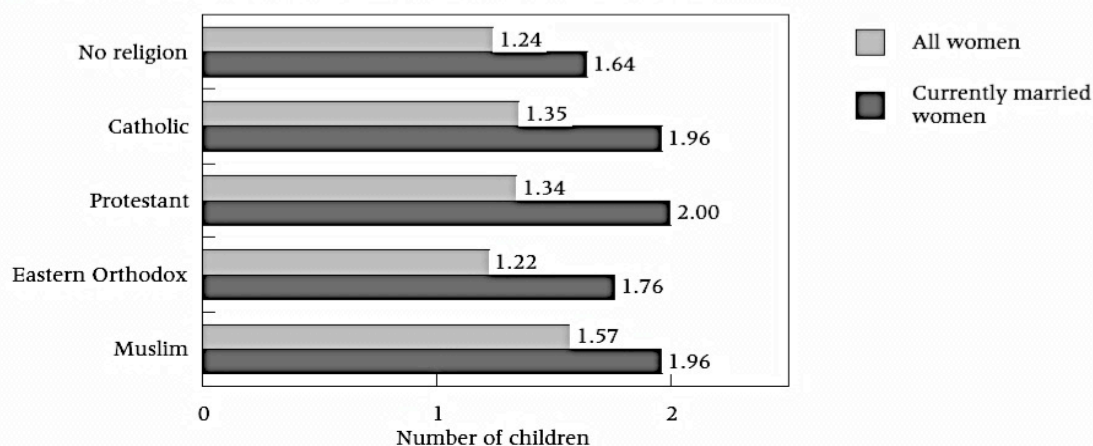


Figure 3 Mean number of children ever born to all women aged 18-44 and to currently married women by religion. Source: Combined samples of the European Values Study, 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007, 797).

Figure 4 shows mean number of children ever born to Muslim (1.57) and non-Muslim (1.3) women in Europe aged 18-44, a difference that is consistent at different ages. By the end of the reproductive age span, Muslims have had 2.4 births compared to 1.9 for non-Muslims.

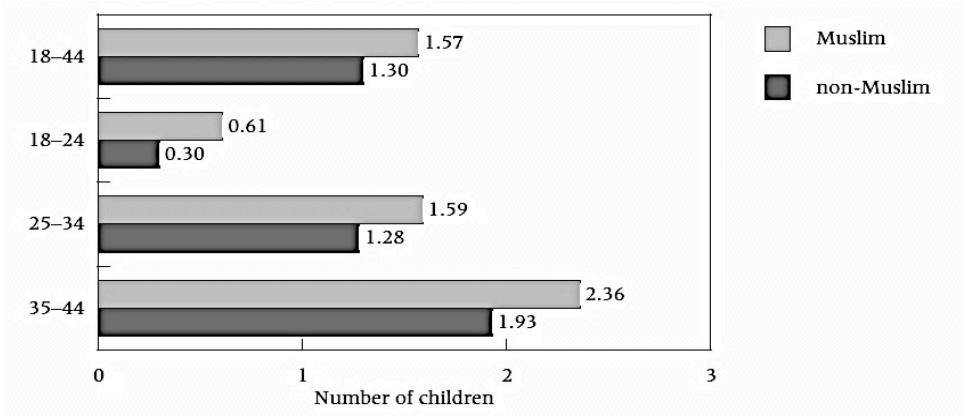


Figure 4 Mean number of children ever born to Muslim and non-Muslim women in Europe by age.
 Source: Combined samples of the European Values Study, 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007, 797).

Using an index of religiousness¹⁹, Westoff and Frejka (2007) find that more religious women have more children than those less religious and that the fertility of Muslim women, measured in children ever born, is slightly higher than for non-Muslims both for the more and for the less religious women (ibid., 799, see Figure 5).

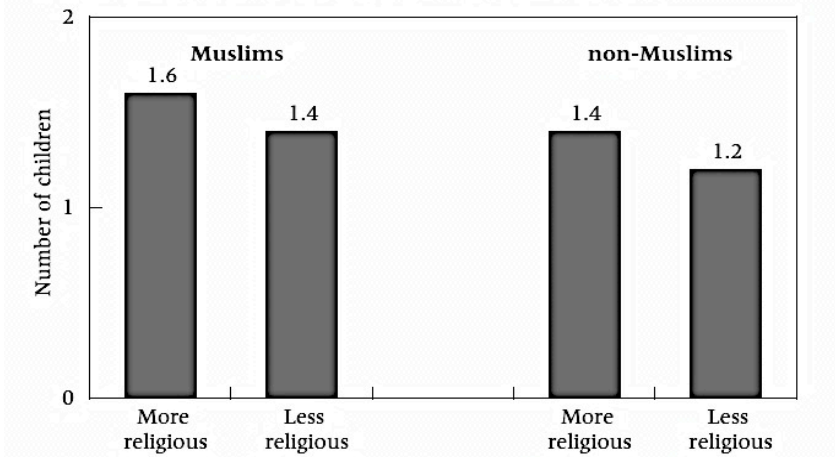


Figure 5 Mean number of children ever born to women aged 18-44 for Muslims and non-Muslims according to a summary measure of religious beliefs.
 Source: Combined samples of the European Values Study, 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007, 800)

The authors, using data from European Social Surveys of 2002 and 2004 find similar results; that fertility, measured in children ever born, is slightly higher among the more religious Muslims than among the less religious (Westoff & Frejka 2007, 800).

¹⁹ Individual items: sees self as religious, believes in God, believes in heaven, believes in sin, and receives comfort from religion. The five items were added in a summary index and dichotomized as close to the median as possible (Westoff & Frejka 2007, 799).

Family Values

Goldscheider (1999) directs attention to what he terms “broadly based norms of family control and gender relationships” (ibid., 312, cited in McQuillan 2004, 26). In his more recent publication, he states “Values that emphasize the subordinate role of women within households and gender hierarchies appear to be critical in sustaining high fertility levels (Goldscheider 2006, 46). He underscores the importance of understanding family values and gender roles in order to understand why religiosity is a major determinant of fertility levels among some religious groups with distinctive fertility patterns (ibid., 56).

Westoff and Frejka (2007), referring to data from European Values Study that includes questions about family values and gender roles, report that a comparison of the distributions of responses to such questions by religious denomination shows that Muslim women aged 18-44 consistently espouse traditional attitudes (ibid., 801). The authors observe that “Muslims are at the most conservative extreme on all of the items”, though some ambiguity might exist with any single indicator (ibid.). Muslim women are more likely than women of other religions to: (1) disapprove of women as single parents, (2) prefer to have a boy if there was only one child, (3) feel that a housewife’s role is just as fulfilling as paid work, (4) feel that men have more of a right to a job if jobs are scarce, (5) feel that the family is an important institution, (6) think that marriage is not an outdated institution, and (7) feel that a woman has to have children to be fulfilled (ibid.). The authors, constructing a summary index of these items into a distribution of five points²⁰, report finding a positive association between pro-family value index and having ever been married (ibid.).

“The proportion of women ever married is strongly related to family values especially among Muslim women”, state the authors (Westoff & Frejka 2007, 801). The same pattern was found when women of age groups 18-29 and 30-44 years were separately examined. The association between marriage and family values is also clearly present among women of other religions, although strongest for Muslims (ibid.).

Westoff and Frejka (2007) also examine the number of children ever born by the score of the same index of family values²¹. They find a “strong positive linear association with pro-family values for each of the four religions” and that “the average number of children ever born is very similar across religions at each level of the index” (ibid., 801). They note that what distinguishes Muslim women is that the family value index is about 20 percent higher for them than for

²⁰ Data shown in Figure 6 in Appendix.

²¹ Data shown in Figure 7 in Appendix.

non-Muslims; 42 percent of the Muslim women are in the highest two categories of the index compared with 8 percent of Protestants, 15 percent of Catholics, 16 percent of women with “No religion”, and 17 percent of Eastern Orthodox women (ibid.).

In the case of Albania, Westoff and Frejka (2007) note that “the evidence indicates that Albanian Muslim woman are less religious than Muslim women living elsewhere in Europe on virtually every measure of religiousness”, and that “as elsewhere, the fertility of the more religious women is higher” (ibid., 806).

Multivariate Analysis

In a binomial logit regression multivariate analysis (Table 14) with the dependent variable defined as the dichotomy of women ages 18-44 with 0-1²² children ever born versus those with two or more controlling for covariates as age, marital status, education, income, religiousness, and family values, Westoff and Frejka (2007) find the odds ratios for Muslim women to be the highest even with the imposition of successive controls. This association decreases and finally becomes non-significant with progressively adding controls for religiousness and family values (ibid., 805). The covariates of religiousness and family values show significant associations with fertility (see models D and E in Table 14) (ibid.). Though income is excluded from this analysis, due to lack of information for 40 percent of the total number of women, there is found no significant association with fertility in an earlier analysis, write Westoff and Frejka (2007, 804).

Table 14 Odds ratios of having two or more children, by religious denomination with various controls.

	A	B	C	D	E
No religion	1.00	1.00	1.00	1.00	1.00
Muslims	1.59	1.90	1.77	1.41	NS
Catholics	1.30	1.46	1.23	NS	NS
Protestants	1.50	1.54	1.51	1.31	1.32
Eastern Orthodox	1.14	NS	NS	NS	NS
Controls					
Age		1.35	1.41	1.37	1.37
Age squared		0.99	0.99	0.99	0.99
Ever married		11.67	14.42	15.44	14.81
Years of education			0.90	0.90	0.90
Religiousness ^a				1.07	1.06
Family values ^b					1.14
Number of women	31,998	31,998	23,513	14,794	14,794
Chi squared	12,144	12,250	10,075	6,637	6,671
R ²	0.274	0.277	0.310	0.324	0.326

Note: NS= non-significant at 5 percent level.

^a Based on responses to belief in God, in heaven, in sin, and receiving comfort from religion.

^b Items mentioned in section Family Values.

Source: Combined samples of the European Values Study, 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007, 804).

²² This criterion was selected because of the importance of replacement-level fertility (2.1) in the European context (Westoff & Frejka 2007, 804). Note my third suggestion for further research in the last page.

Table 15 focuses on the comparative importance for fertility of religiousness and family values for each religion. More religious Muslims show a 30 percent greater likelihood of having two or more children, and religiousness is mainly a factor for Muslim women (Westoff & Frejka 2007, 805).

Table 15 Odds ratios of having two or more children, by religious denomination.

	Muslims	Catholics	Protestants	Eastern Orthodox	No religion
Religiousness (4-item scale) ^a	1.30	1.09	NS	NS	1.07
Family values (5-item scale) ^b	1.30	1.22	1.30	1.33	1.25
Education	NS	0.85	0.93	0.80	0.91
Age	1.43	1.99	1.74	1.61	1.88
Age squared	0.99	0.99	0.99	0.99	0.99
Number of women	293	5,972	2,967	2,155	3,517
Chi squared	96	2,120	893	664	859
R ²	0.239	0.256	0.217	0.223	0.179

Note: NS= non-significant at 5 percent level.

^a Based on responses to belief in God, in heaven, in sin, and receiving comfort from religion.

^b Items mentioned in section Family Values.

Source: Combined samples of the European Values Study, 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007, 805).

A similar association between family values and fertility is observed among Muslim women, but also for women of the other religions (Westoff & Frejka 2007, 805). The education measure is negatively associated with fertility except among Muslim women, though “when education is included without the other controls, it shows a similar association with fertility among Muslims” (ibid.).

The finding that Albanian Muslims are less religious than other Muslims with a below replacement level total fertility rate for 2004 at 1.8 per woman is also an indication of an association between religiousness and fertility.

The association between religiosity and fertility, once controlling for age, education, income, marital status and other factors is found by a relatively few existing recent empirical studies in Europe (Frejka & Westoff 2006, 7).

Adsera (2004) finds that in Spain according to the 1985 Spanish Fertility Survey (SFS), family size was similar among practicing and non-practicing Catholics. A decade and half later, according to the 1999 SFS, practicing Catholics portrayed significantly higher fertility than others. In the context of lower church participation, religiosity acquired a more relevant meaning for demographic behavior. The small group of conservative Protestants and Muslims had the highest fertility in Spain (referred in Frejka & Westoff 2006, 7; Kaufmann 2009, 3).

Philipov and Berghammer (2007) study the impact of several religious measures on fertility ideals, intentions and behavior in 18 European countries. They report a correlation between measures of religiosity and fertility behavior in virtually all countries studied (*ibid.*, 281).

Sobotka and Adgüzel (2003) find that despite ongoing secularization, religiosity remains an important factor in the spatial differentiation of fertility, family formation and dissolution and living arrangements in the Netherlands (referred in Frejka & Westoff 2006, 8).

Srikanthan and Reid (2008), though from a different angle, also point to the influence of religion when they state, “a woman’s ability and willingness to utilize contraception is affected by whether she identifies with orthodox, traditional, or liberal interpretation of her religion” (*ibid.*, 136).

Data Quality

Westoff and Frejka’s (2007) data to investigate influence of religiousness on fertility are based on different country surveys, particularly the European Values Study. Since the number of Muslims in the European Values Study was small, they combine three surveys conducted between 1990 and 2000, which yield a total of 477 Muslim women aged 18-44 living in Europe excluding Albania. How representative they are of Muslim women living in Europe is unknown (*ibid.*, 795). Most of those included in the surveys live in Macedonia, Bosnia, Bulgaria, Russia, and Belgium, with smaller numbers in Britain, France, Germany (where most European Muslims live) as well as several other Western countries. The authors state, “this is a serious problem, although the samples of 280 Muslim woman in the European Social Surveys of 2002 and 2004 seem more representative” (*ibid.*). Findings are therefore yet to be qualified.

Regarding data to analyze religiousness and fertility the authors have derived a crude substitute from the household roster and from a question about children who no longer lived in the household as in European Social Surveys there was no direct question on the number of children ever born (Westoff & Frejka 2007, 800). The authors, based on a comparison with data from European Values Study, observe that this measure seems to underestimate the number of children ever born (*ibid.*).

Concluding Remarks

Based on the above mentioned data, Westoff and Frejka (2007) find that (1) Muslim women are much more religious and (2) subscribe more to family values than do non-Muslim women, and that (3) higher proportions of Muslim women are married. The authors also find that (4) fertility

is directly related to religiousness for both Muslims and non-Muslims (ibid., 806). They conclude that (5) the odds of having at least two children are significantly greater for women who are religious and who hold strong family values, with strongest associations found among Muslim women (ibid.).

As previously mentioned, the term “Muslim” contains such heterogeneity that usage of such general term can be difficult to justify. Muslims in Europe, as elsewhere, are differentiated on a variety of dimensions such as ethnicity, nationality, class and generation (Zubaida 2003, 88).

This study has so far been concerned with the dependent variable, namely actual fertility behavior of Muslims and its relationship with levels of religiousness. The finding of the association between religiousness and fertility for both Muslims and non-Muslims and higher fertility rates among Muslims than non-Muslims results in a need for further search for an explanation. The first finding is an indication that it is not religion *per se*, but rather family values and religiousness that correlate with fertility, while the latter finding could be understood as a need for closer look at Islam and its doctrines.

This understanding is in line with the particularized theology theory. An alternative approach, namely the minority status theory, which would be based on social status and religious identity of the Muslims, could possibly give a more comprehensive understanding of the influence of Islam (see McQuillan 2004, 47). The example of the least religious among Muslim women in Europe with below replacement level total fertility rate of the Muslim majority Albania could indicate this.

In the next part, I investigate the single “common feature” of Muslims, namely their religion Islam. In this part of the study, I apply an interpretive approach to fertility within an Islamic frame of reference. In the search for better understanding of the role and the influence of Islam I investigate the Islamic doctrines regarding reproductive health, hereunder marriage, contraception, lactation and abortion. I will then advance to an analysis of how these doctrines are interpreted. At this stage I assume that God’s own words and teachings are the same, no matter time or place.

PART THREE: ISLAM AND FAMILY PLANNING

Islam is the second largest religion in the world with, according to Pew Research Center's estimates, 1.6 billion followers (2011, 13). Roudi-Fahimi (2004) describes Islam as "a religion that provides guidance for worship as well as a social system for Muslims' public and private lives" (ibid., 3). Srikanthan and Reid (2008) define Islam as a "comprehensive system used to regulate spiritual and political aspects of individual and communal life" (ibid., 132). Central to this belief system is God as almighty and all-knowing creator, Mohammad, ca. A.D. 570-632, as his last and final prophet and messenger.

For Muslims, the Quran^{23,24} is the word of God that was revealed to Mohammad by the angel Gabriel, collated and codified by the order of third Caliph²⁵ about A.D. 650 (see Glasse 1991, 230)²⁶. Besides the word of God, sayings and deeds of Mohammad and his companions, also called Hadith/Sunnah²⁷ (biography) are considered as the foundation of the Islamic law or Sharia (Jones & Karim 2005, 40). Two other additional sources of Islamic jurisprudence, subordinated to the Quran and Hadith are consensus of Islamic jurists and analogy (Roudi-Fahimi 2004, 3). Islamic rulings/fatwas, given by Islamic scholars or jurists have to be drawn from the Quran and Hadith; and if that is not possible, the ruling can be based on other sources but must fall within the spirit of the Quran and Hadith. Human actions are in Islam classified as obligatory, recommended, permitted/halal, disapproved but not forbidden, or forbidden/haram (Srikanthan & Reid 2008, 132).

Throughout Islam's over 1400 years history, there have developed different interpretations and disagreements on the validity of sources or methodologies used, and thereby different schools of jurisprudence, usually named by the leaders who established them. There are two main groups, namely Sunnis and Shias, and some other groups with own Messiah/Mahdi after Mohammad such as Ahmadiyyas, and those with a more spiritual approach to Islam such as the Sufis²⁸.

²³ Arabic word which literally means recitation.

Source: <http://www.britannica.com/EBchecked/topic/487666/Quran> Accessed: May 2012.

²⁴ The Quran/Koran used in this study is translated by N. J. Dawood. See References for "The Koran".

²⁵ Ruler of the Muslim community. Source: <http://www.britannica.com/EBchecked/topic/89726/caliph> Accessed: May 2012.

²⁶ Origin of the Quran is not known. Schimmel (1984) finds no evidence for the original Quranic text, and states that apart from the recent Quran copy discovery in Sanaa, the oldest findings date back to eight century (ibid., 4). Findings suggest that it was written over a period of few hundred years (Rippin 1985, 155; see also Quran experts Lings & Safadi's work *The Quran* 1976).

²⁷ Sunnah predates Islam, referring to the word of revered groups or individuals (Brown 1996, 8).

²⁸ Many Muslims hold firm views on who counts as a Muslim and who does not. While in some Sunni countries such as Egypt and Morocco, Shias are not considered as Muslims, in Iraq and Lebanon, Shias are considered as fellow believers. Ahmadiyyas are not considered Muslims in Pakistan and Indonesia but then Sufis are considered as Muslims in Bangladesh, Pakistan and Afghanistan but not recognized as Muslims by many in Indonesia, Morocco and Egypt (Pew Research Center 2012, 83).

The Sunnis primarily reply on the Quran and Sunnah/Hadith and have four main schools: the Hanafi, the Maliki, the Shafei and the Hanibali. The Shias are devoted to Ali who was the cousin and son-in-law of Mohammad, and particularly value traditions related to or reported by him and his descendants from Fatima, Mohammad's daughter. While Sunnis value traditions related to Mohammad's companions, Shias reject those who disagree with Ali. The Shias also follow the Quran and Hadith; their "differences with Sunnis were not always scholarly; politics and rivalries also influenced the relationship", state Jones and Karim (2005, 44). The Zaydi, the Jafari/Twelvers, and the Ismaili can be mentioned as three main branches here.

The main difference between Sunnis and Shias is Shia's inclusion of Ali's, to this day his descendants' traditions as part of consensus/ijtihad or the consensus of their own community (Jones & Karim 2005, 44; see also Vogt 2005, 208). Consensus is the systematic intellectual search and insight into the interpretation and development of judgment based on specified sources and following strict procedures and set approaches by qualified scholar or jurist (Jones & Karim 2005, 41). For Sunnis "doors of consensus" was closed by the 15th century, as they believe consensus could result in questionable and doubtful interpretations; an opinion that has prevailed among Sunnis since then (Vogt 2005, 90). Islam in Iran, that is subject for case study later on, belongs to the Shia school.

Since there is no single centralized authority with monopoly on understanding or interpreting the Islamic law there are differences of opinion on issues among schools and within a school. The Quran itself admits some of its verses are "precise in meaning" and others "ambiguous", and that "no one knows its meaning except God" (Verse 3:7²⁹). Islam is not a "monolithic complex that transcends culture, time and space", underlines Keefe (2006, 419). Sheikh al-Sharabassi of al-Azhar³⁰ (1964) observes:

Islamic law deals with matters that change with the changing conditions of man or with time and place, it does not lay down a fixed, uniform rule or a rigid, definitive formula but rather leaves this to the opinion of the more discerning scholars of the community within the framework of Islamic jurisprudence (cited in Jones & Karim 2005, 41).

This flexibility allowed Islamic law and clergy ruled Iran's stand against family planning program to be completely reversed and turned to one of the most successful programs only ten years after it was dismantled and called religiously prohibited with reference to the same sacred

²⁹ To avoid repetitions I will henceforth use the numerical reference without using the word "verse".

³⁰ Al-Azhar University is considered the chief center of Islamic and Arabic learning in the world.

Source: <http://www.britannica.com/EBchecked/topic/46851/al-Azhar-University> Accessed: May 2012.

scriptures (see Obermeyer 1994, 47; Hoodfar & Assadpour 2000, 20). This change of mind by the same clergies will be elaborated on in part four of the study.

Islamic Doctrines On Reproductive Health

According to Lindstrand et al. (2006), “a number of different, interacting phenomena, sometimes mutually reinforcing, sometimes not, constitute the reality of which the level of fertility is a consequence” (ibid., 257). Bongaarts (1978) has identified practices related to marriage, contraception, lactation and induced abortion as main proximate determinants of fertility (referred in Jones & Karim 2005, 40). In the following, I will elaborate on the Islamic doctrines’ approach to these proximate determinants.

Marriage, Lactation, Contraceptives And Abortion

Marriage is considered as a sacred institution, and though divorce is possible it is strongly discouraged unless there is no alternative. Marriage is part of Sunnah and every Muslim is expected to get married, though one may postpone marriage due to personal and financial reasons (Jones & Karim 2005, 45). Self-imposed permanent celibacy was solemnly prohibited by Mohammad: “O young men, those among you who can support a wife should marry, for it restrains eyes from casting (evil glances) and preserves one from immorality; but those who cannot should devote themselves to fasting for it is a means of controlling sexual desire” (ibid.; Muslim³¹, Book 8, # 3231). The Quran itself has several references to marriage: “By another sign He gave you spouses from yourselves, that you might live in peace with them, and planted love and kindness in your hearts (30:21), and “It is He who created you from single being. From that being He created his mate, so that he might find comfort in her.” (7:189), and “God has given you wives from among yourselves and, through your wives, sons and grandchildren.” (16:72). These verses are understood as underlining the importance of tranquility and peace that is achieved through marriage between the husband and the wife. Furthermore, while procreation is expected, sexual relationship in the marriage does not always need to result in children, and sex may be used for pleasure (Srikanthan & Reid 2008, 132; Roudi-Fahimi 2004, 3).

When it comes to the age of marriage “there are general references in the Quran regarding the age of marriage and the age of sound judgment, without specifying a fixed age” (Jones & Karim 2005, 46); particularly the wife is expected to be able to run a household and raise children. A girl’s “free consent” would also be missing if the girl were too young.

³¹ Muslim (A.D. ca. 817-875) was one of the chief authorities on Hadith.
Source: <http://www.britannica.com/EBchecked/topic/399402/Muslim-ibn-al-Hajjaj> Accessed: May 2012.

Abu Hanifa³² suggested an age of marriage of eighteen years for boys and seventeen for girls, which was adopted in the Ottoman Family Law before the First World War (Jones & Karim 2005, 46). Mohammad's marriage with his third and most favored wife Aisha bint Abi Bakr, titled by Sunnis as "Mother of the Believers", can be understood as opening for a lower age for marriage. Bukhari³³ reports: "The Prophet wrote the (marriage contract) with Aisha while she was six years old and consummated his marriage with her while she was nine years old and she remained with him for nine years (i.e. till his death)" (Bukhari, Book 62, # 88). The Islamic Republic of Iran, for instance, in order "to eradicate moral corruption and other social ills", sets the legal age of adulthood to nine for girls and fourteen for boys. It does not stipulate a minimum age of marriage, though spouses are expected to have reached the age of puberty, which is usually understood to occur by the age of thirteen for women (Hoodfar & Assadpour 2000, 21).

Since the duration of breastfeeding is mentioned in the Quran, the theme is not a debated issue among Muslim jurists, and therefore endorsed by all schools of thought (Jones & Karim 2005, 46). The Quran's encouragement of breastfeeding, together with Mohammad's discouragement of pregnancy during the lactation is understood as endorsement of child spacing (ibid.). The Quran states: "Mothers shall give suck to their children for two whole years if the father wishes the sucking to be completed" (2:233). Omran (1992) mentions this period as a justifiable reason for using contraception (referred in Roudi-Fahimi 2004, 3).

On the issues of abortion, there are several opinions among different schools varying from unconditional permissibility to unconditional prohibition. Valid reasons for abortion may include "unacceptable risk of maternal mortality, a deformed or non-viable fetus, rape, and economic indications" (Srikanthan & Reid 2008, 133).

Justification For Family Planning And Contraception

There is no direct reference to birth control or family planning in the Quran, and therefore not prohibited. The great majority of Islamic scholars believe that family planning is permissible (Roudi-Fahimi 2004, 3; Srikanthan & Reid 2008, 132). The scholars have deduced support for family planning from the following verses (Omran 1992, referred in Roudi-Fahimi 2004, 3): "God desires your well-being, not discomfort" (2:185), "And laid on you no burdens" (22:78), and "God wishes to lighten your burdens, for man was created weak" (4:28).

³² Muslim jurist and theologian (A.D. 699-767) whose systematization of Islamic doctrine was acknowledged as one of the four schools of Islamic law. Source: <http://www.britannica.com/EBchecked/topic/2209/Abu-Hanifah> Accessed: May 2012.

³³ Bukhari (A.D. 810-870) is viewed as one of the greatest compilers and scholars of Hadith. Source: <http://www.britannica.com/EBchecked/topic/83951/al-Bukhari> Accessed: May 2012.

Omran (1992) suggests that if excessive fertility leads to proven health risks for mothers and children, or economic hardship and embarrassment for the father, or the inability of parents to raise their children properly, Muslims would be allowed to regulate their fertility in such a way as to reduce these hardships (referred in Roudi-Fahimi 2004, 3; Jones & Karim 2005, 47).

The practice of coitus interruptus, or withdrawal, which is considered synonymous with birth control, is extensively debated in Islam. The practice is mentioned in various Hadiths, either as sayings of Mohammad or as receiving his tacit approval (Jones & Karim 2005, 47). The majority of scholars belonging to Sunni schools of the Hanafi, the Maliki, the Shafei and the Hanbali and Shia branches of the Zaydi, the Jafari and the Ismaili agree that the practice is permitted with the consent of the wife (ibid.). It is important to note that contraception may only be used within marriage as sex itself is only permitted within marriage, and that the use is mostly limited to temporary methods. Sterilization, being irreversible, as a family planning method is considered as “interfering with God’s will and attempting to change what God has created” (Roudi-Fahimi 2004, 5; Srikanthan & Reid 2008, 132).

Opposition To Family Planning And Contraception

Opponents of family planning and contraception, Islamic jurists and others find support for their views in the Quran suggesting children are adornment of life, reproduction is the purpose of marriage, family planning contradicts the “will of God” and it doubts God’s ability to provide. They refer to Quranic verses such as: “Losers are those that in their ignorance have wantonly slain their own children and made unlawful what God as given them, inventing falsehood about God” (6:140), “Satan said: I shall order them to tamper with God’s creation” (4:119), “Yet you cannot will, except by the will of God, Lord of the Universe” (81:29), “You shall not kill your children for the fear of want. We will provide for them and for you” (17:31), and “Women are your fields: go, then into your fields when you please. Do good works, and fear God” (2:223).

Maududi, a highly respected religious scholar from the Deobandi Sunni orthodox Islam, founder of the political party Jama‘at-i Islami/Islamic Society in Pakistan was a fierce attacker of family planning. According to Maududi (1969):

The birth control movement is a plot against Islam; to import birth control into developing countries would be tantamount to ushering in moral malaise ranging from the breakdown of the family to sexual promiscuity and sexually transmitted disease; and women would feel free to join the labour force and abandon their traditional roles (cited in Jones & Karim 2005, 51).

The opponents are especially against family planning when it becomes community or government policy, since they view a large population an asset and strength rather than liability. Furthermore, they argue that such programs, “having originated in the West, represent a conspiracy to reduce the number of Muslims and diminish their power” (Roudi-Fahimi 2004, 5). In his widely available and popular reading in Pakistan, *Birth Control*, Maududi (1968) states that “the pattern of life that Islam builds can have no place for birth control as a social policy”, and that “The Islamic culture strikes at the roots of the materialistic and sensate view of life and eliminates the most fundamental urges of human nature, that is, procreation” (ibid., 77).

Concluding Remarks

Modernist and reformist would argue that the sacred scriptures are not static proscriptions and should be contextualized and interpreted, while orthodox and literalists would argue for sacred scriptures as divinely proscribed and should hence not be altered or interpreted³⁴. Both camps find arguments in the basic belief that Islam is a religion for all time. Historically and due to Islam’s political context the orthodox and literalists have been dominant (see Obermeyer 1994, 43).

It is tempting to conclude that for a layman/-woman it must be difficult to orientate him-/herself among different schools and understandings, not mentioning to know where Islam actually stands in regard to family planning, and more specifically the use of contraceptives. Srikanthan and Reid (2008) state that “not all adherents of Islam are aware that contraceptive use is permitted” (ibid., 135). Orientation is further demanding due to textual ambiguity and interpretive flexibility of the sacred scriptures, and more importantly the lack of recognized central authority in Islam. Bowen’s (1997) words are illustrative and revealing:

Unlike most Roman Catholics ... Muslims are not well acquainted with Islam’s position on these issues. This can be attributed partly to the gap in communication between the educated religious leaders (ulama) and the local or village religious leaders. Material mastered and taught by the ulama is often simplified and reduced by local religious leaders into lowest common denominators. Thus, family planning is forbidden, and abortion is forbidden. They are not aware of *the minority opinions*, the methods of juridical reasoning, or exceptions (ibid., 176, emphasis added).

After this presentation of Islamic doctrines, I will now investigate Islam’s influence and role as fertility determinant.

³⁴ According to Pew Research Center (2012), Muslims in most of the 39 countries in the conducted survey, covering about two-thirds of all Muslims in the world, tend to agree that there is only one true interpretation of Islam’s teachings, though this view is not unanimous (ibid., 85). This could indicate widespread lack of knowledge about existing interpretation possibilities among Muslims, and need for popularizing this fact.

PART FOUR: THE ROLE OF ISLAM AS FERTILITY DETERMINANT

In order to investigate **hypothesis 4: *Islam influences fertility rates***, the study draws on the case of the Islamic Republic of Iran, illustrating how Islamic scholars adjust Islamic teachings to the social, political and economical context, earlier termed as “de facto Islam”. This part relies on McQuillan’s (2004) approach regarding when religion influences fertility, as described in Theoretical Framework part. I will in the Discussion and Conclusions part come back to generalizability and applicability of the findings. At this stage, I investigate the ongoing debate, in the literature, regarding the role and influence of Islam on fertility behavior; which could be understood as theoretical implications of the findings in the previous part, namely textual ambiguity and interpretive flexibility of the sacred scriptures in interplay with the lack of recognized central authority in Islam.

Kirk (1977), referring to Muslim countries, argues that “factors contributing to high birth rates generally in these nations are linked in several ways with Moslem influences”, which he describes as strongly “conservative”, “fatalistic” and “pronatalist” (ibid., 146-147). Seitz (1995) states “religion is a powerful force in rural societies and some religions advocate large families. The influence of Islamic fundamentalism is strong in some Islamic states and it is a major force discouraging the use of contraceptives” (ibid., 35). Norris and Inglehart (2004) point out that strengthening the family, to encourage people to have children, to encourage women to stay at home and raise children, and to forbid abortion, divorce, or anything that interferes with high rate of reproduction is one of the most central injunctions of virtually all traditional religions (ibid., 22-23).

Obermeyer (1994) points to several interrelated factors when explaining high Muslim fertility in the Muslim countries in the Middle East, such as low female education, low contraceptive use, belief in male dominance, cultural preference for sons, and the high status favored upon mothers of many children (ibid., 63). Johnson-Hanks (2006) argues that Islam’s “role is not uniform enough to have equivalent effects on fertility across different social, economic, or demographic context” and that “the real story is local”, underlining Islam’s role in making social worlds and local politics (ibid., 14; see also findings e & f in part one here).

Esposito (1998) also stresses the importance of local context and cultural traditions and argues that “Islam has legitimated and reinforced traditional pronatalist beliefs in areas where social conditions made large families desirable” (ibid., 513). Knodel et al. (1999) write about Islam’s influence on fertility behavior among Thai Muslims and refers to Islam’s “clear pronatalist

influence” within a setting in which social and economic changes encourage lower fertility (ibid., 163). They claim, “the national and local context conditions the extent and perhaps nature of Islam’s influence” (ibid.). Keefe (2006) argues that Islamic values and reasoning are fashioned pragmatically by Muslim Africans of Tanzania. She finds that perceptions of Islamic rules about family planning are inconsistent and that individuals are able to define their own approach by manipulating the rules and resisting them (ibid., 418).

Omran (1992) argues that Muslim countries are predominantly developing, and that they, like non-Muslim developing countries, experience late fertility transition (ibid., 67). Karim (1997) analyzes fertility patterns between geographically proximate Muslim and non-Muslim countries, and points to socioeconomic and demographic determinants, not religious ones (ibid., 1). Hosseini and Haghshenas (2009), in a study of 33 Muslim countries based on data from United Nations Development Programme and United Nations Population Division for 2007 and 2008 write that “socio-economic changes and improvement in human development indices have significant effects on fertility decline and then convergence of Muslim countries with world fertility levels and trends” (ibid., 8). They conclude that “there isn’t tendency in Islamic teaching to prevent the attainment of very low fertility”, with reference to below replacement level fertility in Iran, Albania and Tunisia (ibid.). While Kaufmann (2009) finds that both Muslim religiosity and support for Sharia are associated with higher fertility in Muslim countries (ibid., 39). McQuillan (2004) highlights the lack of consensus in Islam regarding issues related to sexuality and childbearing that leads to paradoxical results where Islam is the dominant religion such as persistence of high fertility in Saudi Arabia in contrast to low fertility in Iran (ibid., 42).

Lappegård (2000), referring to Vogt (1995), states that there are many aspects of Islam that encourage high fertility and having many children is seen as a blessing (Lappegård 2000, 31). She found that women immigrating to Norway from Muslim countries experience the slowest pace of fertility decline with respect to the duration of their stay (ibid., 37-38; see also Østby 2004, 127). Coleman (1994) in his study of total fertility rate of several immigrant populations in Europe, argues that “many aspects of Islam encourage the persistence of high fertility”, and that “in the Western context the most outstanding factor is the position of women: their low level of education, and their low workforce participation rates” (ibid., 124, referring to Hollis 1982). Whereas McQuillan (2004) underlines the need to understand the importance of social conflict in reinforcing the internal solidarity of groups, in order to understand “the puzzling persistence of religious differentials in demographic behavior” of minorities with religion as identity marker (ibid., 47). In a study of less successful Iranian family planning program among Afghan refugees

and other ethnic groups compared with low-income Iranians, Tober et al. (2006) find that ethnicity and religious interpretation differences impact reproductive behavior (ibid., 60 & 68).

According to Goldscheider (2006), who writes about high Muslim fertility in Israel, one needs to pay attention to family values and gender roles rather than formal religious dogma in order to understand why religion is a major determinant of fertility levels (ibid., referred in Westoff & Frejka 2007, 800). He states that “values that emphasize the subordinate role of women within households and gender hierarchies appear to be critical in sustaining high fertility levels” (Goldscheider 2006, 46, cited in Westoff & Frejka 2007, 800). According to Jones (2006), patriarchy and the limitation of female autonomy in Islam directly and indirectly increase fertility levels (ibid., 252). Immerman and Mackey (2003) also argue for the influence of value system related to the role of women within a religious community on reproductive choice of women (ibid., 377). They mention acceptance of female clergy in a religious community as a marker for gender egalitarianism and underline the lack of such acceptance in, among others, Islam, where clergy is reserved for men. They conclude that such “denominations are associated with high(er) fertility levels” (ibid., 398).

Obermeyer (1994) believes that applying criteria derived from a feminist perspective to the analysis of reproductive choice in Islam is complicated because of “existing polarization of views on relationship between Islam and women’s status”; she further states that “many discussions of women’s health and fertility in Islamic countries link adverse outcomes to the oppression of women, which in turn is attributed to the way in which Islamic law defines woman’s status” (ibid., 41). Obermeyer (1992) “rejects the view that there is any necessary connection between Islam and women’s autonomy”, McQuillan (2004) observes, and writes “the nature of the relationships among Islam, woman’s role, and high fertility – what Obermeyer (1992) has termed the “fateful triangle” – is a focus of continuing debate”. McQuillan (2004) argues that religious values are most likely to matter when “religious institutions have the means to communicate values to their members and to institute mechanisms to promote compliance and punish nonconformity” (ibid., 30-32).

Building on McQuillan’s (2004) argument and using the Islamic Republic of Iran as an example, I will in the following demonstrate the role Islam can play. Islam here refers to key actors with interpretation authority and power, namely scholars and clerics. Classical definition of power by Weber (1947/1997) is the ability to meet one’s goals over the objections of others (ibid., 152). But Islam also refers to its sacred scriptures as well as its organizational structure. By using the term Islam in this way, I emphasize the interplay between Islamic scriptures’, as shown in part

three, justifying opposite stands and thereby legitimizing the clerics' at anytime choice of interpretation which in its turn is related to the lack of recognized central authority in Islam.

Islam plays the role Islam chooses to play - what I earlier termed as “de facto Islam”. This role is not fixed, but rather adjusted to social, political and economical context Islam finds itself in. In Saudi Arabia and among Muslims of Thailand, pronatalist norms and values are promoted and reinforced; while in Tunisia, Yemen and Djibouti the use of contraceptives is supported (Faour 1989, 255-261; Roudi-Fahimi 2004b, 7; Knodel et al. 1999, 161; Obermeyer 1994, 45).

The basics of the argument made here is about role of Islam once given access to communication institutions and state apparatus that enables Islamic clerics in Iran to efficiently communicate and enforce their teachings (see McQuillan 2004, 49). In Iran, Islam played a decisive role in at one point increasing and later decreasing fertility rates.

“De Facto Islam”: Pronatalist And Antinatalist

The first official family planning policy in Iran was introduced under Reza Pahlavi in 1967, followed by a number of Family Protection Laws in the late 1960s and 1970s (Hoodfar & Assadpour 2000, 19). The family planning program targeted mainly the urban population and primarily women, and lacked technical and financial resources. Largely the network of the Ministry of Health clinics and hospitals handed out the pill. The Family Laws “curbed men’s unilateral right to divorce at will and limited the practice of polygyny by requiring either the courts authorization or the first wife’s permission” (ibid., 19, referring to Sanasarian 1982, and Aghajanian 1991 & 1996). Best interest of a child would be decisive in a custody case following a divorce, ending automatic denial of custody to a divorced mother, divorced mothers would be entitled to child support, women’s right to file for divorce and women were encouraged to take public employment, the minimum age at marriage was raised to 18 and abortion was liberalized (ibid., referring to Mir-Hosseini 1993; see also Obermeyer 1994, 46, referring to Momeni 1981).

The family planning program as well as reform of Family Laws were all sharply rejected and called un-Islamic by the Islamic opposition led by Khomeini. The mullahs³⁵ used their Friday prayer sermons and their mosques to criticize and denounce family planning as “an imperialist plot to reduce the number of Muslims in the world and to subjugate Muslim countries” and the use of contraceptives was denounced as forbidden/haram (Hoodfar & Assadpour 2000, 19). The

³⁵ Mullah is one of several titles used in Islam that is synonyms with religious leader.
Source: <http://www.britannica.com/EBchecked/topic/396814/mullah> Accessed: May 2012.

Islamic opposition advocated a return to a strict interpretation of scriptures concerning the status of women (ibid.; see also Obermeyer 1994, 46).

By and large, with all its shortcomings and criticisms, the short-lived program was successful. Between 1966 and 1976 the total fertility rate declined from 7.7 to 6.3 children per woman, the mean age at marriage increased from 18.4 to 19.7 years, and modest rise occurred in education, and employment levels for women (Obermeyer 1994, 46, referring to Aghajanian 1991).

After the Iranian revolution in 1979 against the autocratic ruler, and establishment of the Islamic Republic, Khomeini, now in position and as the Supreme Leader “called on women to reproduce and find satisfaction in motherhood” (Tober et al. 2006, 52). Islamic leaders with necessary justifications from the Quran and Hadith reversed many of the reforms of the former ruler and re-traditionalized women’s role and re-enforced gender segregation (Obermeyer 1994, 46; Tober et al. 2006; 52; Kaufmann 2009, 8). “Imperialist tool” for maintaining the dominance of the West over the Muslim nation, notably the un-Islamic family planning program was abandoned, abortion and sterilization were outlawed, the minimum legal age at marriage was reduced to 9 for girls and 14 for boys, polygynous marriages and temporary marriages³⁶ were legalized and even encouraged (Obermeyer 1994, 46-47; Hoodfar & Assadpour 2000, 21-22). According to Hoodfar and Assadpour (2000), “In particular, temporary marriage was applauded as indication that Islam is timeless religion, because it allows human beings to satisfy their sexual needs within religiously sanctioned unions” (ibid., 22).

The total fertility rate, not surprisingly, increased from 6.3 to 7.0 children per woman between 1976 and 1986 (Obermeyer 1994, 47). “The increase in marital fertility was most apparent in the urban population, where the greatest fertility decline had occurred in the previous decade” (ibid.)³⁷. The increase also took place, despite mitigating factors such as the war with Iraq, substantial out-migration, and economic uncertainty (Hoodfar & Assadpour 2000, 22). The population grew by 3.9 percent annually from 34 million in 1976 to 50 million in 1986 in one decade, which was celebrated and declared “one of the greatest achievements of the Islamic Revolution”, by then Prime Minister Mousavi³⁸ (ibid., 19; Obermeyer 1994, 47).

³⁶ Temporary marriage is a concept where a man may marry an unlimited number of women concurrently for any length of time agreed upon in advance (Hoodfar & Assadpour 2000, 22).

³⁷ This observation is commented in Discussion and Conclusions part as temporary reversal of fertility transition in the society.

³⁸ In house arrest since February 2011 due his role in post-presidential elections in 2009. Source: <http://www.britannica.com/EBchecked/topic/1549317/Mir-Hossein-Mousavi> Accessed: May 2012.

In 1988, Khomeini approved the Islamic regime's new family planning by issuing new religious declarations/fatwas, declaring that family planning was permissible/halal (Tober et al. 2006, 52). The main justification for family planning in Islam, as mentioned earlier, is verses in the Quran emphasizing the importance of maintaining family harmony, practice of withdrawal according to Hadith, and that tranquility in domestic life will be compromised if a family has too many children, and emphasizing "how in Islam God prioritizes having a healthy family over plentiful family" (ibid., 53). Sterilization, which by Islamic law was forbidden/haram as it was interfering with God's will and attempting to change what God had created, was now permissible/halal.

The Islamic family planning was a comprehensive program aiming to increase literacy and education among women, involving men in family planning decision making, and encourage child spacing and discourage child bearing before the age of 18 and after 35 (Tober et al. 2006, 52). Variety of means of contraception was now available for free or at low cost, including vasectomy and tubal ligation, and abortions were no longer strictly forbidden (ibid., 47). The total fertility rate in the country dropped by more than 50 percent, from 5.5 births per woman in 1988, to below 2.8 in 1996, and 2.0 in 2000 (ibid., 52-53).

Today, Iran has the lowest total fertility rate among Muslim countries in the world with 1.7 children per woman, well below the replacement levels and many European countries (Pew Research Center, 2011). According to Pew Research Center (2011), 73 % of married women aged 15-49 in Iran say they use some form of birth control, the same as in the United States (73 %) and substantially higher than the world average for use of birth control among married women ages 15-49 (61 %) (ibid., referring to analysis in report by the United Nations Population Fund in 2009).

This example demonstrates that Islam is able to renegotiate and adapt its teachings as well as its role according to the changing circumstances and the surrounding environment, in this case from a pronatalist to an antinatalist stance. Whether this adaptation and change of mind in a short time span by the same Islamic scholars with reference to same sacred scriptures should be regarded as religious hypocrisy, political selective usage of sacred scriptures, radical views tempered by practical realities or Islam's ability to meet people's at any time needs depends on the observers'

desire for positive/negative or politically/religious sensitive description³⁹. For the former, Supreme Leader Khomeini, there was no difference between religion and politics; in fact he often declared, “Politics and religion is one”, and “The religion of Islam is a political religion such that everything it has is political, even its worship”⁴⁰ (Moin 1994, 85).

This change of mind was not due to an update of sacred scriptures by God⁴¹, nor did the religious leaders initiate it. It was not a top-down process; it was on the contrary a bottom-up process, where Islam was: (1) sensitized, informed and educated about the need to address the country’s population issue, and (2) pressured and forced by social, economical and political surroundings to take necessary steps.

Islam Sensitized And Pressured

During the 1980’s, Iran’s economic condition had suffered from war with Iraq, economic embargo, falling oil prices, flight of capital and poor management (Amirahmadi 1988, referred in Obermeyer 1994, 47). The Islamic ruling clergy had promised to create a “just Islamic society” (Hoodfar & Assadpour 2000, 22). Basic health care, free education, and job opportunities were domain of services identified as major vehicles for this transformation and embedded in the new Islamic constitution (ibid.). The rapid population growth had to be met with increased public expenditures, particularly in health and education sectors, and not least the cost of rebuilding war-torn regions. Hoodfar and Assadpour (2000) note that “the more politically astute politicoreligious leaders were conscious of a potentially explosive dilemma”, particularly since many of the fellow clergies, “both inside and outside the government, continued to bolster a worldview that was essentially pronatalist” (ibid., 22).

Realizing the unsustainability of current pronatalist policies, intellectuals within and outside government, civil servants, and experts in the fields of economy, development, health and social policy increasingly “felt it was their role to pave the road for a reassessment of pronatalist policies and the introduction of an effective population program” (Hoodfar & Assadpour 2000, 22). Based on data collected by Hoodfar’s anthropological field research in Iran, by means of informal interviews with officials, with medical personnel, with family planning clients, and with religious leaders, Hoodfar and Assadpour (2000) give an insight in the delicately planned

³⁹ The mullas seem to have again changed their mind, according to the Telegraph (<http://goo.gl/qrmFe> Accessed: Aug. 2012) - back to pronatalism. Background, effects and justifications for this recent change of mind are yet to be studied. According to Hoodfar, it is clearly not religion that makes them, having had the most successful family planning policy in the world, now decide to cancel that policy in the mist of economic hardship and unprecedented inflation (Hoodfar, e-mail to author, August 5, 2012).

⁴⁰ Source for second quotation: Government website <http://www.tebyan.net/newindex.aspx?pid=198395> Accessed: May 2012.

⁴¹ I am not aware of any update of the sacred scriptures, or for that matter why they are not regularly updated.

strategy (ibid., 22-23). The strategy was to convince the ruling Islamic clergy, most outspoken enemies of the former ruler's policies, to introduce and support family planning (ibid.).

They generated public debate in the media on issues related to fertility control, family planning and population growth by publicizing informative and provocative articles. During 1987 and 1988, many newspapers regularly published articles on the issues related to population growth, related cost and implications. The public was invited to participate, as well as opponents of family planning. "The goal was to make the population issue the talk of the town everywhere, in private and in public" as one official put it, and the aim was as clearly stated by the same official to put pressure on the religious leaders: "Otherwise, without considerable public pressure, it would be impossible to bring the clergy into the population discussion" (cited in Hoodfar & Assadpour 2000, 23).

While the public support momentum for family planning grew in the media, private citizens and independent experts expressed bewilderment at the conspicuous absence of the ruling religious leaders. They were openly invited "to examine the ethical and religious dimensions of the population issue", by two national newspapers, *Keyhan* and *Ettelaat*, "a bold and unprecedented move" as noted by Hoodfar and Assadpour (2000, 24). Although some ignored the invitation, others including conservative ones addressed the issue that was published by *Keyhan*, controlled since the revolution by the conservatives. All the religious leaders confirmed the fact that rules or scriptures of Islam do not prohibit the usage of contraceptives, and that the issue had to be addressed in "the context of the social and political agenda of the Islamic Republic of Iran" (ibid.).

The ruling Islamic clergy was not familiar with matters involving modern science and thus had "little appreciation of the technical and theoretical advancement in the fields of development and social policy"; neither did they have experience in government or in administering a populous country with multifaceted needs (Hoodfar & Assadpour 2000, 23). Several meetings were held behind closed doors between policymakers, experts and ministers and the major religious leaders, "particularly those judged to be the shrewdest and politically most astute, in order to educate them about the population issues" the authors mention (ibid.). "The technical experts emphasized that their responsibility was to inform the leaders regarding scientific questions, but that for matters of ethics and social morality, they looked to the religious leaders to provide

guidance”, write Hoodfar and Assadpour underlining the sensitivity⁴² of their approach to educate and convince the ruling clergy (ibid.).

In 1988, Khamenei, who later succeeded Khomeini as the Supreme Leader, discussed the necessity of introducing family planning, which was followed by a national conference on population policy in Mashhad⁴³, one of the most sacred cities in Iran, attended by religious leaders, policymakers, scholars, ministers, and representatives from all national organizations. The outcome was a national family planning program that was ratified by Khomeini shortly before his death in 1989. Health and policy experts together with religious leaders became involved in a campaign to promote contraceptive use. Posters with phrases like “fewer children, better life” and “two children are enough” are found in every health clinic. The primary health care system and network of mosques, reaching the most remote villages of the country promoted contraceptive use. In particular low-ranking clergies played a decisive role in marketing and spreading the family program since they are skilled speakers and familiar with local religious and cultural practices of their communities (Hoodfar & Assadpour 2000, 27). A female staff member at a health care clinic remarks the role of the mullahs:

It is not very often that I have good things to say about mullahs who have, historically, been responsible for much of women’s misery. But in this case, credit should go to the religious authorities of the country - and not just the most prominent ones, but to those working in different areas who then took the messages from the high-ranking leaders and put them into the context of the daily life of the local people and communicated the debates and information to the people around them ... (cited in Hoodfar & Assadpour 2000, 27-28).

The religious leaders had managed to establish a discourse that Islam was preoccupied with issues related to population and contraception long before the West and thereby “were able to celebrate Iran’s Islamic heritage, to promote family planning, and to reinforce their independence from the West” (Hoodfar & Assadpour 2000, 28).

Concluding Remarks

Several scholars have examined and analyzed a possible role that Islam plays as a fertility determinant, and the debate continues. Some find a correlation and causality, while others question any correlation or causality and point to other factors as fertility determinant and not the religion itself.

⁴² Some sense of sensitivity can be observed when reading how same historical episode can be commented by Hoodfar and Assadpour far more freely - as they reside out of Iran - compared with Tober et al. as co-writers reside in the country. The latter I assume avoid politicalizing clergies’ ideological change of mind regarding family planning. It seems to me as the authors are re-reporting the official version without any contextualization.

⁴³ I have not noted any significance given to choice of this city in the literature.

As mentioned earlier, Iran is different from most other Muslim countries as it is a Shia country, while most other Muslim countries are Sunnis. Furthermore, the Islamic clerics hold real political power and rule the country - what Brown (2000) notes as “unusual” in light of Islamic teaching which has supported a limited role for religious leaders in politics (ibid., 177). Nevertheless, the strategy of Iran illustrates that it is questionable whether it is possible to find any correlation when Islamic teachings can vary from country to country, mosque to mosque, even from clergy to clergy. It might not be possible to define Islam as one single “variable” when its sacred scriptures and doctrines can simultaneously justify opposite stands on the same issue, whether it is reproductive methods or status of women. It might not be unreasonable to talk about multiplicity of “Islams”, rather than monolithic “Islam”. It is questionable whether it is possible to make any generalization about Islam when practices and values can vary from place to place and across time. In a European context, I wonder if we actually know anything about what doctrines are preached if any, or what impact they have if any.

Furthermore, for many Muslims⁴⁴, Islam is perhaps more of an ethnic or cultural identity that does not depend on whether a person practices the faith or identifies him-/herself with Islamic doctrines, not to mention having knowledge about Islamic doctrines, or variations in Islam/variety of Islams. The vast majority of people are, after all born into their religion, obviously not by choice, and the price of leaving Islam can be high both socially and legally; death penalty is incorporated in legislations of some Muslim countries such as Afghanistan, Iran and Saudi Arabia (Rahman 2006, p. x)⁴⁵.

Islam as a belief system and religious ideology has through its existence been changed, blended and reshaped by people in interaction with its political, economical, social and cultural surroundings, and will continue to do so. It is after all human beings who do the memorizing, writing, reading and interpretation of God’s words. An informant from Keefe’s fieldwork in Tanzania regarding Muslims’ perception of the Islamic explicitly prohibition of sterilization as family planning method, puts it this way: “Yes, many Muslim women use family planning; they just do not talk about it at the mosque. Basically people do what they want, they decide for themselves” (Keefe 2006, 427).

⁴⁴ According to a survey conducted by Pew Research Center (2012) in 39 countries, covering about two-thirds of all Muslims in the world, the percentage of Muslims saying religion is very important to them ranges from 15 % to 98 % (ibid., 40).

⁴⁵ According to survey mentioned in footnote 44, the vast majority of adult Muslims were raised as Muslims. The survey shows extremely low rate of religious switching (Pew Research Center 2012, 33).

DISCUSSION AND CONCLUSIONS

The aim of the study has been to investigate hypotheses related to higher Muslim fertility in Europe, and the role of Islam as a fertility determinant, which are among the pillars in the so-called “Islamic Demographic Warfare” and “Eurabia” theories.

In the first part of my thesis, I question whether Muslim fertility rates in Europe are higher than of non-Muslim fertility. In the second part, I ask whether the intensity of religious feelings and family values influence fertility behavior. In part three, I investigate the main strands of Islamic doctrines. Finally, I do a case study of how Islamic doctrines has been interpreted in the Islamic Republic of Iran with a focus on the years after the Islamic clerics gained control over the state apparatus. The findings of this study can be summarized as following:

Hypothesis 1: *Muslim fertility rates in Europe are higher than non-Muslim fertility rates.*

This study finds that fertility of Muslims in practically all the countries with available data is higher than that of members of the dominant religion, and that fertility of immigrants from Muslim countries is higher than that of the native European population. But the extent to which Muslim fertility exceeds that of non-Muslims is, by and large, uncertain and probably less than assumed in the press and by some other observers. Furthermore, the fertility of Muslim women is declining in all countries for which data are available, and with the passage of time Muslim fertility moves closer to the fertility of the majority of the population in the respective countries.

Hypothesis 2: *Muslims in Europe are more religious than non-Muslims.*

This study finds that Muslim women are much more religious and subscribe more to family values than do non-Muslim women. Muslim men, though less religious than Muslim women, are also found to be more religious than men with other religious affiliations.

Hypothesis 3: *Muslims' higher levels of religiousness correlates with higher fertility rates.*

This study finds that more religious women have more children than those less religious and that the fertility of Muslim women is slightly higher than for non-Muslims, both for the more and for the less religious women. The odds of having at least two children are significantly greater for women who are religious and who hold strong family values, with the strongest associations found among Muslim women. Furthermore, that fertility is slightly higher among the more religious Muslims than among the less religious Muslims.

This study also finds a strong positive association with pro-family values for Muslims, Catholics, Protestants and Eastern Orthodox and that the average number of children ever born is very similar across religions. Fertility among married Muslims is similar to that of married Catholics and Protestants, and lowest among those with no religious affiliation, while fertility for all women is highest for Muslims.

Hypothesis 4: *Islam influences fertility rates.*

This study finds that the textual ambiguity, interpretive flexibility of the sacred scriptures, the lack of recognized central authority in Islam result in the possibility of simultaneously justifying opposite stands on the same issue, whether it is reproductive methods or status of women. Islam can thus hardly be defined as one single “variable”. Islamic scholars can adjust their teachings and worldview to either a pronatalist or an antinatalist stance, and thereby play an influential role in fertility behavior of the faithful; given that they have access to communication institutions and can enforce their doctrines.

Can we draw any general conclusions based on the above findings? Due to the size of sample in the quantitative data and the fact that the findings are not qualified, the study does not permit any rigorous statements or fully testing the earlier mentioned theories regarding the link between religion and fertility behavior. I choose rather to make the following observations.

The particularized theology theory emphasizes the role of religious doctrines, which is found to be pronatalist and antinatalist. This study could be seen as broadening of the particularized theology theory, as it not only investigates the Islamic doctrines but also measuring religiousness and family values. Islamic doctrines cannot be the cause of the higher fertility among Muslims as their fertility rates do not differ from other religious groups and as demonstrated Islam itself cannot be defined as a single, stable and unified “variable”. Furthermore, the lack of data on Muslims’ knowledge and perception regarding Islamic doctrines on issues such as contraceptives makes fully testing this theory impossible. On the other hand, the study points to increased fertility rates in Iran right after the enforcement of pronatalist Islamic doctrine with temporarily reversing the demographic transition. This supports effect of religious doctrines when enforced.

The study finds support for the interaction theory that implies the role of social interaction in shaping reproductive behavior. The study finds that Muslim fertility is declining which is at least partly due to interaction with the wider societies Muslims live in. The finding that women of the same country of origin tend to have similar levels of fertility in different countries of destination

could also imply an impact of fertility influence from country of origin (see also Lappegård 2000, 11). Both findings support the interaction theory.

A prerequisite for the minority group status theory mechanism to operate is that the respective religion a group belongs to should not have a pronatalist ideology or norms prohibiting fertility control. Knowing that Islam can be both antinatalist and pronatalist one needs data on Muslim population's knowledge and perception regarding Islamic teachings to fully test this theory; data that this study lacks. This study neither contains data on Muslim's desire for acculturation, or for that matter segregation from the larger society that is also a prerequisite related to this theory. Thus the theory cannot be tested.

Many studies find evidence for poor housing, difficulties entering the labor market, low female participation in the labor market among Muslims in European countries such as Britain and France (Peach 2006, 637; Tribalat 2004, 77; see also Zubaida, 89). Lack of substantial data in this study regarding socioeconomic differentials among Muslim population in Europe does not permit fully testing the characteristics theory. Nevertheless, the characteristics theory is not supported as an association is found between religiousness and fertility once controlling for socioeconomic differential (see Table 15). Although, the association found between religiousness and fertility is within the religious Muslims and more related to family values (see hypothesis 3), it could contradict the basics of the characteristics theory, which is that fertility differentials among religious groups would disappear when controlling for socioeconomic factors. Furthermore, the characteristics theory does not offer a clear-cut distinction between variables "religion" and "religiousness", which makes it unclear whether it excludes effect of values such as religious commitment and level of religiosity.

McQuillan's "three elements-with-religion-for-a-religion-to influence fertility" theory gets most support, at least in the Iranian context. The three elements McQuillan (2004) mentions are (1) the nature of religious values and norms, (2) religious institutions and (3) the issue of religious identity. While this study investigates the first two elements, the last is assumed existing. Assuming that Islam has become a dominant marker of identity for many people around the world, including Europe would not be a false assumption, though not scientifically qualified in this study (see McQuillan 2004, 48; Zubaida 2003, 88-89). In Iran, which I use as an example, "Islam formed the ideological basis" for the Iranian revolution of 1979 (McQuillan 2004, 48). As the study finds, Islam can both be pronatalist and antinatalist. Thus it is up to Islamic scholars

and clerics to choose⁴⁶ promoting pronatalism or antinatalism and how efficient they choose to communicate their message and policy through the religious institutions they possess. The effect of their teachings among Muslims in Europe is yet to be studied. Findings of such studies are a prerequisite knowledge to fully test applicability of McQuillan's theory regarding Muslims in Europe.

Islam as a belief system can influence fertility behavior depending on its access to communication institutions. The influence is though not timeless or transnational since the context differs across time and place. The influence of Islam depends on the interpretation choice of Islamic scholars that can adapt their teachings and creeds to their political, social and economical surroundings. Whether they choose to meet the needs of the faithful also depends on their knowledge of those needs. The case study of Islam in the Islamic Republic of Iran demonstrates the necessity for a bottom-up approach to educate the Islamic clergy about the needs of the adherents to Islam and to pressure the clergy to act accordingly.

Outside the framework of mentioned theories decline of fertility among Muslims in Europe is an evidence of its transition (see Table 4 as example). Muslims in Europe originate from countries in different stages of the demographic transition, and some even in the pretransition era where the plateau of fertility might be six to eight births per woman, such as the Somalis in Norway (see Table 8). When comparing these groups' fertility levels with those having reached or even completed the transition, it is important to mention this. Higher fertility in pretransition era is rather caused by culture and customs that are unrelated to motivation to control fertility, which would eventually be restricted by possible religious prohibitions (see Hirschman 2001, 119). Following this logic, I wonder whether an explanation for higher fertility of certain citizens in Europe compared with their country of origin, for instance Turkish citizens, can be that some immigrant groups mostly originate from rural communities. Most Turkish citizens in Europe are from rural areas in Turkey, belonging to the Kurdish minority and in an earlier stage of transition; thus having higher fertility rates even when compared with their origin country.

⁴⁶ Brunner (2005) writes about the intense discussion among Muslims on their position vis-a-vis Islamic values and the secular Western social order.

FURTHER RESEARCH

In order to avoid biased generalizations about Muslims and Islam there is a need for more detailed research and data. We need more knowledge in many fields. First of all, European countries should consider collecting statistics needed to clarify high fertility rates of some immigrant and religious groups. A common approach and standardization will contribute resolving issues of data comparability and thereby avoid biased generalizations. Secondly, more empirical interdisciplinary research is needed both to explain religious Muslims' higher fertility and particularly to capture the "de facto Islam" effect and not least in-depth analysis of the varieties of Islam.

In particular anthropology⁴⁷ with its fieldwork methods such as ethnography, ethnomethodology, narrative and conversation analysis' contribution should be welcomed. Research on Muslims' knowledge and perception about "official" Islamic position regarding family planning and contraception in European context is needed to measure the effect of Islamic doctrines and also the clarity of "de facto Islam". Knowledge regarding what Islam teaches its European followers is needed. Similarly anthropology could contribute in understanding Muslims' voluntary and imposed religious identity to clarify the eventual "minority effects" in the faithful's fertility behavior.

Thirdly, focus should be directed to the choice of third child, as most people will for social, psychological and evolutionary reasons have one or two children. This will decrease spuriousness of casual effect. Fourthly, we need more knowledge about fertility behavior of Muslims across a variety of dimensions such as ethnicity, nationality, class and generation.

Taking the late Ruhollah Khomeini⁴⁸ literally when he said "The religion of Islam is a political religion such that everything it has is political, even its worship"⁴⁹, implies the need for increased independent scientific research on Islamic sacred scriptures. Islamic scholars and Muslim theologians should welcome critical research related to validity and reliability as well as interpretations of Islamic sacred scriptures and doctrines.

After all, attitudes are shaped by knowledge or the lack of such.

⁴⁷ Bernardi and Hutter (2007) write about the need for a holistic approach and emergence of anthropological demography as discipline; this to better understand fertility, migration and mortality (ibid., 541).

⁴⁸ Ruhollah is Arabic word that literally translated to English means God's own spirit. Khomeini argued for the establishment of a theocratic government administered by Islamic jurists in place of corrupt secular regimes. The Iranian constitution of 1979 embodies articles upholding this concept of juristic authority.

Source: <http://www.britannica.com/EBchecked/topic/316812/Ruhollah-Khomeini> Accessed: May 2012.

⁴⁹ See footnote 40 for source.

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Web Resources:

Amnesty International: <http://www.amnesty.org/>

Council of Europe: http://www.coe.int/t/dg3/default_en.asp

Demographic Research: <http://www.demographic-research.org/default.htm>

Britannica Online: <http://www.britannica.com/>

European Council For Fatwa & Research: <http://e-cfr.org/ar/>

Gapminder: <http://www.gapminder.org/>

Guttmacher Institute: <http://www.guttmacher.org/>

Hadith Collection: <http://www.hadithcollection.com>

Institute for Social Research: <http://www.socialresearch.no/>

Multilingual Demographic Dictionary: http://en-ii.demopaedia.org/wiki/Main_Page

Pew Research Center: <http://pewresearch.org/>

Population Reference Bureau: <http://www.prb.org>

Promoting comparative quantitative research in the field of migration and integration in Europe:
http://ec.europa.eu/research/social-sciences/projects/268_en.html

Statistics Norway: <http://www.ssb.no/english/>

Tebyan: <http://www.tebyan.net/>

The Telegraph: <http://www.telegraph.co.uk/>

The World Fatwa Management and Research Institute: <http://www.usim.edu.my/infad/>

United Nations Population Division: <http://www.un.org/esa/population/>

World Health Organization: <http://www.who.int/en/>

Scholars mentioned in the Acknowledgments:

Bowen, John: <http://goo.gl/XbC1x>

Gule, Lars: <http://goo.gl/b0kXU>

Homa, Hoodfar: <http://goo.gl/8ZK3N>

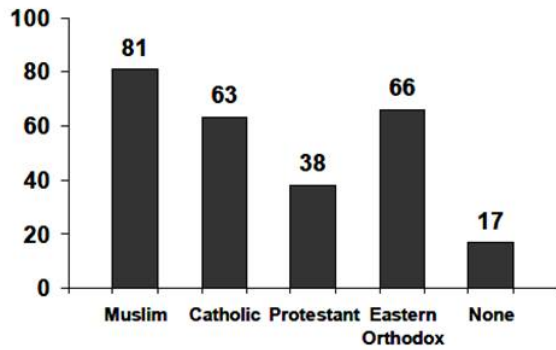
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Seltzer, Michael: <http://goo.gl/T0m40>

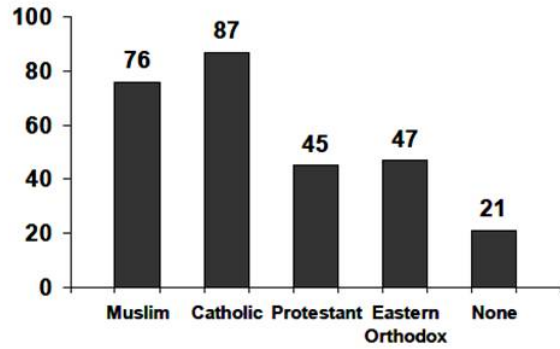
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APPENDIX

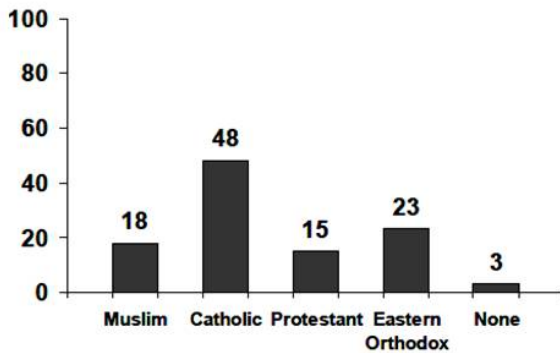
Think religion important or very important



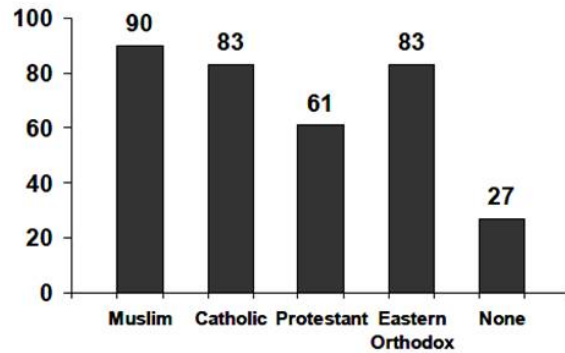
Raised religious



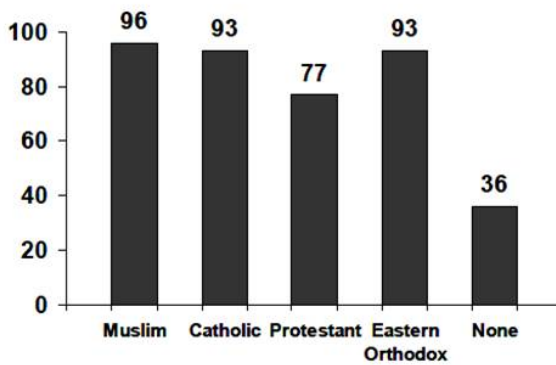
Attend religious services at least once a month



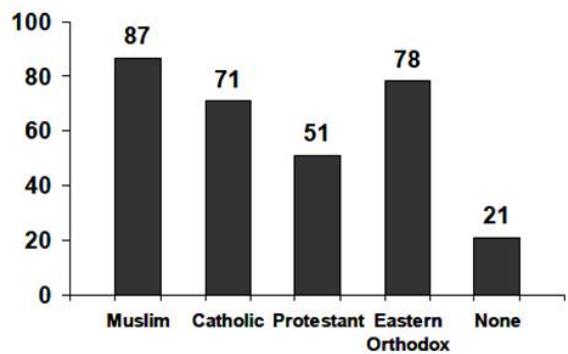
Feel they are religious



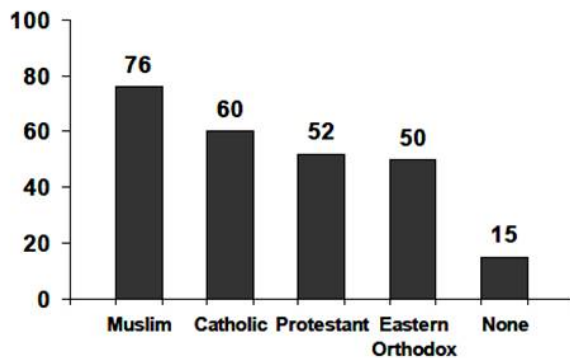
Believe in God



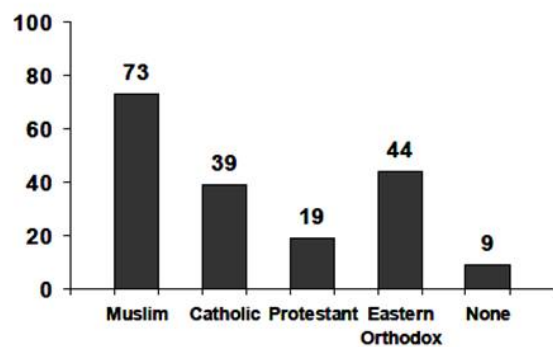
Find comfort in religion



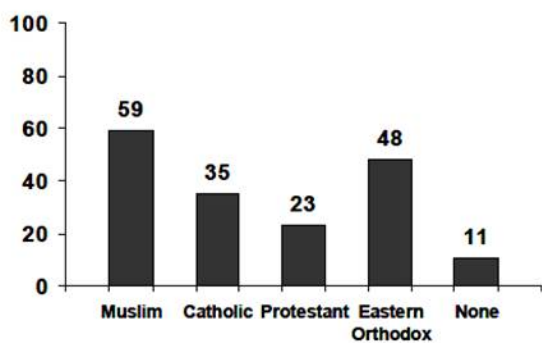
Believe in heaven



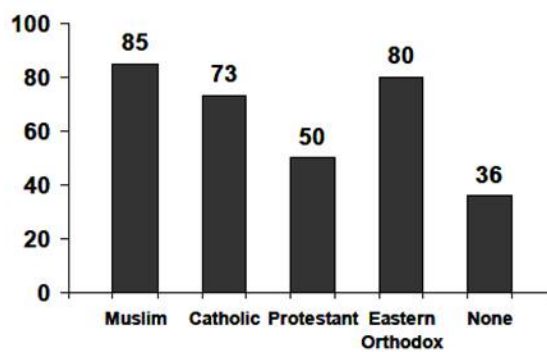
Believe in hell



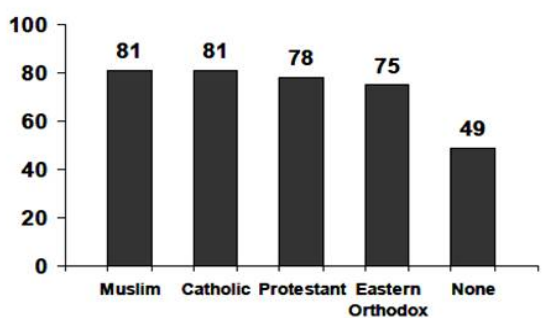
Believe in the devil



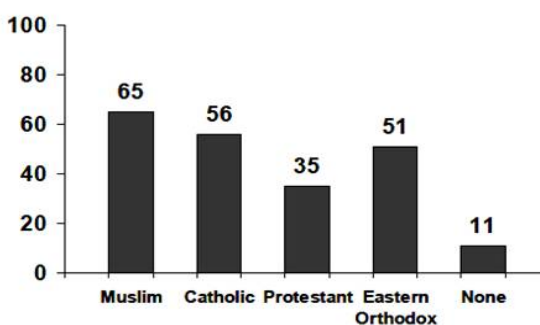
Believe in sin



Believe in a soul



Pray at least weekly



Mean score on a scale of 0 – 10 on the importance of God

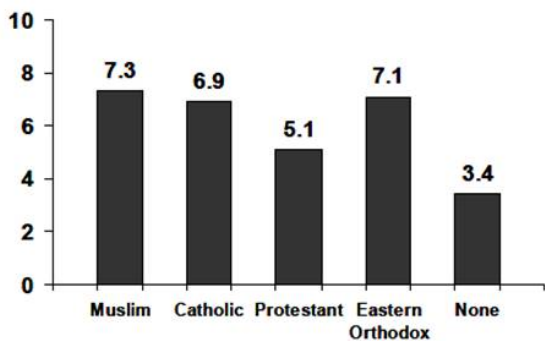


Figure 1 Percent of European women 18-44 by different measures of religiousness, by religion.
Source: Combined samples of the European Value Study: 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007b, 13-16).

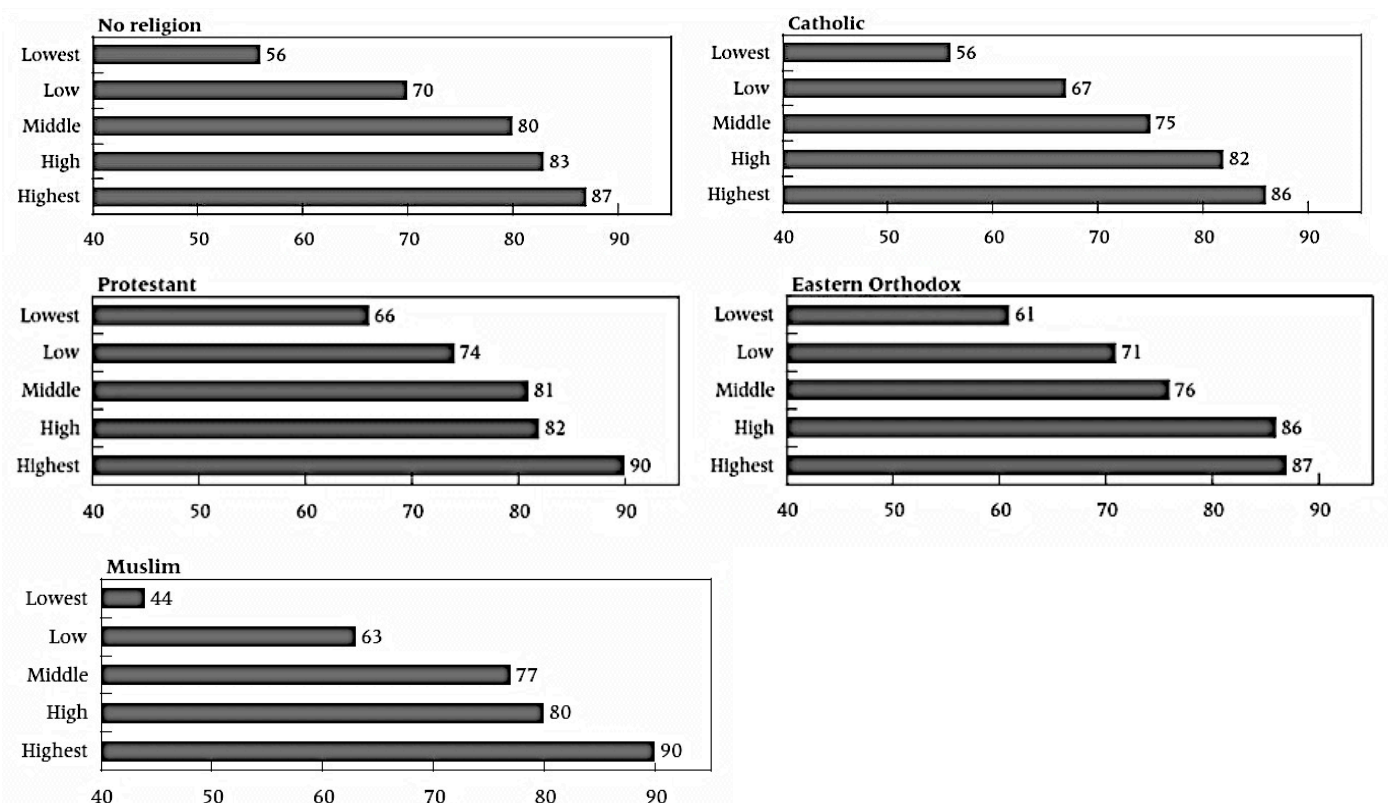


Figure 6 Percent of women aged 18-44 ever married by index of family values and religion.
 Source: Combined samples of the European Values Study, 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007, 797).

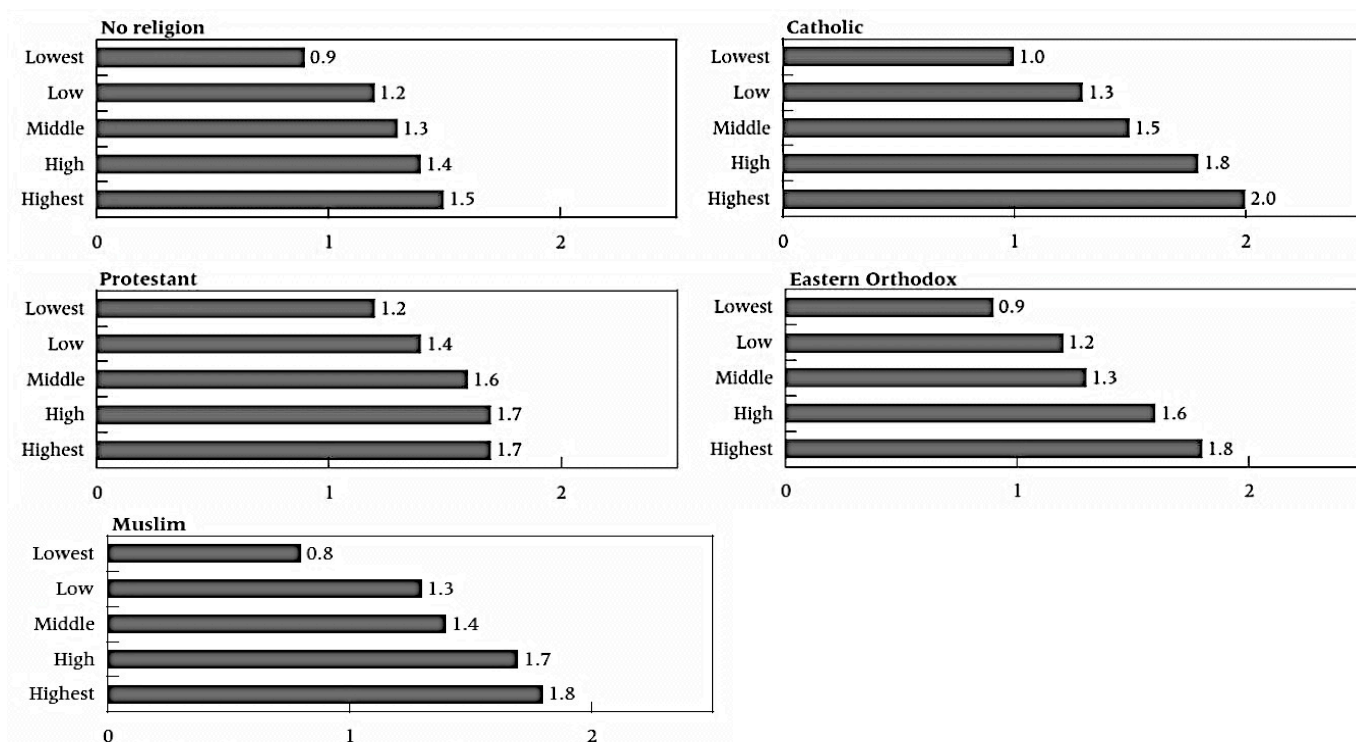


Figure 7 Mean number of children ever born to women aged 18-44 by the index of family values and religion.
 Source: Combined samples of the European Values Study, 1990, 1995-97, 1999-2000, referred in Westoff and Frejka (2007, 803).