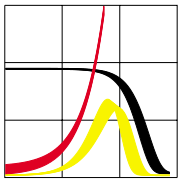

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Religion, Religiousness and Fertility in the U.S. and in Europe

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Religion, Religiousness and Fertility in the U.S. and in Europe[1]

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1. Introduction

In the past two to three decades, it has become evident that fertility and religiosity are higher in the United States than in Europe. This difference is considered critical because European fertility on average is considerably below replacement A number of social scientists and theologians have interpreted this to mean that Europe "has lost the biological will to live" (Mead, 2005) or even that demographic suicide is "perhaps the most urgent issue confronting Europe today" (Weigel, 2005). This paper explores the interrelations of fertility and religiosity in the US and Europe and whether religiosity has contributed to the fertility differential between the U.S. and Europe.

There is a body of research in the U.S. that has looked at the association of fertility and religion, mostly denominational affiliation, over the last 25 years, but the subject has been largely ignored in Europe .To the best of our knowledge, there has been no research aimed at a comparison of the U.S and Europe in terms of the influence of religion and religiousness on fertility.

The heart of the paper is part 8 which presents an empirical analysis of religion, religiosity and fertility based on data from the World Values Survey, the European Values Survey and the National Survey of Family Growth (2002). Preceding this are several sections providing background and context that are intended to facilitate the understanding of the empirical analysis. Part 2 discusses the complexities of comparing U.S. and European fertility. Part 3 looks into the differentials of religion and religiosity between the two entities. In part 4 recent studies dealing with the association of fertility and religion and religiosity in Europe are summarized. A historical perspective of religious fertility differentials in the U.S. is provided in part 5. Part 6 reviews theoretical analyses and beliefs on the interrelations of religion and religiosity vis-à-vis fertility. Part 7 discusses factors other than religion that explain relatively high US fertility. Following part 8, the empirical research component, the paper closes with a set of conclusions and final thoughts.

2. Fertility: A comparison of US and Europe

The perception that US fertility is higher than in Europe is widespread and almost ubiquitous. Morgan (2003) has labeled US fertility as "the most obvious exception" to very low fertility. Wetrogan (2001) in her introductory remarks to the US Census Bureau conference on *The Direction of Fertility in the United States* asked: "Why does US fertility appear to be 'an outlier' among developed countries?" Caldwell and Schindlmayr (2003) refer to the "curiously high fertility of the United States." Demographic suicide as "perhaps the most urgent issue

[1] Presented at 2006 Annual Meeting of the PAA in Los Angeles.

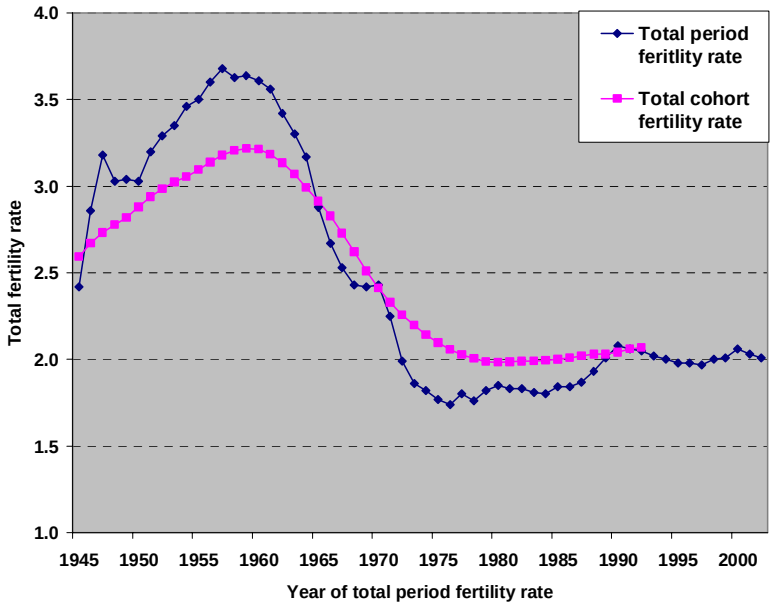
confronting Europe today" is a central theme throughout Weigel's book (2005) *The Cube and the Cathedral: Europe, America, and Politics without God*.

Since the late 1980s, U.S. fertility has indeed been higher than in Europe, but at least two qualifications have to be pointed out:

- Fertility is higher in the US compared to Europe as a whole or to the European Union, however fertility in a number of North and West European countries is practically the same as in the US.
- The comparison of European and US fertility is different depending on how fertility is measured, whether as period or cohort fertility.

US fertility close to the replacement level was reached following a decline that lasted almost continuously for two centuries starting with an average of seven children borne by every white woman in the early 19th century (Coale and Zelnick, 1963) to a TFR of 3.6 at the end of that century. The long-term decline was interrupted by a considerable unexpected increase in fertility, the "baby boom," which was at its height during the 1950s when women were bearing on average 3 – 4 children. Around 1960 the decline resumed and since the late 1970s US fertility has been remarkably stable at about two births per woman (Figure 1). More specifically, the period TFR was around 1.8 from the mid-1970s to the mid-1980s and since then it has been in the range of 2.0 to 2.1 births per woman. Completed cohort fertility has been at the replacement level beginning with the birth cohorts of the late 1940s through those of the 1960s.

Figure 1 - Total period feriltiy rates 1945-2002, total cohort fertility rates, birth cohorts 1918-1965, United States



Source: Observatoire Démographique Européen 2006

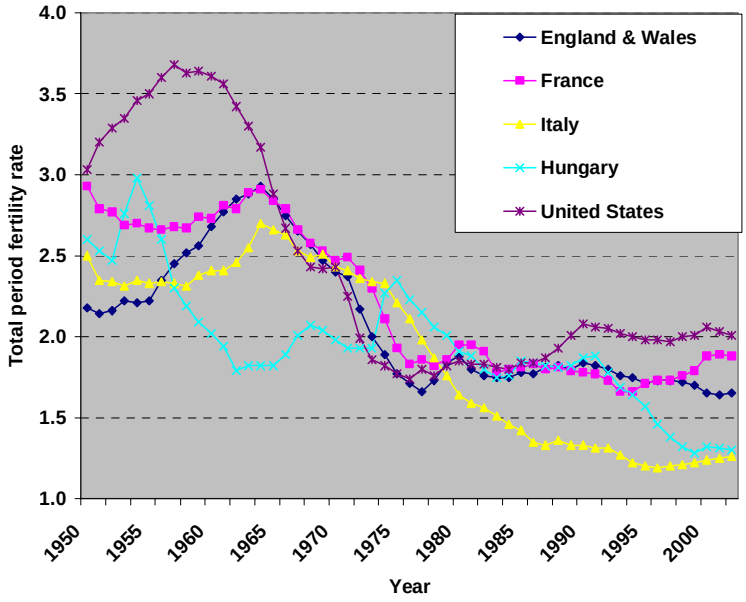
Long-term fertility trends in European countries were similar to those in the US, but generally at lower levels. As a rule, with exceptions, pre-transition fertility during the first half of the 19th century varied between four to over five births per woman and the transition usually started late in the 19th century or even around the beginning of the 20th century. In the process of these countries changing from traditional to modern industrialized ones, fertility declined notably between the late19th century and the late 1930s. European countries experienced post-war baby-booms, though relatively weak ones. Subsequently, during the late 1960s and throughout the 1970s, all North, West and South European countries experienced a considerable fertility decline. During the 1980s and especially in the 1990s period fertility stabilized, again generally at a lower level than in the US. France and Norway, for example, had moderately lower fertility compared to the US. Other countries, such as Austria and Italy experienced considerably lower fertility (Table 1 and Figure 2).

Table 1
Total period fertility rates, selected developed countries, 1970-2002

Country	*Total period fertility rate*				
	1970	*1980*	*1990*	*2000*	*2002*
Norway	2.5	1.7	1.9	1.9	1.8
France	2.5	2.0	1.8	1.9	1.9
Austria	2.3	1.7	1.5	1.4	1.4
Italy	2.4	1.6	1.3	1.2	1.3
Hungary	2.0	1.9	1.9	1.3	1.3
Russia	2.0	1.9	1.9	1.2	1.3
United States of America	**2.43**	**1.85**	**2.08**	**2.06**	**2.01**
Europe of 15	2.38	1.82	1.57	1.50	1.50
US/Europe of 15 (in %)	**102**	**102**	**132**	**137**	**134**

Source : Sardon 2004

Figure 2 - Total period fertility rates, selected advanced countries, 1950-2002



Source: Observatoire Démographique Europeén 2006

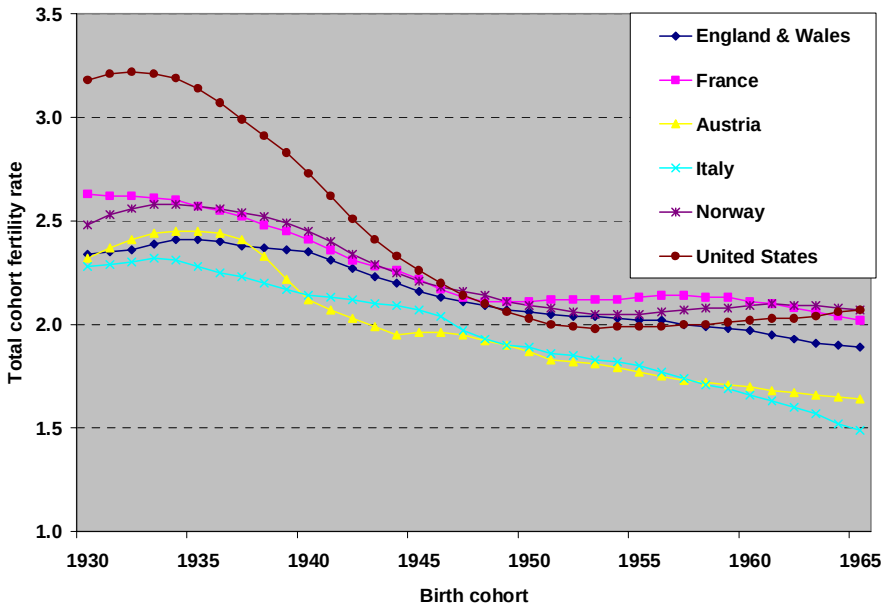
Cohort fertility trends of the 20th century reveal a somewhat different picture. Women born in the late 1920s and 1930s generated the baby boom with completed fertility around 2.3-2.6 children per woman in West European countries and 3.2 in the US. A common fertility decline ensued which continued among the birth cohorts of the 1950s and 1960s in Southern Europe and in the predominantly German speaking countries as exemplified by Italy and Austria in Figure 3. In the Nordic countries as well as in Western Europe the 1950s and 1960s cohorts settled with childbearing patterns very similar to those in the US, namely close to 2.0 children born per woman (Table 2 and Figure 3).

Table 2
Total cohort fertility rates, selected developed countries, birth cohorts 1930-1965

Country	*Total cohort fertility rate*					
	1930	*1940*	*1950*	*1955*	*1960*	*1965*
Norway	2.5	2.5	2.1	2.1	2.1	2.1
France	2.6	2.4	2.1	2.1	2.1	2.0
Austria	2.3	2.1	1.9	1.8	1.7	1.6
Italy	2.3	2.1	1.9	1.8	1.7	1.5
Hungary	2.1	1.9	2.0	1.9	2.0	2.0
Russia	n.a.	1.9	1.9	1.9	1.8	1.7
United States of America	**3.18**	**2.73**	**2.03**	**1.99**	**2.02**	**2.07**
Europe of 15	n.a.	n.a.	n.a.	1.90	1.84	1.74[a]
US/Europe of 15 (in %)	**n.a.**	**n.a.**	**n.a.**	**105**	**110**	**118[a]**

Note: a=1964
Source : Sardon 2004

Figure 3 - Total cohort fertility rates, selected advanced countries, birth cohorts 1930-1965



Source: Observatoire Démographique Europeén 2006

As a proxy for the whole of Europe, the European Union as comprised by the 15 countries prior to 1 May 2004 is included in Tables 1 and 2.[2] According to the period rates, US fertility is 34 percent higher than in the European Union. The comparison of the latest available completed cohort fertility rates indicate that the difference between US and European fertility is only about half that amount, 18 percent. An interaction and combination of several processes account for these differences. In the first place, considerable changes in the age patterns of childbearing were taking place during the past 30-40 years. Secondly and simultaneously, the quantum of fertility was declining in a number of countries (Frejka and Sardon, 2004).

Compared to all the western countries, childbearing patterns and their trends during the past several decades were very different in the formerly socialist countries of Central and Eastern Europe. Typically fertility was rather stable prior to the revolutionary political, economic and social transformations around 1990, i.e., there were some variations but generally fertility was not declining, it tended to be close to replacement levels, and the age patterns of childbearing were being moderately advanced rather than postponed. Fertility then declined sharply during the 1990s. Total period fertility rates early in the 21st century had declined to around 1.2 – 1.3 births per woman in almost all of these countries (Table 1). Completed cohort fertility rates of women born in the mid-1960s (Table 2) were only partially affected as these cohorts were in the prime years of their reproductive periods under the socialist regimes. However, fertility of young women born during the 1970s was declining steadily. It is too early to tell the extent to which this is a quantum fertility decline or whether a considerable proportion of the unrealized, possibly postponed, births will be borne by these women when they will be older.

To conclude, there is no simple way to describe the difference between fertility in Europe and the United States. Taking Europe as a whole, fertility is lower than in the United States. The difference is much greater when expressed in measures of period fertility rather than cohort fertility. If one takes individual countries or regions of Europe, there are some where fertility, especially cohort fertility is similar to that in the US. On the other hand, there are a number of countries where fertility is much lower than in the US, especially period fertility.

3. Religiousness in the United States and Europe

There is a considerable amount of evidence that religion and religiousness play a more important role in the lives of Americans compared to Europeans. Nonetheless, there are two countries, namely Italy and Ireland, where until recently religiosity was similar to that in the US. Most data and authors point to an ongoing process of secularization in Europe, other authors dispute that. Within societies the more affluent and better educated strata tend to be more secular.

A Pew poll released on 19 December 2002 inquired about the importance of religion in people's lives. The title of the report clearly describes the state of affairs: "Among wealthy Nations US stands alone in its embrace of religion" (Pew, 2002). The percentage of adults for

[2] Values of data for the European Union after 1 May 2004 comprised by 25 countries are almost the same, but the available time series is shorter, which is the reason why the EU 15 was included in the table.

whom religion is important was 59 in US, whereas in Europe the range was from 11 percent in France to 21 percent in Germany, 27 percent Italy, 33 percent Great Britain, and the highest was 36 percent Poland.

In a Pew commentary "Anti-Americanism: Causes and Characteristics" released December 10, 2003 it is stated: "And perhaps more than any other issue, religion has come to define the transatlantic values gap. Among wealthy nations, Pew has found, the United States is the most religious nation – in sharp contrast to mostly secular Western Europe. A 58 percent majority in the U.S. views belief in God as a prerequisite to morality – just a third of Germans and even fewer Italians, British and French agree." More specifically, a positive answer to the question "whether it is necessary to believe in God to be moral" was given by 13 percent in France and the Czech Rep., 25 percent in Britain, 27 percent in Italy, 33 percent in Germany, but 58 percent in the US (Pew, 2003).

Detailed further evidence of the religiosity differentials and the generally higher religiousness in the US is provided in Table 4 and Figure 4 below.

The progress of secularization in Europe is analyzed by Norris and Inglehart (2004) based on surveys of the Mannheim Eurobarometer Trend Files on religious participation[3] in thirteen European countries. The longest time series are available for the five core European Union countries (France, Belgium, the Netherlands, Germany and Italy). In these countries "on average about 40 percent of the public attended church regularly in 1970, with this proportion falling in half" by the late 1990s (p.73).

The downward trend in religious participation is confirmed in the World Values Surveys for the period 1981-2001 in a large number of countries with one exception. In Italy responses to an analogous question on religious participation show an increase from 32 to 40 percent between 1981 and 2001. For comparison, according to the WVS, religious participation increased moderately also in the United States, from 43 to 46 percent between 1981 and 2001 (Norris and Inglehart, 2004, p. 73).

Andrew Greeley (2002) denies that there is a universal decline of religiousness across Europe. His findings are based on four surveys carried out between 1980 and 1998. He asserts that although religion has declined in France, the Netherlands and in Britain, it has increased in Russia, Latvia, Slovenia and Hungary, and has remained high and stable in Ireland, Poland, Switzerland, Slovakia, and Austria, and diffuse and stable in Spain, Italy and Portugal, and low in Scandinavia and the Czech Republic. Greeley is not arguing that Europeans are devout but that the modernity trend is finished.

The data from the Pew surveys as well as the conclusions formulated in the Pew reports depict the United States as an exceptionally religious country. Indeed also most of the evidence from the three waves of the WVS surveys between 1981 and 2001 which contain numerous questions on religiosity demonstrates that the majority of European countries are considerably less religious than the US. At the same time, these surveys show that "although religion in the

[3] Religious participation is defined as a positive response to the survey question attending services "more than once a week" or "once a week.

United States is distinctive among rich nations, it would still be misleading to refer to American 'exceptionalism,' as so many emphasize, as though it were a deviant case from all other postindustrial nations, as we can observe similarities with both Ireland and Italy" (Norris and Inglehart, 2004, p. 84).

There are other signs that the evidence regarding US religiosity as an outlier is somewhat ambiguous. Among other findings, the US General Social Survey (GSS) conducted annually by NORC indicated that the proportion of Americans reporting they attended church at least weekly was on the decline from the late 1980s to around the year 2000, while at the same time the proportion saying they never attended church doubled to one-fifth of all Americans (cited by Norris and Inglehart, 2004, p. 92). The GSS also reported that the proportion of Americans who are secularists, reporting that they have no religious preference or identity, climbed steadily during the 1990s (Norris and Inglehart, 2004, p. 93).

The differences as well as similarities between the United States and all advanced countries are found also in the relationship of religiosity and income. Data from the WVS show that religiosity is systematically related at the individual level to the distribution of income groups in postindustrial societies: the poor are almost twice as religious as the rich; around 30 percent of the least well-off income group pray daily and consider religion very important compared to between 15 and 20 percent of the rich. The patterns in the US are similar, but at a much higher level, for example, 66 percent of the lowest income group pray daily compared with 47 percent of the highest income group (Norris and Inglehart, 2004, p. 108).

In sum, the evidence supports the notion that US religiousness is relatively high, higher than in most European countries. It is nonetheless questionable whether the United States can be considered an exceptionally religious country as there were a number of European countries also identified as highly religious. Further, there is no consensus on the continuation of the secularization process. Norris and Inglehart argue that most countries are continuing in their secularization and even point to signs of secularization in the United States. Greeley believes secularization has come to a halt.

4. The association of religion and fertility in Europe

Secularization and religious belief and practice are among the value items that are an essential component of the investigations related to the Second Demographic Transition (see, for instance, Surkyn and Lesthaeghe, 2004). But there appear to be relatively few recent empirical analyses focusing on the interrelations of religion and fertility in European countries.

Adsera (2004) found that in Spain according to the 1985 Spanish Fertility Survey (SFS) family size was similar among practicing and non-practicing Catholics. A decade and a 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 (Adsera, 2004).

Despite ongoing secularization, religiosity remains an important factor in the spatial differentiation of fertility, family formation and dissolution and living arrangements in the Netherlands (Sobotka and Adigüzel, 2003).

An analysis of the 1996 Austrian Family and Fertility Survey shows that women's denominational affiliation and religiosity affect the number of children born (Heineck, 2005).

5. Religious fertility differentials in long-term US fertility trends

The composition of the U.S. population by religious denominations has changed over time. For centuries the United States has been a predominantly Protestant country. This might change in the near future as the percentage of Protestants in the U.S. has been diluted because of immigration from Roman Catholic countries, immigration from the Middle and Far East, and the rise in the number of agnostics, atheists and other non-theists. From 1972 to 1993, the *General Social Survey* of the *National Opinion Research Center* found that the proportion of Protestants was stable and constituted about 63 percent of the population. This declined to about 55 percent in 2002 (Pew Forum, 2004).

The adult population consisted of four major groups as follows (selected sub-groups are also identified; all numbers are percentages of the overall total):

54.7% Protestants
- 26.3% white and non-Latino Evangelical Protestants
  - 12.6% Traditional Evangelicals
  - 10.8% Centrists Evangelicals
  - 2.9% Modernist Evangelicals
- 16.0% white and non-Latino Mainline Protestants
- 2.8% Latino Protestants
- 9.6% Black Protestants

22.0% Roman Catholics

12.6% Miscellaneous religions
- 2.7% include Christian scientists, Later Day Saints (Mormons), Orthodox churches
- 1.9% Jewish
- 2.7% Other religions (Buddhists, Hindus, Muslims, etc)
- 5.3% Unaffiliated

10.7% Reject beliefs of established religions
- 7.5% Secularists
- 3.2% Atheists & agnostics

As already noted, fertility in the US was cut in half during the 19th century from around 7.0 to 3.6 births per woman. All religious denominations were no doubt part of this decline. According to a study by Billings (1889, cited in Goldscheider 1967) the Jewish birth rate was lower than the non-Jewish one in the 1880s. A 1905 Rhode Island census showed that the average family size of native-born Jewish women was 2.3 compared to 3.2 for native-born Catholics and 2.5 for native-born Protestants (Goldscheider 1967).

Some convergence of Catholic and non-Catholic fertility occurred between 1920 and the early 1940s when Catholic fertility declined more rapidly than non-Catholic fertility (Westoff and Jones, 1979). During the post-war baby boom Catholic fertility increased disproportionately, but by the 1970s Catholic and non-Catholic fertility were almost identical (Table 3).

Table 3 – Total marital fertility rates[a] for Catholic and non-Catholic women based on merged data from the 1955 and 1960 GAF Studies and the 1965, 1970 and 1975 NFS

Period	***Total***	***Catholic***	***Non-Catholic***	***Difference C-NC***
1971-75	2.20	2.27	2.17	0.10
1966-70	2.78	3.21	2.62	0.59
1961-65	3.45	4.25	3.14	1.11
1956-60	3.57	4.24	3.36	0.88
1951-55	3.26	3.54	3.15	0.39

Note: a – calculated through duration 15-19

Source: Westoff and Jones, 1979, p.213

Among the many changes in societal conditions and life styles that occurred in the post-war period, the increased variety, availability and utilization of contraceptive methods were meaningful. Whatever the motivations for limiting family size may have been, birth regulation was facilitated and the available means of contraception were being utilized. By the first half of the 1970s Catholic marital fertility had declined by almost one half compared to a decade earlier, and it was equal to non-Catholic fertility. Apparently all strata of the US population, including the various religious denominations were taking advantage of the available means of fertility regulation (Westoff and Bumpass, 1973; Westoff and Ryder, 1977).

Jewish fertility followed the general trends of American fertility but remained consistently below the average (DellaPergola, 1980). On the other hand, some other small religious denominations, e.g. the Mormons, consistently maintained above average fertility. One can also mention extraordinarily small denominations with extremely high fertility, such as the Amish and Hutterites (Immerman and Mackey, 2003)

Based on the results of the National Surveys of Family Growth in the 1980s it appears that Protestant fertility began to be higher than Catholic fertility, and above the overall average (Mosher et al., 1992). Measured by the total fertility rates, Catholic fertility was about one-quarter of a child below Protestant fertility: 1.64 vs. 1.91 birth per woman. Much of the differential was caused by later and less frequent marriage among Catholics.

The last section of this paper will report on religious fertility differentials at the dawn of the 21st century.

6. A review of analyses and beliefs on the interrelations of religion and religiosity and fertility

In this section the principal theories, observations and conclusions of a reasonably representative sample of scholars are summarized. *Inter alia*, the section should provide the background for a better understanding of empirical analyses.

McQuillan (2004) focuses on the question: When does religion influence fertility? He points out that there is a need to extensively discuss this question because many studies have demonstrated significant differences in demographic behavior between religious groups but the reasons for these differences have not been adequately elucidated. McQuillan builds on Goldscheider's work who argued in favor of a broader definition of the ideological influence of religion to include "the total content of that social organization" and "broadly based norms of family control and gender relationships," i.e. values regarding gender, sexuality and family life in addition to fertility regulation. Further, Goldscheider emphasized the importance of the status of religious groups within the social and economic order of society, in particular minority-group status (Goldscheider 1971, 1999; Goldscheider and Mosher 1991).

McQuillan extends this approach by directing attention to three elements: the nature of religious values and norms, religious institutions and the issue of religious identity. First, the respective religion has to articulate behavioral norms with a bearing on fertility behavior; these can be norms or rules that regulate behavior directly connected to proximate determinants of fertility, i.e. contraception, sterilization, and abortion, but also guidelines on entry into sexual unions, the promotion of large families, and even beliefs related to duties owed to ancestors. Certain broader issues of social organization, such as appropriate roles for men and women, may ultimately affect fertility; for instance, the segregation of Muslim women signifies a curtailment of pursuits other than motherhood. Second, the religion has to have the means to communicate these values and norms, and to promote compliance and punish nonconformity. The institutional influence of religion can be felt at three levels: in the larger society, in the community and in the life of the individual. Third, religion forms a central component of the social identity of its followers. Voluntary identification with religious faith can support correct behavior, especially when religion and nationalism blend together.

Weigel (2005), a prominent Catholic theologian, comes to the conclusion that (western) Europe is in a profound, long-standing crisis of morale, with demographic suicide being "perhaps the most urgent issue confronting Europe today" (p.5). " … [t]he proximate roots of the 'Europe problem' …. go back to the nineteenth century – to the drama of atheistic humanism and the related triumph of secularization, or de-Christianization, in western Europe" (pp.51-52). "Human greatness required rejecting the biblical God, according to atheistic humanism" (p.47). The proposed European constitutional treaty perpetuates this approach by refusing to make any reference to Christianity as a source of Europe's distinctive civilization (p.57). Weigel's interpretation is supported by others, such as David Hart (2004), an Orthodox theologian, who expressed the view that it is "fairly obvious that there is some direct, indissoluble bond between faith and the will to a future," and that without faith there is no future: "This is why post-Christian Europe seems to lack not only the moral and imaginative resources for sustaining its civilization, but even any good reason for continuing to reproduce" (cited by Weigel, p. 163).

Analogous considerations are, among many others, contained in the apostolic exhortation *Ecclesia in Europa* (The Church in Europe, 2003) of Pope John Paul II. Europe ought to have experienced a new burst of hope and confidence after seventy-seven years of turmoil; yet what it seemed to be living was an experience of ambiguity that led to a loss of faith in the future; "the most urgent matter Europe faces … is a growing need for hope, a hope which will enable us to give meaning to life and history and to continue on our way together." Among the manifestations of this loss of hope are: "weakening of the very concept of the family," and "a growing lack of concern for ethics and an obsessive concern for personal interests and privileges" leading to "the diminished number of births." "At the root of this loss of hope is an attempt to promote a vision of man apart from God and apart from Christ" (cited by Weigel, pp. 117-119).

Weigel (2005) argues that there are compelling reasons why the United States should care whether Europe is and remains in a civilizational crisis. First, "a United States indifferent to the fate of Europe is a United States indifferent to its roots." Second is "the medium- and long-term threat to American security posed by Europe's demographic meltdown. Demographic vacuums do not remain unfilled." A future Europe could be "increasingly influenced, and perhaps even dominated, by militant Islamic populations." Third, "the American democratic experiment will be weakened if Europe's depoliticization reinforces similar tendencies in the United States, and so will the democratic project in the world" (pp. 132-137).

Weigel acknowledges that "there are economic, sociological, psychological, and even ideological reasons why Europe's birth rates have fallen below replacement level for decades. But the failure to create a human future in the most elemental sense – by creating a successor generation – is surely an expression of a broader failure: a failure in self-confidence … tied to a collapse of faith in the God of the Bible. For when God goes … so does God's first command: 'Be fruitful and multiply' (Genesis 1:28)" (p.164).

Similar observations have been expressed by Mead (2005) when describing how conservative Americans possibly view Europe: "What you see now in much of Europe is that it has lost the biological will to live. A red state American might say that Europeans are failing to reproduce themselves and are being supplanted by Muslims who at least believe in God, even if they are of the wrong religion." … "the relationship between the lack of fertility in Europe and the lack of religious belief" is a sentiment that is started to be heard.

Greeley (2004) concludes that "it can be asserted that Christian faith has *increased* in Europe as a whole." Greeley conducted his analysis using four surveys carried out between 1980 and 1998 in 23 countries. On the one extreme he found that religion had declined in France, Britain and the Netherlands. On the other it had increased in Russia, Latvia, Slovenia and Hungary. In the other countries religion had stayed stable, in some high in others low.

Berger (2005) does not think America is an exceptional country in the realm of religion, because "(M)ost of the world is fiercely religious, and the United States is a strongly religious society. Thus, the exception is not the United States, but rather the exception is Europe. … I mean specifically Western and Central Europe." Berger further states there is overwhelming evidence that modernity does not necessarily lead to a decline in religion and to secularization.

"What it does lead to …. is pluralism, by which I simply mean the coexistence within the same society of very different religious groups."

According to Berger (2005), what is very different in terms of religion between the US and Western and Central Europe is institutional behavior. "The major churches in Western and Central Europe, both Protestant and Catholic, are in very deep trouble by any indicator you want to take. Attendance of people at services, loyalty to the institution, recruitment of clergy, financial contributions influence in the public realm all have declined – a reality that's very different from the one in the United States." Moreover, "you have something in America which is almost totally absent in Europe – a massive presence of Evangelical Protestantism, ranging somewhere between … maybe 50 to 70 million Americans. …. There are millions of Americans who are born-again Christians of one sort or another – there is nothing like this in Europe except in very small groups."

Norris and Ingelhart (2004) analyzed the process of secularization on the basis of the World Value Study (79 country surveys) and a host of other materials. Their main conclusion is that secularization -- a systematic erosion of religious practices, values, and beliefs – has been progressing, especially in advanced countries and among the more affluent strata of populations, but that this does not mean that the world as a whole has become less religious. The investigations of Norris and Ingelhart demonstrate that secularization is based on existential security. As modernization occurs living conditions for many people are transformed reducing their vulnerability to sudden, unpredictable risks. In addition, conditions of socio-economic inequality are critical for conditions of human security. Thus, growing up in less secure societies heightens the importance of religious values, while conversely more secure conditions lessen it. At the same time, as rich societies become more secular, the status of women changes, women's options in life increase, the value of individuals rises, fertility and population growth decline. Due to a lack of modernization and relatively low security in poor countries, fertility and population growth continue to be higher. The net effect is that religious populations are growing faster than secular populations and the proportion of religious people in the world is increasing.

There is no doubt that religiosity is high in the United States compared to Europe as a whole; however it is similar to Ireland and Italy. To some degree Norris and Ingelhart consider this a puzzle, given the degree of modernization and affluence in the US. In part, they believe, this is due to the fact that the US is one of the most unequal postindustrial societies and that relatively high levels of economic insecurity are experienced by many sectors of US society. This conclusion is based on data showing that altogether in postindustrial societies the poor are almost twice as religious as the rich, and this relationship is similar in the US. – Norris and Ingelhart explore a number of other important issues, such as the validity of the "religious market model" which postulates that religiosity is generated by the availability of a plurality of religious institutions and the activity of their leaders. They do not find support for these theories in their analyses.

The notion that religion -- its presence, gradual disappearance or its absence -- is a defining force in reproductive behavior continues to be a matter of attention, concern and preoccupation. Goldscheider and McQuillan have significantly advanced the understanding of the mechanisms how religion and religiousness operate in modifying fertility. But there certainly

is no consensus in describing and interpreting contemporary reality. Even on the basic issue of whether faith is increasing or declining, theologians do not agree. And it appears that the majority of them are pessimistic and consider the loss of faith and hope as a direct cause of a diminished number of births in Europe. On the other hand, lay scholars are further developing the theory of secularization by providing evidence that economic conditions, relative economic security and the distribution of wealth are the defining factors of the intensity of religiousness. Frail existential security tends to intensify religiosity. Increasing economic security tends to advance secularization and by heightening the status of women diminish childbearing.

7. Factors other than religion that explain relatively high US fertility

The question of why US fertility is relatively high has attracted the attention of academicians and the media. On the other hand, the question of why European fertility is lower than that of the United States tends not to be raised. The basic consensus of the extensive literature dealing with the contemporary situation in Europe is that low fertility is here to stay for quite some time without specifying how long that might be (see, for instance, Goldstein et al. 2003; Hobcraft and Kiernan, 1995; Lesthaeghe and Moors, 2000; Macura and MacDonald, 2003; van de Kaa, 1987). This conclusion is based on wide-ranging research of family formation, fertility regulation, economic conditions, values and norms, gender relations, as well as family and population policy measures. In this context one should mention that relatively low Canadian fertility vis-à-vis US fertility has been the subject of comparisons and investigations (For instance, Bélanger and Ouellet, 2002).

Numerous factors have been identified as having contributed to relatively high US fertility. These include immigration and ethnic composition, the institutional constellation, the nature of the economic system, attitudinal changes, high rates of unplanned pregnancies and births related to poverty, functional illiteracy and characteristics of the health and reproductive health care delivery system, all of which are reasonably well supported by evidence (Frejka, 2004). Some appear more significant than other ones, but the different strains do not lend themselves to conduct a comprehensive quantitative analysis to establish the relative importance of the various factors. -- The purpose of the present study is to explore whether religious affiliation and religiosity are also a significant contributor to maintaining comparatively high US fertility.

8. Empirical Analyses

Sources of Data

The main source of data for this study for Europe is the European Value Survey conducted in 2000 which includes some 34 countries (excluding Turkey). Although the U.S. is also included in the World Values Survey (which includes the EVS), a much larger sample with much greater detail on fertility is in the National Survey of Family Growth (2002). The basic data limitation is that the surveys that are rich in measures of religiousness such as the EVS have little information on fertility, and vice versa. One consequence of this is that we have had to confine our measure of fertility to the number of children ever born to women 18-44 years of age (younger women were not included in the EVS). A few tables are also included for women 35-

44 to try to capture nearly- completed fertility but this strains the sample size in the EVS which typically is limited to between 300 and 400 women of reproductive age per country.

Comparisons of Religion and Religousness

As noted in Section 5, we see that Protestant women (18-44) predominate in the U.S. and in Northern Europe, Catholics in Western and especially in Southern Europe and women affiliated with Orthodox religions and with no religion are the most common in Eastern Europe (Table 4). Those who declare no religion comprise 14 percent of American women but 30 percent of European women, particularly in Western and Eastern Europe.

Distributions of the frequency of attendance at religious services and responses to the question on the importance of religion in daily life – the only two questions on the subject common to both the EVS and the NSFG – are also included in Table 4. American women generally attend religious services more frequently than European women though the women of Southern Europe are quite similar to the Americans. In contrast, over 40 percent of women in Northern and Western Europe never attend services, about twice the proportion in the U.S. and in Southern Europe.

Table 4. Distribution of women 18 – 44 by religion and religiousness in the United States and Europe.

			Europe			
Religion	U.S	All	Northern	Western	Eastern	Southern
No religion	14	30	17	34	39	13
Catholic	29	33	19	40	16	71
Protestant	51	14	57	22	2	<1
Orthodox	a	19	1	1	39	13
Other	6	4	6	3	4	2
Total	100	100	100	100	100	100
Attendance at Religious Services						
More than once a week	12	3	3	2	2	5
Once a week	21	12	9	6	11	23
1 – 3 times a month	17	11	5	12	10	15
Less than once a month	29	42	38	38	49	39
Never	21	32	45	42	28	18
Total	100	100	100	100	100	100
Importance of Religion in Daily Life						
Very important	50	16	10	9	20	24
Somewhat important	34	30	26	25	32	39
Not important	15*	53	64	66	48	37
Total	100	100	100	100	100	100

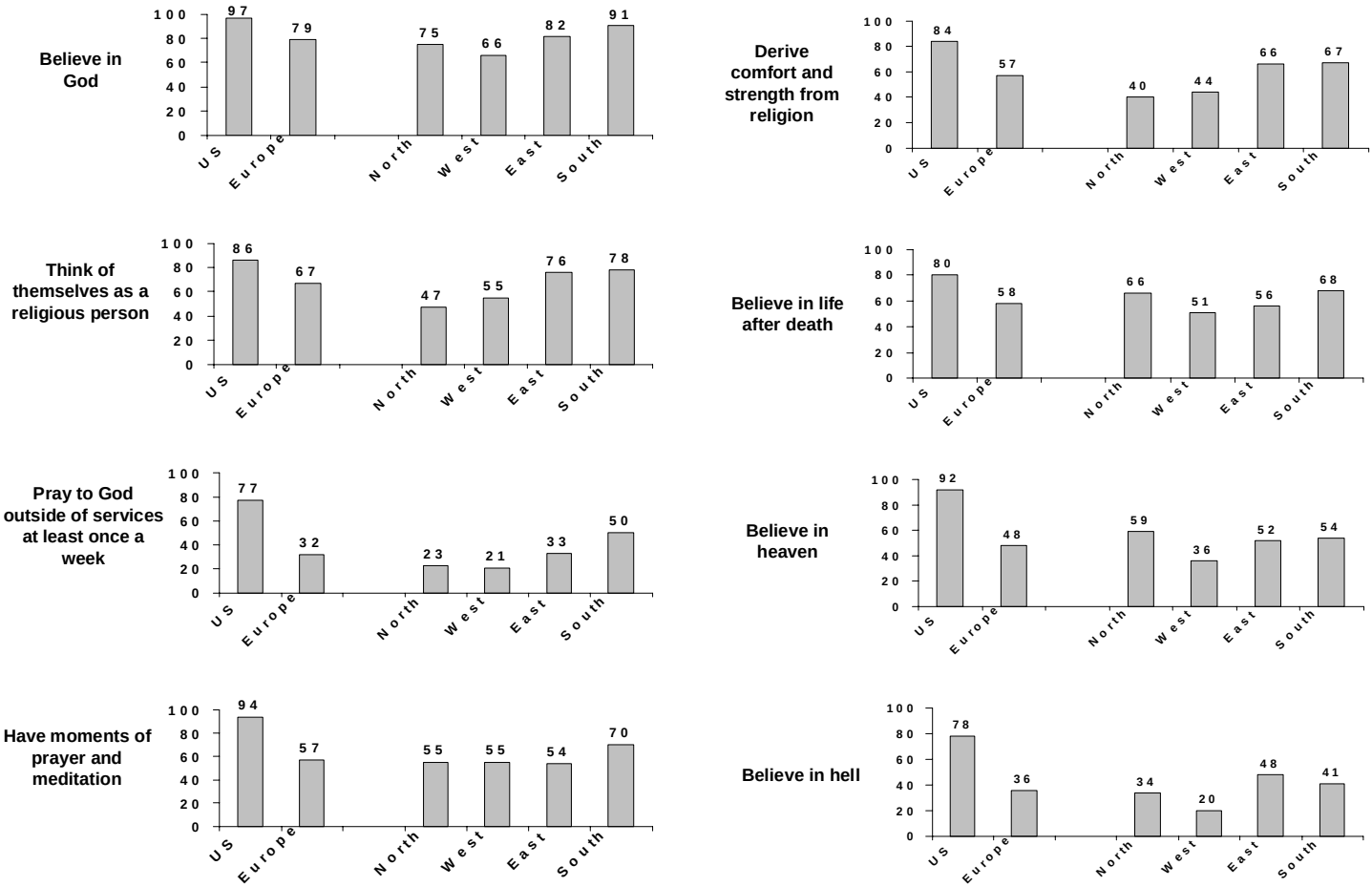
a Orthodox included in Other

* Includes women with no religion who never attend services

The responses to the question on the importance of religion in daily life clearly differentiate Americans and Europeans. While 50 percent of American women report that religion is "very important", only 16 percent of European women are in this category. In Northern and Western Europe, two-thirds state that religion is not important. The women of Southern Europe are the closest to American women on this measure but there is still a substantial difference.

The same picture of stronger religious attitudes in the U.S. is evident in Figure 4 where the responses to eight questions on religious beliefs are depicted (the data for the U.S. here are derived from the EVS). For every one of the eight measures, American women emerge as more religious than their European counterparts. The greatest differences are in the frequency of prayer and belief in heaven and hell. The differences in general are substantial, averaging across the eight measures by an absolute 32 percent difference between Americans and Europeans. Again, the Southern European women are closest to the Americans with an average difference of 21 percent.

Figure 4. Percent of women 18 – 44 with various religious beliefs.



Fertility Differences

Protestants and Catholics in the U.S. show little difference in the mean number of children ever born, both for women 18-44 and for those 35-44 (Table 5). The fertility of women who report no religion (14 percent of those in the U.S.) is substantially lower. In Europe, the fertility of Protestant women is somewhat higher than for Catholic women while women with no religion as well as those of Orthodox affiliations show the lowest fertility. A comparison of U.S. and European fertility by religion shows higher Catholic fertility in the U.S. but little difference among Protestants.

The fertility rates in Northern Europe are mostly higher than in the U.S. within religious categories and are frequently higher than other regions of Europe.

Fertility is fairly consistently negatively related to the frequency of attendance at religious services, both in the U.S. and throughout Europe. There is, of course, some question about whether women as they have children become more observant as a result, rather than having more children because they are more religious. However, if the analysis is repeated on the basis of recalled religious behavior when they were around 12 years old, the same association prevails.

Table 5. Mean number of children ever born by religion and religiousness.

	18 – 44						35 – 44					
	U.S.	Europe					U.S.	Europe				
Religion		All	Northern	Western	Eastern	Southern		All	Northern	Western	Eastern	Southern
Total	1.41	1.25	1.57	1.27	1.28	0.90	2.02	1.90	2.24	1.92	1.86	1.69
No religion	1.13	1.15	1.42	1.12	1.21	0.63	1.51	1.72	1.79	1.75	1.74	1.32
Catholic	1.50	1.26	1.68	1.32	1.48	1.00	2.17	2.00	2.30	2.00	2.31	1.74
Protestant	1.46	1.52	1.62	1.38	1.72	-	2.08	2.23	2.33	2.08	2.69	-
Orthodox	-	1.14	1.43	-	1.21	0.61	-	1.72	1.66	-	1.73	1.65
Attendance at religious services												
More than once a week	1.65	1.74	1.55	2.66	1.57	1.38	2.34	2.74	2.52	4.17	2.65	1.83
Once a week	1.60	1.44	1.91	1.66	1.51	1.10	2.17	2.23	2.58	2.35	2.46	1.74
1 – 3 times a month	1.53	1.32	1.36	1.54	1.32	1.05	2.12	1.93	2.24	1.97	1.93	1.80
Less than once a month	1.25	1.18	1.51	1.22	1.21	0.82	1.86	1.83	2.23	1.91	1.74	1.67
Never	1.18	1.19	1.55	1.10	1.28	0.58	1.70	1.79	2.16	1.68	1.81	1.44
Importance of religion in daily life												
Very important	1.61	1.52	1.46	2.07	1.49	1.25	2.20	2.27	2.54	2.88	2.19	1.90
Somewhat important	1.29	1.26	1.77	1.29	1.30	0.91	1.92	1.86	2.41	1.80	1.87	1.62
Not important	1.04	1.15	1.51	1.15	1.18	0.67	1.41	1.81	2.13	1.79	1.76	1.54

Belief in the importance of religion in daily life shows a similar pattern with fertility as that with frequency of attendance.

The major religious denomination is substituted for region in Tables 6 and 7 and the association is shown by frequency of attendance and by the importance of religion. In general, the more religious, the higher the fertility within the major affiliations.

Table 6. Mean number of children ever born to women 18 – 44 by religion and attendance at religious services: United States and Europe.

	United States			
Attendance at Religious Services	None	Catholic	Protestant	Non-Christian
More than once a week	-	1.78	1.66	1.04
Once a week	-	1.76	1.51	1.33
1 – 3 times a week	2.25	1.59	1.50	1.20
Less than once a month	1.29	1.26	1.27	1.02
Never	1.00	1.26	1.46	0.94
Total	1.13	1.50	1.47	1.07

	Europe			
Attendance at Religious Services	None	Catholic	Protestant	Orthodox
More than once a week	-	1.81	1.53	1.75
Once a week	0.69	1.41	2.03	1.31
1 – 3 times a week	0.97	1.36	1.68	1.12
Less than once a month	1.14	1.10	1.47	1.11
Never	1.17	1.09	1.42	1.21
Total	1.15	1.26	1.52	1.14

Table 7. Mean number of children ever born to women 18 – 44 by importance of religions: United States and Europe.

	United States			
Importance of Religion in Daily Life	None	Catholic	Protestant	Non-Christian
Very Important	-	1.74	1.58	1.23
Somewhat Important	1.29	1.31	1.30	1.15
Not Important	1.00	0.93	0.85	0.44
	Europe			
	None	Catholic	Protestant	Orthodox
Very Important	1.35	1.57	1.71	1.34
Somewhat Important	1.21	1.25	1.74	1.14
Not Important	1.14	1.08	1.40	0.99

Multivariate Analyses

The question arises of whether the bivariate associations of religiousness and fertility are erased or diminished when other important covariates are simultaneously considered. In Table 8, this issue is systematically examined in a step-by-step analysis with progressively more covariates included. It begins with the two measures of religiousness included alone but simultaneously. In the U.S., each measure is significant in the presence of the other while in Europe, the importance of religion[4] shows a more impressive association with fertility than does the frequency of church attendance. In Southern Europe, the odds ratio indicates that women who believe that religion is important are 76 percent more likely to have two or more children than those who do not feel it is important.

Table 8. Odds ratios of having two or more children (for women 18 – 44) by frequency of attendance at religious services and the importance of religion (simultaneously) with increasing number of controls.

	U.S	Europe				
		All	Northern	Western	Eastern	Southern
Religiousness measures alone:						
Attendance at services	1.32	NS	NS	1.2	NS	1.44
Importance of religion	1.48	1.31	1.17	1.5	1.31	1.76
With religion added:						
Attendance at services	1.29	NS	NS	NS	NS	1.55
Importance of religion	1.46	1.35	1.23	1.46	1.45	1.71
Plus age and marital status:						
Attendance at services	1.17	NS	NS	NS	NS	1.43
Importance of religion	1.36	1.27	NS	1.5	1.26	NS
Plus metropolitan residence, education and income:						
Attendance at services	1.29	NS	NS	NS	NS	1.48
Importance of religion	1.29	1.18	NS	1.49	NS	NS

In the next pair of rows, formal religious affiliation is added but this does not make much of any difference in the association of the two religious measures with fertility.

[4] In the U.S., the importance of religion is dichotomized into "very important" (51 percent) and "somewhat or not important" (49 percent). In Europe, the dichotomy is "important or very important" (46 percent) and "not important" (54 percent). In the U.S., the frequency of church attendance is dichotomized into more (50 percent) and less (50 percent) than once a month. In Europe, the dichotomy is more (59 percent) and less (41 percent) than once a year.

In the third pair of rows in Table 8, age and marital status are added to the equation in the second rows. This addition weakens the association in Northern and in Southern Europe but not elsewhere.

The bottom pair of rows completes the full model and adds to the preceding equation metropolitan residence, education and income. The result is weakened only slightly (for Eastern Europe).

The conclusion of this exercise is that religiousness as measured by the frequency of church attendance and the importance of religion in daily life is essentially independent of the covariates in the U.S. but in Europe only the importance of religion remains significant though slightly diminished. The covariates are religious affiliation, age, marital status, metropolitan residence, education, and income. In Europe, frequency of church attendance is a factor only in Southern Europe where it remains significant in all of the equations.

The details of the full model are shown in Table 9. Religious affiliation shows mixed effects. In the U.S., only Catholics show a significant effect but that obscures the higher fertility of some of the Protestant denominations (see Table 10). In Europe, the Orthodox show a negative association with fertility in contrast to the other religions. The pattern is mixed in the different regions with non-significant values being the most common.

Table 9. Odds ratios of having two or more births for women 18 – 44.

	U.S	Europe				
Religion		All	Northern	Western	Eastern	Southern
Attend religious services regularly	1.28	NS	NS	NS	NS	1.48
Religion important	1.25	1.18	NS	1.49	NS	NS
No religion	1.00	1.00	1.00	1.00	1.00	1.00
Catholic	1.22	1.18	NS	NS	1.56	NS
Protestant	NS	1.67	NS	0.59	4.12	NS
Orthodox	-	0.78	NS	NS	NS	NS
Muslim	-	1.6	NS	NS	2.24	NS
Other	NS	NS	NS	NS	NS	NS
30 years of age or older	4.37	6.02	4.87	3.75	7.97	10.22
Ever married	6.38	8.31	4.85	10.19	8.78	49.54
Lives in metropolitan area	NS	0.63	0.76	0.82	0.5	NS
Had at least secondary education	0.39	0.62	0.4	0.53	0.77	0.42
Income						
Lowest third	1.00	1.00	1.00	1.00	1.00	1.00
Middle third	0.54	0.87	0.74	NS	NS	NS
Highest third	0.54	0.89	NS	1.34	NS	0.71
Number of women	5553	9024	2301	2094	2860	1769
Chi square	1827	3461	803	801	1089	978
R square	0.238	0.28	0.255	0.278	0.28	0.435

The other covariates of interest are metropolitan residence which is inversely correlated with fertility except in the U.S. and in Southern Europe. Having had at least a secondary education is

also negatively associated with fertility in all of the populations. Income is also independently negatively associated with fertility in the U.S. and in Europe as a whole, but not consistently across the four regions.

The large sample in the 2002 NSFG enables us to take a more detailed look at the covariates of fertility in both the 18-44 age range and the 35-44 category in the U.S. (Table 10). The frequency of church attendance shows significant associations with the likelihood of having two or more births for both age groups but the importance of religion does not remain significant among the older women. With "no religion" as the reference group, Catholics, Baptists and Southern Baptists, the Methodist, Lutheran, Presbyterian and Episcopalian group, and "Other Protestant denominations" (largely Mormons) show strong positive associations with fertility but the Fundamentalists are in this category only among the older women. Hispanic women have higher fertility in both age categories while non-Hispanic black women only show higher fertility in the 18-44 age group. This probably reflects their early childbearing while the completed fertility is not different from the others. The negative effects of education and income remain as described above.

Table 10. Odds ratios of having two or more births for the full model for the U.S. for women 18 – 44 and 35 – 44.

	18 – 44	35 – 44
Religion:		
None	1.00	1.00
Catholic	1.45	1.97
Baptist, Southern Baptist	1.49	1.4
Methodist, Lutheran, Presbyterian, Episcopalian	1.24	1.4
Fundamentalist Protestant	NS	2.08
Other Protestant denominations	1.69	2.03
Protestant, no specific denomination	NS	NS
Other non-Christian religion	NS	NS
Frequency attend religious services	1.4	1.61
Importance of religion	1.18	NS
Ethnicity:		
White non-Hispanic	1.00	1.00
Hispanic	1.61	1.41
Non-Hispanic black	1.6	NS
Non-Hispanic other	NS	NS
Over 30 years of age	4.04	-
Ever married	6.32	6.16
Ever cohabitated	1.33	NS
Lives in metropolitan area	NS	0.85
More than high school educated	0.49	0.7
Mother more than HS educated	0.76	NS
Income:		
Lower third	1.00	1.00
Middle third	0.61	0.69
Higher third	0.64	0.67
Number of women	6426	2291
Chi square	2239	306
R square	0.253	0.104

Estimates of the Effects of Religiousness on U.S. - Europe Fertility Differences

The last set of analyses is an effort to quantify the hypothetical implications for European fertility if European women were as religious as American women. The procedure, in effect, is to standardize European fertility rates by the distribution of the frequency of church attendance and the perceived importance of religion observed for American women. If European women attended religious services at the higher levels that American women report or were to regard religion as important as their American counterparts, how much higher might European fertility be? The estimates in Table 11 only reflect the two measures of religiousness and not any of the covariates that might be involved. The estimates are calculated for the four regions of Europe for women 18-44 as well as the subset 35-44 and for a few low fertility countries for the entire age range (because of sample size considerations).

Table 11. Estimated percent increase in fertility in Europe if European women had the same frequency of attendance at religious services or the same attitude toward the importance of religion as women in the United States.

	Frequency of Attendance		Importance of Religion	
	18 – 44	35 – 44	18 – 44	35 – 44
Europe	14	10	13	12
North	1	4	0	11
West	19	19	38	30
East	5	12	9	11
South	4	0	22	6
Austria	4	–	37	–
France	35	–	43	–
Germany	9	–	39	–
Great Britain	0	–	9	–
Greece	21	–	23	–
Italy	0	–	21	–
Netherlands	24	–	32	–
Slovenia	10	–	24	–
Spain	17	–	33	–

For Europe as a whole, the estimate is that the fertility of women 18-44 would theoretically be 14 percent higher than its current level if church attendance were the same and 13 percent higher if the same importance were attached to religion. The theoretical increases are lowest for the North and highest for the West. The general picture is approximately the same for women 35-44 but only in the West is a substantial increase suggested (of 30 percent). The effects in different countries are a function of the differences in religiousness compared with the U.S., differences in current fertility and in the strength of the association between religiousness and fertility.

These calculations can logically be reversed to estimate how much lower US fertility would be theoretically if American women attended church with the same frequency as European women or attached the same importance to religion. The estimates for women 18-44 are 7 percent lower with the same church attendance and 23 percent lower with the same perceived importance of religion. For women 35-44, the estimate for church attendance is 6 percent lower and 18 percent lower for the importance of religion.

9. Conclusions

This study originated with the question of why fertility is higher in the U.S. than in Europe. One of the hypotheses pointed to the possible effects of differences in religiousness which is the focus of this paper.

There is no doubt, whatever its origins, that American women are more religious than European women regardless of how it is measured. Whether that difference, which is demonstrated here in terms of attendance at religious services and the importance attached to religion in daily life as well as other measures, is growing or diminishing over recent decades is an interesting and researchable question but it is not the focus here. The question we have pursued is whether religiousness is currently related to fertility in both Europe and America and whether the association is sufficient to explain some of the differences in fertility.

Several results have emerged. The first is that the difference in fertility indicated by the period Total Fertility Rate is larger than the comparison of the cohort fertility would suggest. The cohorts here are those born around 1960. There has been a greater postponement of fertility in Europe than in the U.S. So, some of the difference is related to the tempo rather than the quantum of childbearing. The fertility of the relevant cohorts here is about the same in the U.S. as in some European countries, most notably in Northern Europe.

Secondly, it is clear that countries of Europe differ substantially in fertility and in religiousness. For the most part, however, because of sample constraints we have had to limit the disaggregation to four regions of Europe which still masks a great deal of heterogeneity. Another limitation is that it is largely dependent on just two measures of religiousness – the frequency of church attendance and the perceived importance of religion in daily life. Differences in religious affiliation, at least in terms of Catholic and Protestant, show little fertility variation but again, this masks considerable variation especially in Protestant denominations. In the U.S., the more “liberal” denominations such as Presbyterians, Methodists, Lutherans, and Episcopalians have lower fertility than Catholics and fundamentalist Protestants.

We have tried to answer our basic question by estimating how much of an increase in fertility might theoretically occur if Europeans were as religious as Americans. The overall answer, in brief, is that one might expect a small increase for Europe as a whole but considerably more for Western Europe.

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