

## **'De-secularisation?': Religiosity and fertility in Western Europe**

### Introduction

One of the great sociological questions of our age is whether the religious proportion of the world's population will continue to expand due to the higher fertility of religious women, or whether religious apostasy will lead to a reduction in global religiosity. At the national level, the balance between secular and religious subcultures has important repercussions for electoral cleavages, party systems, public policy and international relations. Where precisely does the secular-religious balance lie in the developed world? This study interrogates the problem through the prism of ten west European countries. To date, few analyses of religious trends in Europe adopt a time-sensitive approach which can parse out cohort and life-cycle effects.<sup>1</sup> In addition, research in the sociology of religion, cultural demography and labour economics suggests an important relationship between religiosity and demographic indicators which can affect the size of religious and secular populations. Norris and Inglehart (2004), for instance, claim that while higher religious fertility is overwhelming religious apostasy in the developing world today, the balance swings in the other direction as human development proceeds. However, their demographic theory of secularisation has not been systematically tested with individual-level data from the developed world. Finally, research which uses inputs from models of past behaviour to make demographic

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<sup>1</sup> Exceptions being the studies on Britain and the Netherlands which confirm that the decline in religiosity is a generational rather than life cycle effect. (Voas & Crockett 2005)

projections of future secularisation scenarios is missing for western Europe. This article attempts to fill these lacunae in the literature.

## The Secularization Debate

All three 'founding fathers' of sociological theory - Marx, Weber and Durkheim - cast a narrative of modernisation in which religion was an inevitable casualty of advancing rationality. For Marx, under the pressure of industrial capitalism and science, 'solid' religious certainties would 'melt into air', profaning the sacred public sphere. (Marx 1973: 70-71) Max Weber spoke of the advance of 'disenchantment' as the acids of scientific modernity and bureaucratisation shrink the scope for religious explanations and supernatural beliefs. (Weber 1948: 155) Finally, Emile Durkheim, drawing on classical and Spencerian thought, proposed a theory of structural differentiation and moral evolution whereby the role of religious expertise is confined to an ever shrinking sphere. Increasingly, as in France after the Revolution, society worships itself rather than a supernatural deity. (Durkheim 1995, [1893] 1984, ch. VI)

More recently, Steve Bruce has synthesised the work of previous modernisation theorists like Ernest Gellner and David Martin to argue for the irreversibility of secularisation in modern society. Whereas the previous generation of secularisation theorists largely confined their arguments to the declining influence of religious institutions in the running of society, Bruce introduced the radical argument that secularisation was also occurring at the level of *individual* beliefs. This comes about for two major reasons: first, the fragmenting effect of societal differentiation on religious

identity, and second, the declining authority of religious truth claims. Societal differentiation begins because economic rationality demands producer and consumer specialisation to maximise comparative advantage, creating occupational differences and burgeoning consumer choice. This spills over into lifestyle pluralism, constricting the religious sphere and relativising its influence. Meanwhile, the mundane specialist knowledge of the techno-economy crowds out religious expertise in solving secular problems and leads to a wider questioning of organised religion's totalizing claim to truth. (Bruce 2002: 2-43, 1998: 5-7, 15) Exceptions to this rule are found only in cases where religion acquires a this-worldly role, principally as a vector for ethnic or nationalist resistance - as in Poland under communism or in divided societies like Northern Ireland - or as a site of social integration during periods of rapid social dislocation, as with rural-urban migration. (Bruce 1998: 19-21)

The work of Ron Inglehart and Pippa Norris dovetails with Bruce's argument. They claim that rising material wealth and political stability reduce the ontological insecurities that drive religiosity. This argument is also made - albeit in a different way - by Anthony Giddens, who suggests that detraditionalisation involves the replacement of religious forms of expertise by scientists and their technological 'expert systems'. However, Giddens also allows for the 'return of the repressed', i.e. the return of spirituality in response to high modernity's inability to address the ultimate questions of human existence. (Giddens 1991: 194-5, 207-8)

Whereas much of the work on secularisation stems from the European context where declining religious attendance and/or belief seems more apparent, some American researchers take a different view. The so-called 'supply-side' or religious market model is

methodologically individualist and focuses on the *supply* of religious services in contrast to the secularisation theorists' concentration on social structures and changes in individuals' *demand* for religion. Supply-side theories contend that a major reason for the lack of religious vitality in much of Europe stems from the dominance of state religions, which restrict competition in the religious marketplace and produce inefficient religious monopolists who fail to create religious demand. This is in marked contrast to the United States, where the early separation of church and state led to a freer market in religious provision which could cater to a wider variety of spiritual demands as well as providing the non-spiritual 'selective incentives' which often help to attract people to places of worship. While religious attendance remains low in Europe, religious beliefs show a high degree of vibrancy. Advocates of the supply-side perspective maintain that the disjuncture between beliefs and practice is a result of a lax religious establishment failing to serve consumer demand within an over-regulated religious market. (Stark and Iannaccone 1994; Stark & Finke 2000: 57-79)

Recent research which tests these competing theories using European data suggests that the secularisation approach provides a more convincing explanation than supply-side theories. Halman and Draulans (2006: 278) for instance, find no support for the supply-side postulate that greater religious diversity is linked to higher levels of religious belief or practice. Instead, the reverse seems to be the case. Using national-level data for a global set of countries, McCleary and Barro (2006) found that attempts by the state to regulate religious markets (a practice often associated with communism) does lower religiosity, but the promotion of official religions by the state actually increases religious participation - possibly because of the additional resources flowing to organised

religion. Pluralism seems to have a mixed effect on religiosity. Meanwhile, recent analyses of European survey data find a consistent pattern of religious decline encompassing participation (attendance), belief and affiliation. (Voas and Crockett 2005; Norris and Inglehart 2004, ch. 3)

In response, some theorists propose that the story is more complex than a linear theory of secularisation would allow, with trends varying between countries and with different trajectories depending on whether the variable of interest is religious practice, religious belief, religious traditionalism or religious affiliation. Andrew Greeley, using data from the International Social Survey Programme (ISSP) religion modules contends that the religious situation in Europe defies any unitary process like secularisation. (Greeley 2002) Grace Davie, drawing on the recent European Values Survey (EVS), finds diverse religious pathways, but also a regularity of 'believing without belonging' in many European countries. She even avers that the data often show religious belief varying *inversely* with religious practice. (Davie 1994, 2002: 4-8)

### Demographic Aspects of Religion

Much of the research on the sociology of religion has focused on religion as a social phenomenon whose rise or decline depends upon the conscious choices of individuals within changing structural contexts. However, it is apparent that even in the absence of socially-inspired revivals/declines of religion, the degree of religiosity in a society can fluctuate. The chief non-social mechanism of change is demography. If we consider 'the religious' as a population affected not only by assimilation/dissimilation into

the secular population but by migration, fertility and mortality, we arrive at a more multivalent picture. David Voas is one sociologist who has urged that greater attention be paid to the demography of religion. 'People enter, exit, and move within religion,' he remarks, 'just as they are born, will die, and migrate, in life'. (Voas 2003: 94) 'Silent' demographic effects can be profound in the long-term. For example, Stark shows how early Christians' favourable fertility and mortality rates as compared to Hellenistic pagans helped to fuel a 40 percent growth rate in the Christian population of the Roman Empire over several centuries. This gave rise to a population increase from 40 converts in 30 A.D. to 6 million by the year 300 leading to a 'tipping point' which helped Christianity become institutionalised within the Empire. (Stark 1996) Currently, many Islamic parts of what was once the Roman Empire have seen major declines in their Christian and Jewish populations due to emigration, lower fertility and mixed marriages. (Fargues 2001)

Those who study the religious marketplace in the United States have been impressed by the extent to which denominations have grown through migration and fertility advantage. Sherkat (2001), for example, finds that American Catholics have been able to offset large net losses to other denominations through gains arising from (largely) Hispanic-Catholic immigrants and their higher fertility. Fertility differentials can also play a key role - especially long term. Mormons, once a very small sect, now equal or surpass Jews among post-1945 birth cohorts due to their fertility advantage over Jews and other denominations. (Sherkat 2001: 1472-4) Conservative Protestants, a much larger group than the Mormons, also benefit from relatively high fertility. Using the General Social Survey, Roof and McKinney noted in the 1980s that Southern Baptists had

roughly twice the fertility of Jews and secular (unaffiliated) Americans. (Roof and McKinney 1987) A recent article extends this finding by showing that three-quarters of the growth of conservative Protestant denominations is due to fertility rather than conversion. (Hout, Greeley and Wilde 2001) This has powered the growth of the religious right and increased the base of the Republican party. Indeed, a recent article demonstrates the extremely significant and robust correlation between non-Hispanic white fertility patterns and the Republican vote - especially in 2004. States whose white population tends to be liberal and postmaterialist have lower fertility - as per 'second demographic transition' theory (SDT) - and a lower pro-Bush vote share. (Lesthaeghe and Neidert 2005)

In Europe, there has been less attention paid to fertility differences between denominations. However, the growth of the European Muslim population through immigration is a trend that is widely acknowledged. Austria is one of the few European countries to collect religious data on their census. A recent attempt to project Austria's population to 2051 found that a combination of higher fertility and immigration will increase the proportion of Muslims in the country from 4.6 percent of the population in 2001 to between 14 and 26 percent by 2051. Certainly the secular/unaffiliated population is projected to increase from 4 percent in 1981 to 10 percent in 2001, and is projected to grow in the near future. However, the secular population in Austria has a total fertility rate (TFR) of just .86 children per couple, limiting its long-term growth potential. This means that in the event that secularisation ceases - to say nothing of religious revival - the secular population will peak and begin to decline as early as 2021. (Goujon et al. 2006: 24)

## Religiosity and fertility

One postulate of second demographic transition theory is that secularisation is linked to lower fertility. (Surkyn and Lesthaeghe 2004; van de Kaa 1987) Norris and Inglehart also find a strong correlation between religiosity and fertility based on their analysis of aggregate-level data. Their multivariate analysis of national-level indicators for some 65 countries sampled in the World Values Surveys of 1981-2001 show a significant correlation between religious participation/prayer and proxies for fertility. Though they did not directly test for the impact of religiosity on fertility, the strong coefficients for population growth and population age structure intimate that religiosity is linked with higher fertility at the global level. (Norris & Inglehart 2004: 62-3) The authors maintain that human security is not only related to religiosity and fertility at the international level, but also at the individual level within nations. In the United States, for example, the authors note that those with lower income and education tend to be more religious than other Americans.<sup>2</sup> (Norris & Inglehart 2004: 110) More recently, Berman, Iannacone and Ragusa (2005), employing a pooled model for four Catholic European countries in the period 1960-2000, found that church attendance is associated with fertility, but only in interaction with an indicator for the number of nuns per capita. This is attributed to the salutary effect of nuns (not priests) in providing ancillary social services at church which helped to raise the total fertility rate in Catholic countries.

Studies of the religiosity-fertility link at the individual level reinforce the contention that a woman's level of religiosity is an important predictor of the number of

children she will bear in her lifetime. Westoff and Jones (1979) first reported that among American Catholics, religiosity (as measured by communion) was associated with higher fertility in the 1950s and 1960s, though not in the 1970s. A similar result was found for the late 1980s in the US. (Lehrer 1996) The work of Alicia Adsera on Spain, based on Spanish Fertility Surveys, argues the reverse, pointing to the *growing* importance of religiosity in predicting fertility. Whereas there was no statistical effect of religious attendance on fertility in 1985, this had changed by the 1999 survey, with practising Catholics having significantly higher fertility.<sup>3</sup> Adsera attributes this difference to secularisation in the post-Franco era, which, in depleting the ranks of the Catholic church, left behind an increasingly devout remnant of practising, pro-natalist Catholics. (Adsera 2004: 23) Westoff and Frejka (2006) have recently tried to test this link by examining the 2000 European/World Values Survey (EVS/WVS) data and 2002 National Survey of Family Growth. They found a major gap in fertility between those who attended weekly or felt religion to be important in their lives, and those who attended less frequently or felt religion to be unimportant to them. Yet multivariate tests of the odds of having a third child showed mixed results: religiousness measures seemed to be significant in about half the equations after a battery of controls were applied. Nonetheless, a similar study based on the Family Fertility Surveys (FFS) of the 1990s found a much stronger relationship between religiosity (as both attendance and self-assessed belief) and fertility across eighteen European countries. Here the significance of the relationship was nearly universal. (Berghammer, Philipov and Sobotka 2006)

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<sup>2</sup> This relationship was not, however, tested through multivariate analysis.

<sup>3</sup> The difference is especially marked in the progression from the second to the third child. (Adsera 2004)

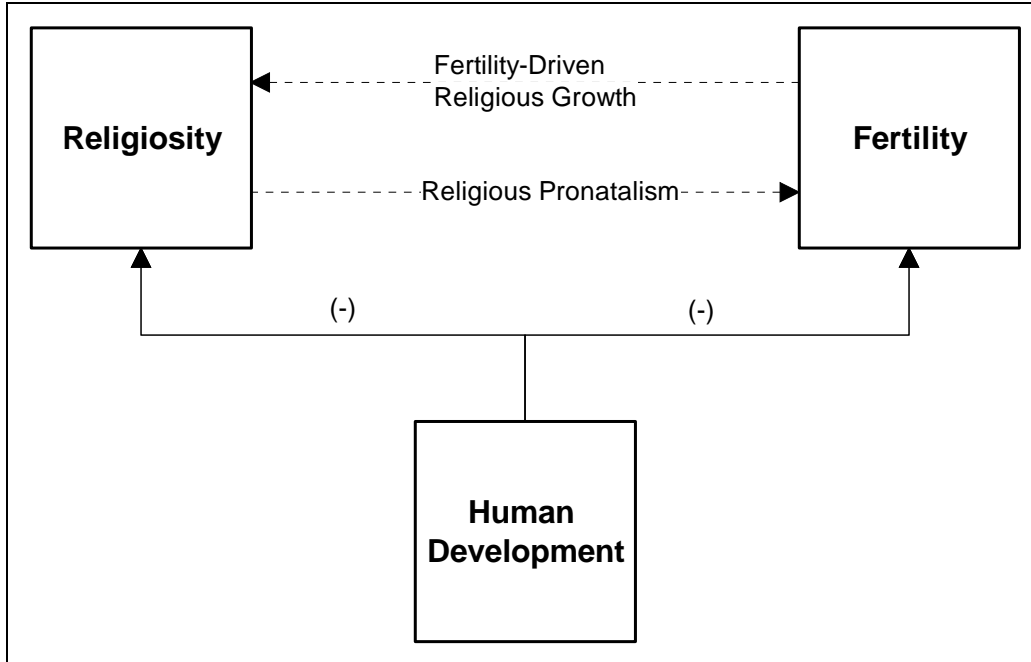
## Who Shall be the Victor?: Religious Apostasy vs. Religious Fertility

In their masterful and wide-ranging account of religion and politics worldwide, Norris and Inglehart remark:

One of the most central injunctions of virtually all traditional religions is to strengthen the family, to encourage people to have children, to encourage women to stay home and raise children, and to forbid abortion, divorce, or anything that interferes with high rates of reproduction. As a result of these two interlocking trends, rich nations are becoming more secular, *but the world as a whole is becoming more religious*. (Norris and Inglehart 2004: 22-23, emphasis added)

Norris and Inglehart view human development as the variable which governs the religiosity-fertility relationship. In other words, political and economic security lowers religiosity (with its pronatalist injunctions), which in turn lowers fertility. (see fig. 1) There is also a direct effect linking improved human security to lower fertility and thus a slower rate of growth in the religious population.

**Figure 1. The Inglehart-Norris Theory of Secularisation**



Long term, the authors are bullish about the prospects for development-led secularization:

In the long term and in global perspective...our theory predicts that the importance of religion in people's lives will gradually diminish with the process of human development. Moreover it does so most dramatically during the first stage of human development, as nations emerge from low-income agrarian economies into moderate-income industrial societies with basic welfare safety nets safeguarding against the worst life-threatening risks...this process does not reverse itself....

(Norris and Inglehart 2004: 54)

At a glance, the shift from the pessimism of the authors' introduction to the optimism of their conclusion is puzzling. For if religious fertility is currently able to overwhelm

development-driven secularisation, what will enable secularisation to pull ahead? The theoretical answer provided by Norris and Inglehart is that human development, i.e. an economic minimum, political stability and education, will gradually take root and lower fertility and religiosity in the long run.

Unfortunately, the macro trends on this point are not encouraging. For example, the demographic transition in the developing world is already well-established, with a number of less developed countries like Brazil, Tunisia and Iran now reporting below-replacement fertility. Overall, demographers predict that the developing world as a whole will reach below-replacement fertility well before the end of the twenty-first century, largely because of urbanisation rather than any significant increase in human development. In fact some see a danger whereby vulnerable nations undergo demographic transition without developing, thereby exposing their fragile economies to high dependency ratios. (Wattenberg 2004) If secularisation is the main source of declining fertility in the developing world then we should have already seen strong declines in religiosity by cohort there. Yet, according to the WVS evidence reviewed by Norris and Inglehart (2004, chapter 3), religiosity does not decline with age in developing countries. Moreover, in parts of the Islamic world, younger people are more religious than their elders. (Wickham 2002) Here it is interesting to note that the demographic transition in Europe typically occurred well before mass-secularisation.<sup>4</sup>

The main problem with Norris and Inglehart' technique is an attempt to test a developmentalist (i.e. time-series) theory with cross-sectional data, often on the basis of

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<sup>4</sup> Demographic transition usually preceded mass secularisation. In Spain, for example, fertility decline in the early twentieth century was caused by women controlling their fertility in response to declining infant mortality. All of this took place in a religious context without secularisation. (Reher and Sanz-Gimeno 2006)

bivariate trends. Yet we know that differences on a variable between countries are often created by historical specificities and tend to be much larger than differences within the same country over time. Prior to 1964, for example, southern U.S. states were generally weak on welfare spending but strongly supported the Democrats. The erroneous conclusion from a cross-sectional model - even with controls - would be that low welfare spending predicts high Democratic support. (Smith 1995) The same goes for the surprising finding that districts of the Punjab during 1961-1971 with higher literacy rates had higher fertility rates. On the other hand, within each district, as literacy increased each year over 1961-71, fertility (as expected) declined. The reason for the erroneous cross-sectional results is that districts with high literacy had high fertility for historical reasons.<sup>5</sup> This unit effect persisted throughout the course of 1961-71. (Ali 1978)

Overall, what is missing in *Sacred and Secular* is a systematic individual-level multivariate test of the proposition that development indicators govern both religiosity and fertility. Lacking such a test, there is no basis for the authors' optimistic claim that despite current setbacks, religious apostasy will one day win the battle over religious fertility. Consider a world in which religiosity continues to strongly predict fertility at both aggregate and individual levels despite controls for human development indicators. The fact that most developed countries have lower religiosity and lower fertility than developing countries would have to be explained by unspecified features of developed countries. One candidate would be the history of demographic transition and secularisation in Europe - processes which often took place at very different times. The same mechanism would explain why some of the highest-income European countries (France and Protestant Europe) have higher fertility than many lower-income European

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<sup>5</sup> Perhaps since wealth used to be linked to both higher fertility and higher literacy.

countries in Southern and Eastern Europe. This would indicate that the connections between human development and religiosity/fertility are various and oblique, thus human development can advance in tandem with a *rise* in religiosity and/or fertility.

The WVS data do not allow for a test of the historical mechanism which underpins their key thesis, namely the withering away of the religiosity-fertility dynamic. In order to prove it, a pooled analysis would need to be undertaken which controls for unit and time-series effects. (Beck and Katz 1995) This model of religiosity would need to retain measures of fertility: if these remain significant when the 'human security' variables are introduced, then this would suggest that the religiosity-fertility relationship is substantially *independent* of human development, contrary to the relationship specified in figure 1. Another option would be to show a decrease in the coefficient for fertility on religiosity (or vice-versa) and an increase in the coefficient for human development indicators in each successive survey wave. The lack of WVS developing country time-series data makes this difficult. What *is* possible with the data is to show that the religiosity-fertility relationship is weaker in developed countries than in developing ones. This would suggest that as countries develop, the religiosity-fertility juggernaut becomes less important. A test of this proposition using the World Values Survey appears in table 1 below. Here we compare patterns in the 22 west European, 22 East European and 18 developing countries sampled during 1981-1997.<sup>6</sup>

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<sup>6</sup> Education measured in terms of age completing education, waveyear is a continuous variable with 1981 coded 1 and 2000 coded as 3.

**Table 1. Regression Coefficients for Number of Children Ever Born, Females Aged 18+ in Europe and the Developing World, EVS 1981-2000**

	<b>Western Europe</b>		<b>Eastern Europe</b>		<b>Developing World</b>	
<b>Marital status</b>	0.372***	(0.006)	0.312***	(0.005)	0.467***	(0.008)
<b>Religiosity</b>	0.142***	(0.023)	0.102***	(0.018)	0.190***	(0.038)
<b>Age</b>	0.042***	(0.001)	0.032***	(0.001)	0.035***	(0.001)
<b>Education</b>	-0.036***	(0.003)	-0.032***	(0.002)	-0.010***	(0.002)
<b>Town size</b>	-0.031***	(0.005)	-0.057***	(0.004)	-0.026**	(0.008)
<b>Waveyear</b>	-0.002	(0.017)	0.167***	(0.022)	0.311***	(0.023)
<b>Income</b>	-0.005	(0.005)	-2.31E-07	(1.61E-07)	-0.111***	(0.007)
<b>_Cons</b>	1.541***	(0.081)	1.377***	(0.083)	2.249***	(0.101)
<b>R<sup>2</sup></b>	.390		.353		.375	
<b>N</b>	16744		15432		11005	

Source: EVS/WVS 1981, 1990 and 1999-2000

Notice that there is little to substantiate the thesis that the religiosity-fertility dynamic weakens with development. Instead, we find that religiosity (i.e. 'How religious are you?') retains a roughly similar - and significant - association with fertility across all groups of countries. This is also true of North America and Australia (not shown here). The most noticeable difference between Europe and developing societies is that low personal income becomes a far less important determinant of high fertility, while advanced education becomes more important. In North America and Australia, by contrast, income remains more important than education, though less so than in the developing world. This moderately reinforces the 'higher income-lower fertility-lower religious population' strand of Norris and Inglehart' claim. On the other hand, the 'lower religiosity-lower fertility' effect seems to bear no relationship to a country's level of human development.

Elsewhere, Norris and Inglehart claim that 'one can easily think of striking exceptions [to the rule that human development reduces religiosity/fertility] such as

Osama bin Laden who is (or was) extremely rich and fanatically religious. But when we go beyond anecdotal evidence such as this, we find that the overwhelming bulk of evidence points in the opposite direction...' (Norris and Inglehart 2004: 5) Yet a test of our developing country model which switches religiosity and fertility from independent to dependent variables (and vice-versa) finds that education is not significantly correlated with religiosity while wealthier individuals are more, rather than less, religious! Meanwhile, other studies report no relationship between education and religiosity in Europe. (Halman and Draulans 2006: 279) This finding may reflect unit effects similar to those uncovered by Ali in his Punjabi study. All told, there appears to be a pronounced disconnect between human development and religiosity/fertility.

Let us now return to the secularisation debate in western Europe, where society has reached a very high level of human development. If the triumph of religious apostasy over religious fertility is not guaranteed there, this would be particularly worrying for the developmentalist paradigm outlined in *Sacred and Secular*. On the other hand, if the Inglehart-Norris thesis is correct, we should find the following hypotheses to hold:

H<sub>0</sub>: Religiosity is related to higher fertility at the individual level

H<sub>1</sub>: The level of education and wealth are the primary causal forces affecting religiosity and fertility, thus:

H<sub>2</sub>: Education and wealth effects should overwhelm those of religiosity when introduced into a model of individual fertility

Finally, in the long run, we would expect that:

H<sub>3</sub>: Rising education and wealth will lead to a rate of religious apostasy that exceeds the demographic expansion of religion

## Data and Methods

In order to test these hypotheses, we draw upon data from several sources. These include the EVS of 1981, 1990 and 1999-2000 and the second wave European Social Survey (ESS) of 2004. We will also be using the Eurobarometer Trend File of 1970-2002 for national-level variables and trends. We use these datasets because of their time-series dimension and the fact that they ask the same (or similar) questions on religiosity and fertility. The study is limited to ten west European countries, as these are the only cases that were sampled across all specified waves of the EVS on our variables of interest. Germany was dropped because of the difficulties of pre and post-Unification data collation. Second wave ESS data was used because, unlike wave 1, this dataset has a fertility measure and enabled us to match countries with the EVS.

Rather than use weights to account for variations in the relative samples of different countries, we have opted to create a standardised west European dataset with a fixed ratio of cases between countries. The desire to maximise the number of countries and cases subject to the strictures of attaining a uniform time-series dataset has resulted in the geographic apportionment within Europe shown in table 2 for all datasets for the period 1981-2004.

**Table 2. Geographic Distribution of Cases in the EVS and ESS Datasets**

<b>Country</b>	<b>N</b>	<b>Share of Total (%)</b>
Spain	1663	15.31
Norway	1239	11.41
Britain	1231	11.34
Belgium	1145	10.54
Denmark	1030	9.48
Netherlands	1017	9.36
France	1002	9.23
Republic of Ireland	1000	9.21
Sweden	954	8.78
Iceland	579	5.33

N.B. Norway data for 2000 is missing, so we substitute data from the 1997 EVS.

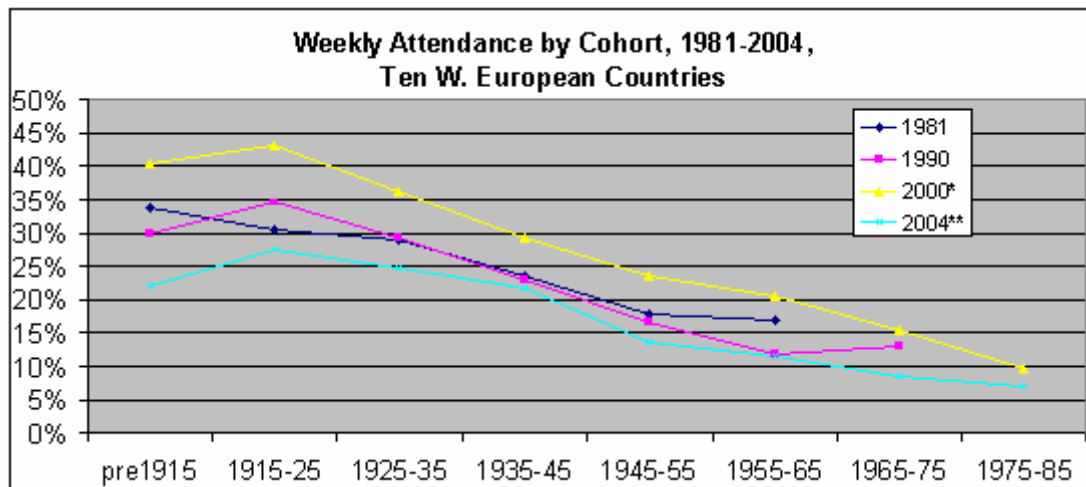
This is clearly not a proportional representation of western Europe and should not be interpreted as such. Nonetheless, while the dataset features a strong Scandinavian dimension, it also contains a range of cases including late-developing Catholic (Spain, Ireland) as well as mixed-faith (Holland, Britain) societies. Though some geographic representativeness is sacrificed, the dataset provides a critical time-series dimension which is missing from most individual-level studies. Finally, we employ an OLS linear regression using Stata 7.0.

## Results

The standard WVS/EVS question on religious attendance for 1981, 1990 and 2000 asks 'Apart from weddings, funerals and christenings, about how often do you attend religious services these days?' The EVS allows for a seven-category response to this question. This was transformed into a dummy variable for tabulation purposes. This

was coded to distinguish between those who attended weekly or more and the rest, i.e. those who attended monthly or less. The ESS adopted the exact same question, so coding strategy is identical. The results are presented in figure 2 for ten-year cohorts. Notice that there is a pronounced pattern of declining religious attendance as we move from the earliest to most recent birth cohorts. The only exception to this trend is the earliest (pre-1915) cohort. Also evident is the lack of any life-cycle pattern whereby respondents begin to attend as they get older: the four wave lines do not shift upwards in chronological order. The vertical pattern almost certainly owes more to period effects and differences in survey methodology than anything else. This confirms some of the findings of secularisation theory, which argues that religious attendance falls across generations and does not revive as one ages through the life course.

**Figure 2.**



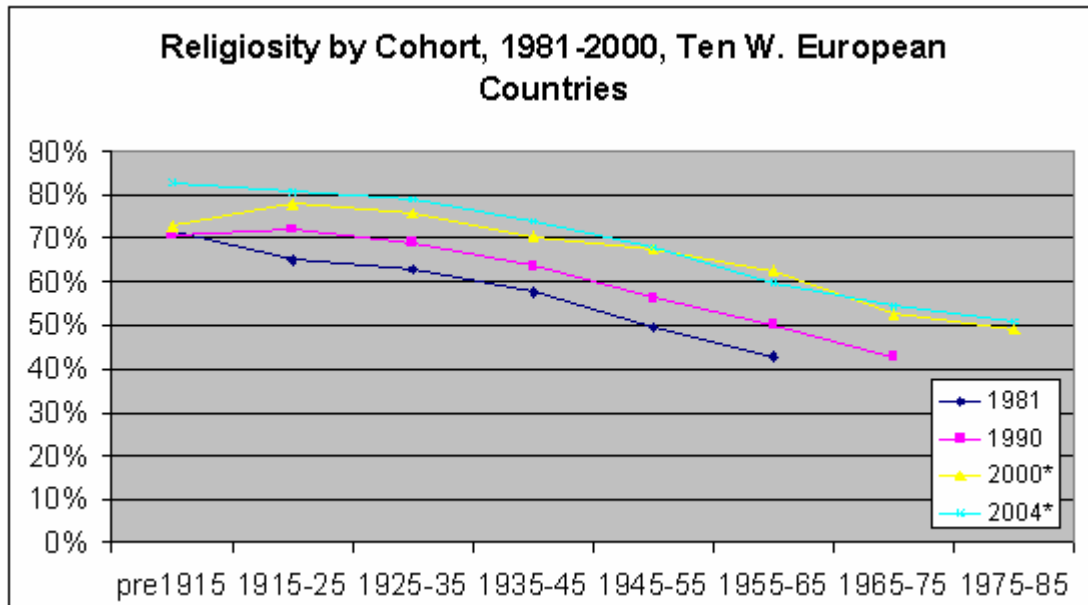
Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* Data for 2000 uses Norway responses from 1997

\*\* Data for 2004 from ESS which uses same question but different methodology

In addition to attendance, the EVS asks a battery of questions concerned with private religious belief. Though these do not match up with the ESS questions, there is a high degree of comparability between the EVS and ESS questions on private religiosity. The EVS question asks: 'Independently of whether you go to church or not, would you say you are: 1-a religious person, 2-not a religious person, 3-an atheist'. The ESS question asks 'Regardless of whether you belong to a particular religion, how religious would you say you are?' The ESS uses an eleven-point scale from 'not at all religious' to 'very religious', as opposed to the three categories used by the EVS. Based on comparing percentage responses with the 2000 EVS, we have collapsed the highest six ESS scores into the top EVS score. All others are considered to be 'not religious' or atheists. Looking at the proportion of self-identified 'religious' people by cohort in figure 3, we find that private religiosity, like religious attendance, has declined steadily within these societies across birth cohorts. That said, there are some interesting divergences from the findings for religious attendance. First, these data lend support to the life cycle hypothesis that individuals become more religious as they age. Leaving aside the 2004 ESS, which is calibrated to match the 2000 EVS, the lines clearly shift upward across all cohorts with each survey wave. Moreover, the link between aging and greater religiosity appears to be strengthening among more recent cohorts, though we must be careful in interpreting 2000 data as there may have been a millennium period effect which temporarily raised religiosity.

**Figure 3.**



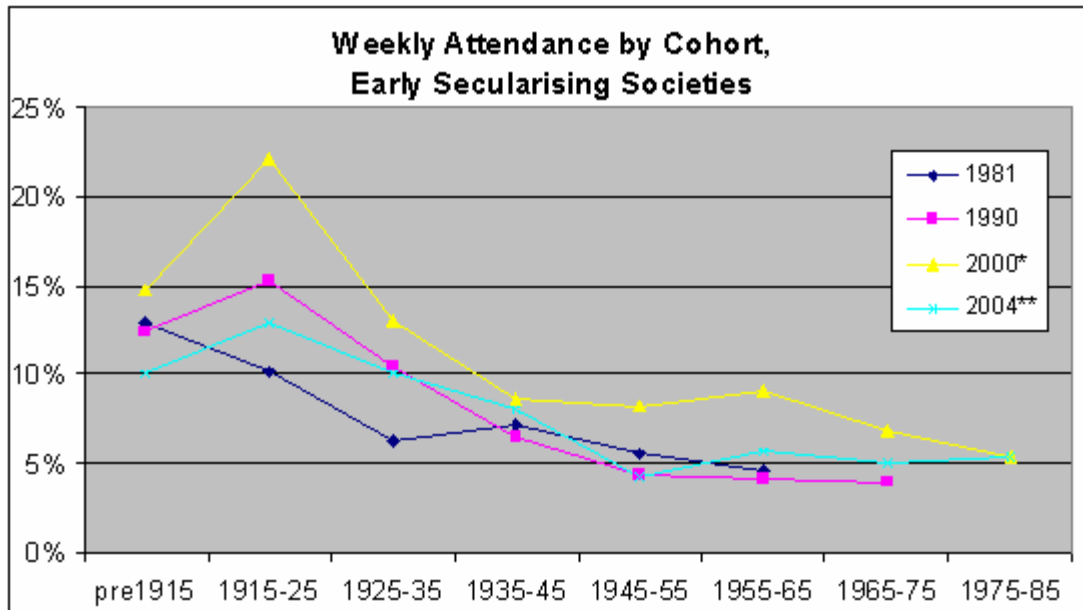
Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* Data for 2000 uses Norway responses from 1997

\*\* Data for 2004 from ESS which uses same question but different methodology

Within our ten country dataset, it is useful to prise apart cases where secularisation took place relatively early (France plus the five largely Protestant countries) from those where it has taken hold more recently (three Catholic countries plus part-Catholic Holland). The results are presented in figures 4 and 5. The data shows that church attendance in the early-secularising (i.e. mainly Protestant) societies is effectively flat for those born after 1945 while it continues to plummet in the mainly Catholic societies. The decline in church attendance across all cohorts is roughly 10-20 percent in the early secularising countries, but 30-50 percent in the late-secularising ones.

**Figure 4.**

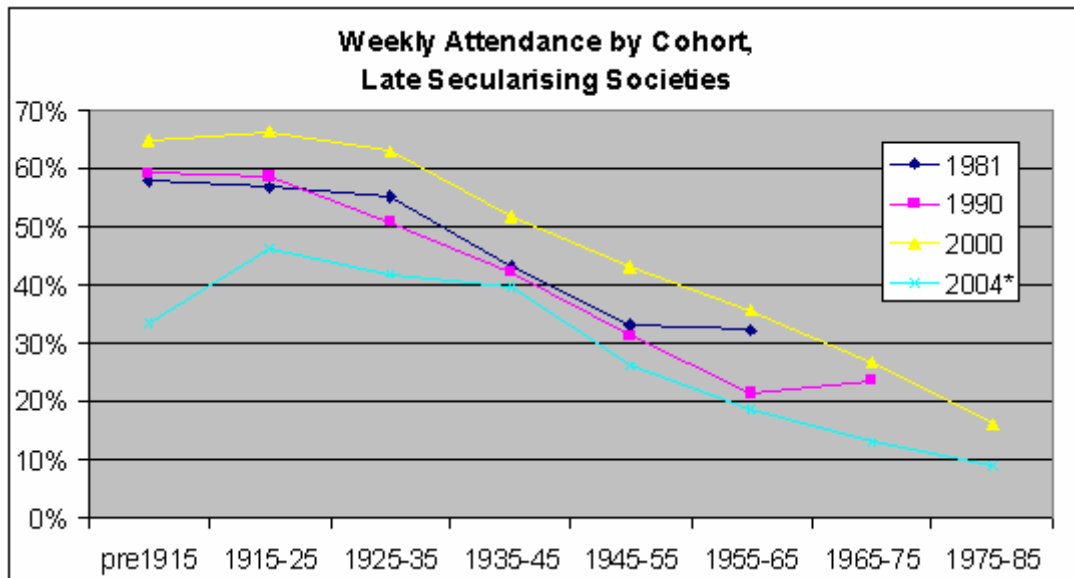


Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* Data for 2000 uses Norway responses from 1997

\*\* Data for 2004 from ESS which uses same question but different methodology

**Figure 5.**



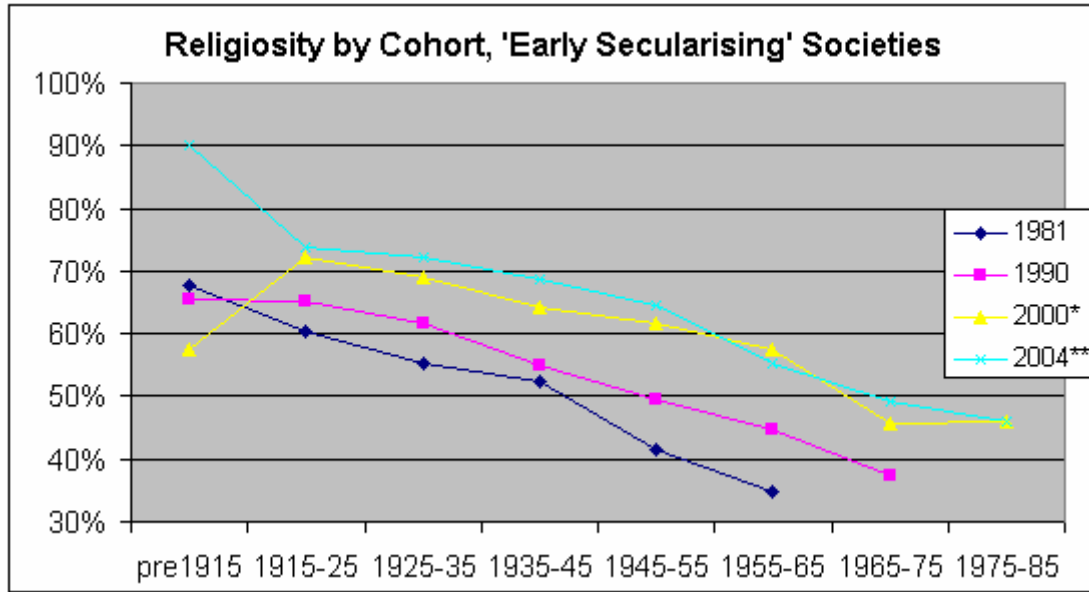
Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* Data for 2004 from ESS which uses same question but different methodology

The picture is less distinct for private religiosity (see figs. 6 and 7), but the differences are noticeable: whereas private religiosity has declined by a substantial 20-30 percent across cohorts in the early-secularising societies, it has dived by 30-40 percent in late-secularising ones. For the 2000 and 2004 surveys, there is evidence that religious decline is flattening out somewhat among the most recent cohorts in early-secularising societies. It is especially noteworthy that the trough of religiosity among the youngest cohort does not seem to have budged during 1981-2000.

Naturally, future survey evidence is needed in order to fully substantiate this. Notwithstanding this caveat, if we soon reach a plateau on this measure, then it would appear that early-secularising societies have arrived at a baseline of 5 percent church attendance and perhaps 40-45 percent private religiosity. It is worth noting that while private religiosity rates among the strongest of all religious indicators on the EVS, it is exceeded by some 10-15 points by belief in god. In the 2000 EVS, for example, 77 percent of respondents in early secularising societies affirmed their belief in god, even though just 64 percent claimed to be religious. Assuming that trends in Catholic Europe follow those in the early-secularising countries, we may well see a future in which western European church attendance falls to very low levels even as society remains fairly evenly divided between religious and non-religious populations. This would appear to corroborate Grace Davie's (1994) observation that many Europeans are 'believing without belonging', though a substantial number neither belong nor believe.

**Figure 6.**

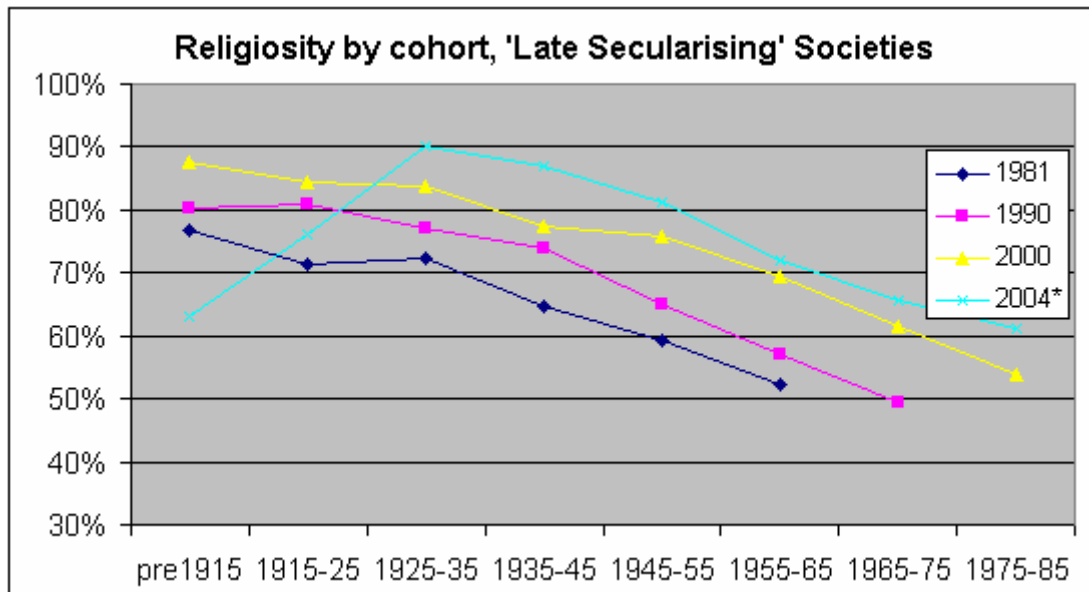


Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* No data for Norway in 2000

\*\* Data for 2004 from ESS, which asks a slightly different question and is calibrated to EVS 2000

**Figure 7.**



Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* Data for 2004 from ESS, which asks a slightly different question and is calibrated to EVS 2000

Our next task is to examine the first Inglehart-Norris hypothesis that religiosity is related to higher fertility. This argument appears to be confirmed by the figures charting a substantial fertility differential between those who attend weekly and those who do not. This is highly noticeable in column 1 of table 3 denoting crude fertility differentials in the surveys. Although EVS respondents who are weekly attenders in these ten countries have roughly 40 percent more children than those who attend monthly or less, this figure is inflated by the fact that weekly attenders tend to be older than nonattenders and thus skewed toward earlier cohorts which had higher fertility. However, even when we examine intra-cohort trends, as in column 2, there remains a pronounced fertility differential of 7-19 percent. Removing the earliest and most recent cohorts from the analysis (which tend to be highly volatile small samples) in column 3 gives us perhaps our best picture of the trend: a roughly 20 percent fertility advantage accruing to weekly attenders as against those who attend monthly or less.

**Table 3. Fertility Differentials between Weekly Religious Attenders and Others, for Women aged 18+, 1981-2004**

	<b>Average Number of Children Ever Born to Weekly Attending Females aged 18+</b>	<b>Average Number of Children Ever Born to non-Weekly Attending Females aged 18+</b>	<b>Crude Fertility Differential (%)</b>	<b>Average Intra-Cohort Fertility Differential (%)</b>	<b>Average Intra-Cohort Fertility Differential Net of Outliers (%)</b>
<b>1981</b>	2.18	1.64	0.33	0.11	0.20
<b>1990</b>	2.35	1.69	0.39	0.07	0.20
<b>2000*</b>	2.56	1.80	0.42	0.17	0.18
<b>2004**</b>	2.33	1.60	0.42	0.19	0.24

Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* Data for 2000 uses Norway responses from 1997

\*\* Data for 2004 from ESS which uses same question but different methodology

If we substitute religious belief for religious attendance, we find a similar difference in fertility between religious and non-religious women, though the difference is reduced by a few percentage points when comparing the last column in each table. (See table 4) This is an important finding because while weekly attenders are an increasingly small minority, a majority of respondents in almost all cohorts are religious. The fact that the religious fertility premium is maintained as we move from weekly attendance to private religiosity endows it with far greater social significance.

**Table 4. Religious-Secular Fertility Differentials, Women Aged 18+, 1981-2004**

	<b>Average Number of Children Ever Born to Religious Females aged 18+</b>	<b>Average Number of Children Ever Born to Non-Religious Females aged 18+</b>	<b>Crude Fertility Differential (%)</b>	<b>Average Intra-Cohort Fertility Differential (%)</b>	<b>Average Intra-Cohort Fertility Differential Net of Outliers (%)</b>
<b>1981</b>	1.98	1.46	0.36	0.16	0.11
<b>1990</b>	2.03	1.46	0.39	0.21	0.18
<b>2000*</b>	2.19	1.59	0.38	0.18	0.16
<b>2004**</b>	1.86	1.40	0.33	0.15	0.17

Source: EVS 1981, 1990, 1999-2000 & ESS 2004

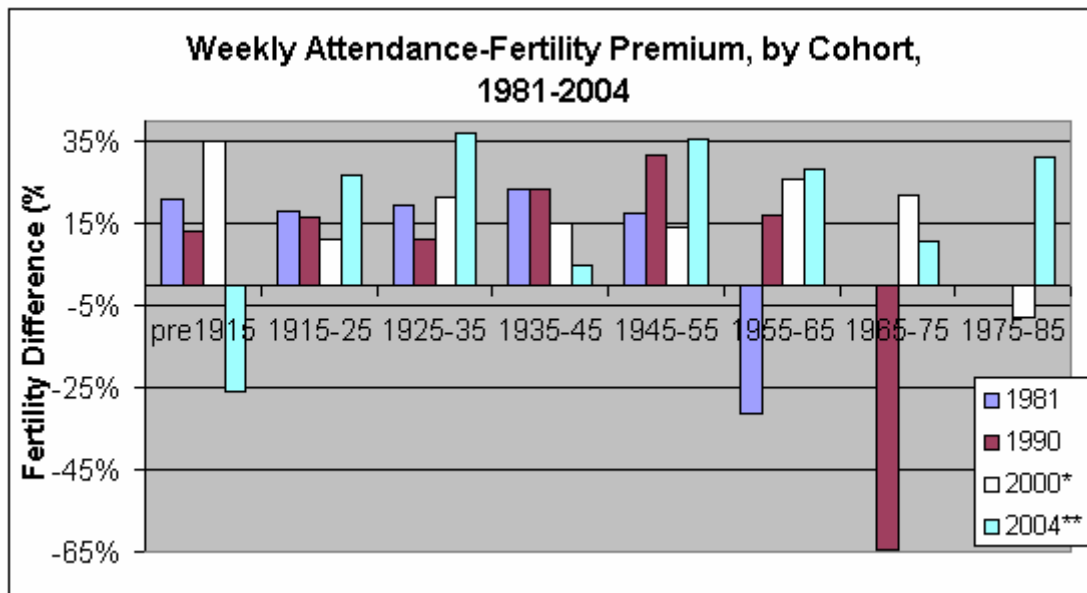
\* No data for Norway

\*\* Data from ESS, which asks a slightly different question and is calibrated to EVS 2000

Does the fertility premium change as we move across cohorts from the earliest to most recent? Adsera's work suggests that a fertility differential between practising and non-practising Catholics opened up between 1985 and 1999 as church attendance in Spain waned, making religious practice a more salient discriminant between high and

low-fertility populations. (Adsera 2004) At first glance, our analysis does not support this proposition, for, as figures 8 and 9 demonstrate, there appears to be no consistent pattern in the religious fertility premium across birth cohorts. This finding holds whether we measure religious fertility through attendance or belief. This said, we shall later see that Adsera's findings are more accurate for late-secularising Catholic countries like Spain.

**Figure 8.**

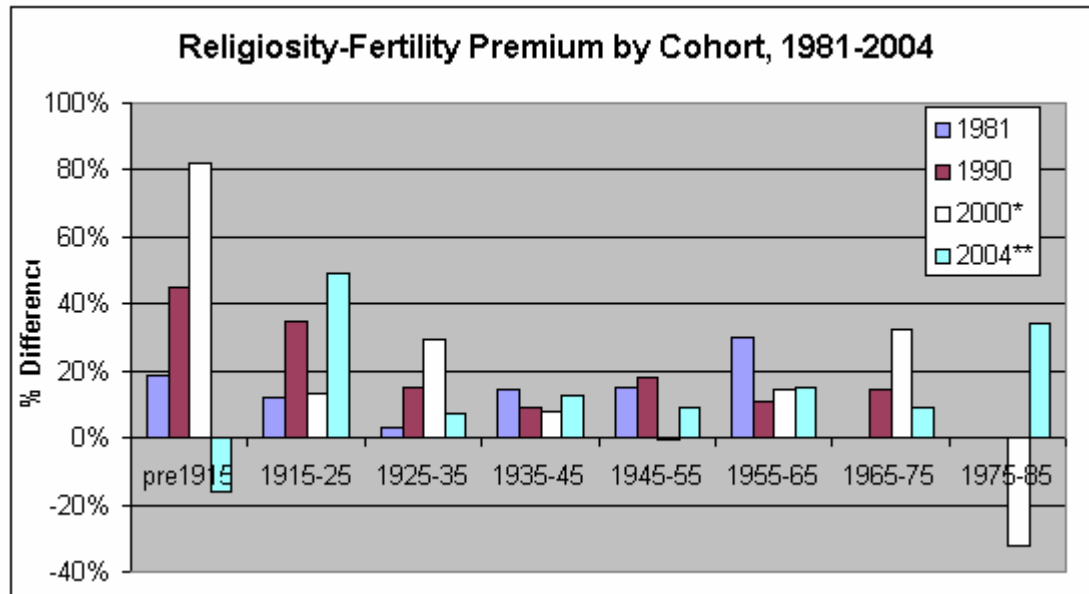


Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* Data for 2000 uses Norway responses from 1997

\*\* Data for 2004 from ESS which uses same question but different methodology

**Figure 9.**



Source: EVS 1981, 1990, 1999-2000 & ESS 2004

\* No data for Norway

\*\* Data from ESS, which asks a slightly different question and is calibrated to EVS 2000

### Models of Religious Fertility

We can now proceed to specify a model for each survey with standard controls for education, age and socioeconomic factors. (see table 5) Denomination was insignificant in all years, so has been dropped from the model, as were other variables.<sup>7</sup> Due to changes in question wording between the EVS and ESS, we cannot combine the 1981-2000 EVS dataset with the 2004 ESS. Model 2 involves dropping insignificant variables and/or weak predictors which lead to large numbers of omitted cases so as to achieve a more parsimonious, better fitting model.

Adding control variables to the model greatly improves model fit, but religious

<sup>7</sup> Income, class, occupation and rural/urban indicators were occasionally significant, but resulted in the dropping of too many country-years since these questions were not uniformly asked across all countries and survey waves. These variables did not prompt religious indicators to lose their significance.

attendance retains its significance at the  $p < .001$  level in each survey year. Only marital status is an unambiguously better predictor of the number of children a woman has ever had across all surveys. While education level has a somewhat stronger association with fertility than religious attendance in all three waves of the EVS (1981-2000), it scored marginally weaker in the 2004 ESS. Broadly speaking, though, marital status is the strongest predictor of fertility, followed by education and religious attendance. Age, cohort and socioeconomic factors (income, class, occupation) are significant in many models, but have a weaker effect. Cohort effects on fertility are present in 1981, but fade thereafter, suggesting a slowing of fertility decline in the most recent generation.<sup>8</sup>

Ronald Inglehart's 3-item postmaterialism index retains its significance in the presence of socioeconomic and religious variables, but has a weaker effect on fertility than education or religious attendance. The fact that religious attendance retains its significance for fertility in the presence of control variables like income, postmaterialism and education is striking. The materialist version of the secularisation argument, i.e. Inglehart-Norris, would predict that fertility and religious attendance are governed by the human development control variables (education, income), which should have led to the exit of religious attendance from the model. That this prediction proves false strongly suggests that the materialist-secularisation argument may not apply to developed western societies. This also qualifies the findings of Frejka and Westoff (2006) whose analysis of the 2000 EVS - using a somewhat different methodology based on the odds of women aged 18-44 having two or more children - found that the effect of religious attendance faded more quickly with the introduction of the standard controls.

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<sup>8</sup> Cohort was tested as both a continuous and categorical variable. In these models, the continuous specification is presented. The overall pattern is similar. Though the categorical specification has more

**Table 5. Regression Coefficients for Number of Children Ever Born, Females Aged 18+, 1981-2000 EVS and 2004 ESS. (Attendance Specification)**

	<b>EVS 1981-2000</b>	<b>Model 1</b>	<b>EVS 1981-2000</b>	<b>Model 2</b>	<b>ESS 2004</b>	
<b>Attendance</b>	0.066***	(0.008)	0.061***	(0.007)	0.080***	(0.013)
<b>Marital Status</b>	0.368***	(0.009)	0.363***	(0.007)	0.255***	(0.012)
<b>Income</b>	-0.004	(0.007)			Not sig.	
<b>Class</b>	0.017	(0.013)			-	-
<b>Education</b>	-0.05***	(0.006)	-0.051***	(0.003)	-0.027***	(0.006)
<b>Age</b>	0.031***	(0.005)	0.027***	(0.003)	-0.036***	(0.007)
<b>Cohort</b>	-0.069*	(0.055)	-0.108***	(0.025)	0.124	(0.073)
<b>Waveyear</b>	-0.059	(0.049)			-	-
<b>Postmaterialism</b>	-0.089**	(0.028)	-0.080***	(0.022)	-	-
<b>_Cons</b>	2.816	(0.410)	3.018***	(0.256)	73.330***	(13.825)
<b>R<sup>2</sup></b>	.359		.369		.209	
<b>N</b>	8089		12217		4769	

\*p<.05; \*\*p<.01; \*\*\*p<.001

N.B. Data for 2000 uses Norway responses from 1997. Class and postmaterialism not asked in ESS. For cohort, higher values refer to most recent.

Much the same picture emerges when religious belief is substituted for religious attendance. Whether we use the EVS question on self-ascribed religiosity or a religiosity principle component distilled from nine EVS religiosity measures, we find that religiosity retains its impact in the 1981-2000 dataset and marital status typically shows the strongest effect. In the 2000 EVS, self-ascribed religiosity actually falls out of the model, but in the 2004 ESS, religiosity reasserts its significance. (see table 6) In fact the latter exceeds education level as a predictor of fertility. Income remains insignificant in both models. Father's occupation at age fourteen - the closest measure of class we have in the ESS - is significant, but only weakly so. It is dropped from the model because its inclusion results in too large a loss of cases. Comparing the religiosity models with the religious attendance models we visited earlier, we find that age is a stronger predictor of

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power, it detracts from the parsimony of the model.

fertility while the impact of birth cohort declines. This chimes with our earlier discussion of how age (i.e. life cycle) effects are important when it comes to religious belief, but not religious practice. Against the same backdrop of fertility decline, age thereby stands out as more important in the religiosity model than in the attendance one.

**Table 6. Regression Coefficients on Number of Children Ever Born, Females Aged 18+, 1981-2000 EVS and 2004 ESS. (Religiosity Specification)**

	<b>EVS 1981-2000</b>		<b>ESS 2004</b>	
<b>Marital Status</b>	0.353***	(0.007)	0.246***	(0.015)
<b>Religiosity</b>	0.176***	(0.028)	0.045***	(0.008)
<b>Postmaterialism</b>	-0.089***	(0.023)	-	-
<b>Income</b>	.002	(0.007)	0.008	(0.012)
<b>Education</b>	-0.059***	(0.004)	-0.025***	(0.007)
<b>Age</b>	-0.036***	(0.008)	0.035***	(0.005)
<b>Cohort</b>	-0.031	(0.046)	0.116	(0.080)
<b>Waveyear</b>	-0.088	(0.039)	-	-
<b>_cons</b>	2.607***	(0.337)	73.072***	(15.230)
<b>R<sup>2</sup></b>	.356		.205	
<b>N</b>	12046		3980	

\*p<.05; \*\*p<.01; \*\*\*p<.001

N.B. No data for Norway in 2000. Postmaterialism not asked in ESS. For cohort, higher values refer to most recent.

Earlier, we noted the wide discrepancy in religious trends between the mainly Catholic late-secularising countries and the largely Protestant early-secularising ones. Unsurprisingly, these differences are translated through into our model of religious attendance and fertility in table 7. For example, religious attendance significantly predicts fertility in both early and late secularising societies, but the effect is much stronger in the latter, Catholic, countries. In the 2004 ESS data, for instance, religious attendance loses its significance for fertility in the early secularising (Protestant) societies, but remains extremely powerful in late secularising countries. This provides support for Adsera's

findings with respect to Spain, where declining church attendance during 1985-99 was accompanied by the rise of religious attendance to prominence as a predictor of fertility.

(Adsera 2004)

**Table 7. Regression Coefficients on Number of Children Ever Born, Females Aged 18+, 1981-2000 EVS and 2004 ESS. (Attendance Specification), by Late and Early Secularising Countries**

	Early Secularising ( <i>'Protestant'</i> ) EVS '81-00		Late Secularising ( <i>'Catholic'</i> ) EVS '81-00		Early Secularising ( <i>'Protestant'</i> ) ESS 2004		Late Secularising ( <i>'Catholic'</i> ) ESS 2004
<b>Marital Status</b>	0.336***	(0.011)	0.351***	(0.012)	0.264***	(0.018)	0.240***
<b>Attendance</b>	0.044***	(0.011)	0.103***	(0.012)	0.018	(0.022)	0.159***
<b>Age</b>	0.014*	(0.006)	0.056***	(0.008)	-0.036***	(0.010)	-0.044**
<b>Education</b>	-0.058***	(0.006)	-0.062***	(0.008)	-0.029**	(0.009)	-0.027*
<b>Waveyear</b>	0.024**	(0.056)	-0.211	(0.071)	-	-	-
<b>Cohort</b>	-0.181**	(0.064)	0.126	(0.081)	0.136	(0.095)	0.171
<b>Postmaterialism</b>	-0.110**	(0.033)	-0.024	(0.041)	-	-	-
<b>Income</b>	-0.021*	(0.008)	0.016	(0.011)	0.019	(0.014)	-0.033
<b>_cons</b>	3.983***	0.480	1.256*	(0.607)	72.034***	(18.175)	87.697***
<b>R<sup>2</sup></b>	.331		.367		.223		.215
<b>N</b>	5045		4505		2163		1814

\*p<.05; \*\*p<.01; \*\*\*p<.001

N.B. Data for 2000 uses Norway responses from 1997. Postmaterialism not asked in ESS. For cohort, higher values refer to most recent.

Might it be the case that when the Catholic countries fully secularise, they will approximate to the Protestant pattern of 2004, where religious attendance no longer matters for fertility? This would provide ammunition for Inglehart-Norris hypotheses 1 and 2 outlined earlier. A rerun of the model using self-ascribed religiosity can help us definitively answer this question. (See table 8) This establishes that self-ascribed religiosity has a stronger effect (though with greater error) on fertility than religious attendance. As with attendance, it is a more important discriminant of fertile women in

late secularising societies than in early-secularising countries, but religiosity remains a significant predictor of fertility even in the 'Protestant' countries.

**Table 8. Regression Coefficients on Number of Children Ever Born, Females Aged 18+, 1981-2000 EVS and 2004 ESS. (Religiosity Specification), by Late and Early Secularising Countries**

	Early Secularising ('Protestant') EVS '81-00		Late Secularising ('Catholic') EVS '81-00		Early Secularising ('Protestant') ESS 2004		Late Secularising ('Catholic') ESS 2004
<b>Marital Status</b>	0.331***	(0.011)	0.348***	(0.013)	0.258***	(0.018)	0.246***
<b>Religiosity</b>	0.167***	(0.037)	0.192***	(0.055)	0.030**	(0.010)	0.068***
<b>Age</b>	0.014*	(0.007)	0.057***	(0.008)	-0.035***	(0.010)	-0.039**
<b>Education</b>	-0.057***	(0.006)	-0.066***	(0.009)	-0.032***	(0.009)	-0.024*
<b>Waveyear</b>	0.025	(0.057)	-0.228**	(0.073)	-		-
<b>Cohort</b>	-0.184**	(0.066)	0.114	(0.084)	0.139	(0.095)	0.108
<b>Postmaterialism</b>	-0.116**	(0.034)	-0.054	(0.042)	-		-
<b>Income</b>	-0.019**	(0.009)	0.024*	(0.012)	0.020	(0.014)	-0.031
<b>_cons</b>	3.991***	(0.494)	1.210	(0.627)	70.847***	(18.140)	78.088***
<b>R<sup>2</sup></b>	.326		.354		.226		.202
<b>N</b>	4808		4359		2165		1815

\*p<.05; \*\*p <.01; \*\*\*p < .001

N.B. No data for Norway in 2000. Postmaterialism not asked in ESS. For cohort, higher values refer to most recent.

Might it be possible that the decline in the predictive power of the model between 1981-2000 and 2004 is related to a waning religiosity-fertility dynamic as human development factors gain in strength? If we break the 1981-2000 model down into discrete survey waves, it becomes apparent that there is no trend in the relative power of the explanatory variables over time. Religious attendance, marital status, education and religiosity all randomly fluctuate in their predictive strength with each survey wave. The discrepancy between the 1981-2000 EVS and the 2004 ESS is an artefact of the differences in the methods and questions used in the two surveys. Hence while the

Inglehart-Norris  $H_0$  is confirmed, there is no real basis for  $H_1$  and  $H_2$ .

This leads us to  $H_3$ , the idea that rising education and wealth will lead to a rate of religious apostasy that exceeds the demographic expansion of religion. The inability of human development indicators to progressively lower the impact of religiosity on fertility would suggest that there is no automatic progression to lower levels of religiosity/fertility. The most that can be said is that higher levels of education may lower fertility, while increased religiosity may raise it. Of course, religiosity *has* declined in western Europe in the past: if it did not, religious attendance and belief would not exhibit the downward sloping patterns across birth cohorts that they do. The pivotal question, therefore, is what the future holds. We noted, for instance, that secularisation is arguably flat for post-1945 birth cohorts in the six countries that secularised earlier in the twentieth century.

Alone among the surveys considered here, the 1991 EVS asked respondents, 'Were you brought up religiously at home?' Cross-tabulating this question with the self-ascribed religiosity question gives us a picture of how many religious individuals have left the faith and how many secular ones have become religious. Let us focus upon the early secularising countries as they are arguably in the vanguard of secularisation and thus closest to the *telos* envisioned in developmentalist theories. Table 9 provides data comparing the currently religious/nonreligious population with the population raised religiously/nonreligiously, by age and sex. Note the striking gender difference: women in 1991 at virtually all ages tended to be more religious than they were raised while the reverse was true for men. Previous research has highlighted the greater representation of women in the religious population *stock*, and this finding confirms that women are also

overrepresented among religious retainers and converts in the net religious-secular *flow*.<sup>9</sup>

**Table 9. Percentage Difference between Currently Religious/Non-Religious Population and Proportion Raised Religious/Non-Religious, for Each Age Group, 1991, by Sex**

	Religious Population Net Gain/Loss		Nonreligious Population Net Gain/Loss	
	Male	Female	Male	Female
<b>18-24</b>	-0.058	0.176	0.032	-0.124
<b>25-29</b>	-0.201	0.114	0.166	-0.103
<b>30-34</b>	0.139	0.086	-0.092	-0.083
<b>35-39</b>	-0.168	0.018	0.147	-0.022
<b>40-44</b>	-0.007	0.110	0.007	-0.146
<b>45-49</b>	-0.109	0.048	0.133	-0.075
<b>50-54</b>	-0.107	-0.007	0.135	0.013
<b>55-59</b>	-0.047	0.104	0.080	-0.200
<b>60-64</b>	-0.153	0.117	0.273	-0.215
<b>65-69</b>	-0.098	0.000	0.191	0.000
<b>70-74</b>	-0.056	0.082	0.098	-0.250
<b>75+</b>	0.037	0.038	-0.048	-0.102

N.B. Based on crosstabulation of Religious and 'Raised Religious' individuals in EVS 1991.

If we assume that women tend to pass their values on to their children, this means that the religious population gains in strength from its skewed gender balance, though the analytically tricky issue of secular-religious mixed marriage may counter this.<sup>10</sup>

Combined with higher religious fertility, this heralds religious growth in the future. On

<sup>9</sup> Hayes (1996) also finds that women are significantly less likely to switch denomination, but did not note the prominence of women among converts from secularism.

<sup>10</sup> See Hayes (1996: 644) for further references on the role of women in the transmission of religious values. There is of course the question of the impact of mixed marriages between secular and religious people on the level of secularisation, which falls outside the scope of this paper. Voas finds that mixed marriages in Britain and the Netherlands tend to lead to apostasy among formerly religious spouses. However, these two studies are a) based upon measures of religious affiliation rather than religiosity, and b) remain unclear about whether those who leave their religious affiliation after marriage to a secular spouse are self-selected to do so. In addition, 'the religiously sterilising' effect of mixed marriage appears to vary with the degree of secularism in the country such that there is no similar effect in the more religious context of the United States. (Voas 2003: 91-3) All told, it is difficult to infer that 'religious' people are becoming

the other hand, as our previous models illustrated, age is an important predictor of religiosity in the 'Protestant' countries. The secular population is younger than the religious one, and hence more likely to be in the childbearing age range. Secularisation may therefore be able to prevail over demographically-driven religious growth.

If we use the above apostasy figures in combination with 1991 EVS data on the age structure, gender and size of the religious and non-religious population, we have the basis for a 100-year projection of the religious-secular balance in the early secularising countries (see figure 10).<sup>11</sup> Any such exercise must remain highly speculative given the possibility for short-run political and social changes that affect religiosity, but in many situations in the past - as with the rise of Christianity in the first three centuries A.D. - demography has been very important.(Stark 1996: 74-128) We begin with an assumption that religious women will have a constant total fertility rate of 1.9, as against 1.6 for nonreligious women. This represents an average intra-cohort fertility difference between religious and non-religious women in 1991 that is in the 15-20 percent range which we found in table 4. Using table 9, we calculate a constant annual net 'migration' flow of apostates/converts between the religious and non-religious populations for each five-year age band.<sup>12</sup>

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'not religious' or 'atheists'. It may therefore be the case that marriage patterns reflect, rather than affect, overarching patterns of secularisation.

<sup>11</sup> Assumes that the tempo of fertility in all cases follows a 'late fertility' pattern and standard developed country mortality schedule based on the Brass General Standard. Assumes constant fertility differences and constant levels of religious-secular 'migration' by age and sex throughout the duration of the projection. Projections use *People* version 3.0.

<sup>12</sup> This is based on the formula:

$$\sum_{t=0}^{100} M(P)_{at} = ((r+c)/b)_{at} - ((r+c)/b)_{(a-1)t}$$

Where net migration rate, M, in a population P at year t is denoted M(P). P takes only two values, religious or nonreligious. In this formulation, r is the retained population, c the population of converts and b the

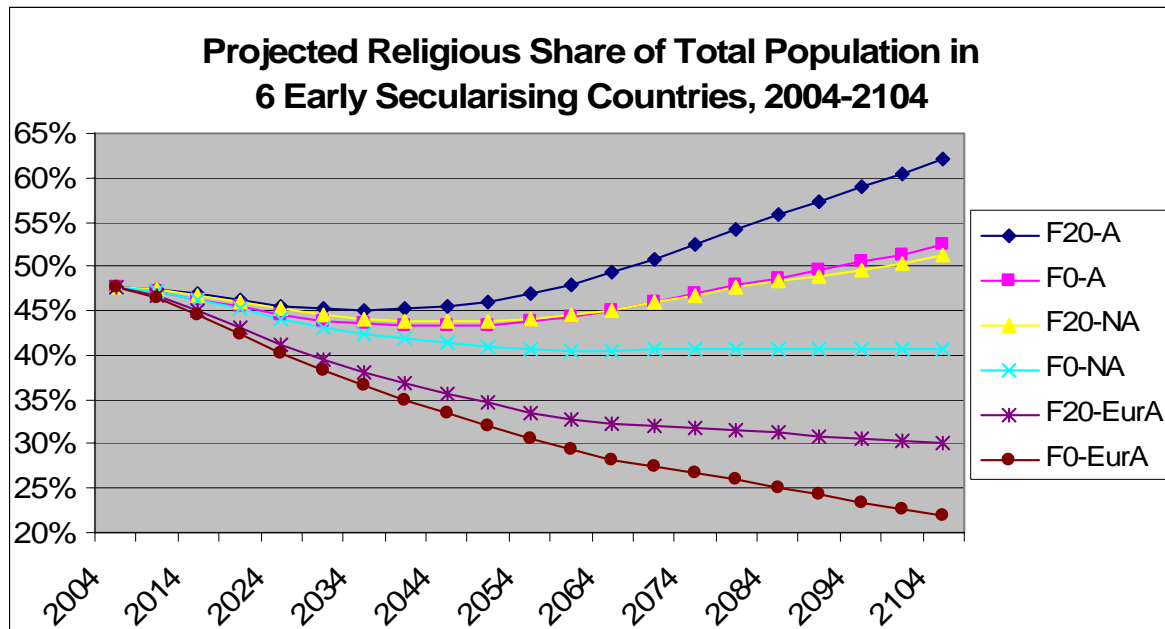
On this basis, we arrive at the highest line in figure 10, labeled 'F20-A'. The lines labeled 'F0' therefore show what happens when we lower the fertility differential from almost 20 percent to zero. We also experiment with three conversion/apostasy scenarios. The group of lines labeled 'A' are based on current (1991) levels of conversion/apostasy, those labeled 'NA' assume zero net conversion/apostasy and those marked 'EurA' are based on the 1991 conversion/apostasy rates across *all ten* western European countries in our sample (as opposed to the six early secularising countries). This apostasy rate strongly favours the secular population because it reflects the impact of the late secularising nations of Catholic Europe. These were experiencing very rapid apostasy as of 1991. Though the 'F20-A' line is the projected trajectory based on our 1991 data, we believe it somewhat exaggerates the overall trend, just as the 'F0-EurA' scenario exaggerates the projected decline.<sup>13</sup>

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population raised (in all cases, religiously or nonreligiously). Lastly, subscript  $a$  refers to a five-year age group and  $a-1$  to the preceding five-year age group. Note that if apostasy is high in an age group, the proportion  $((r+c)/b)_{at}$  takes on a lower value, as in table 9. However, the net migration rate in an age group is determined by the change in  $((r+c)/b)$  between successive age groups, which is akin to the difference between figures in successive rows in table 9. Note that while  $P$  varies over time, conversion, apostasy and retention rates are fixed across all values of  $t$ .

<sup>13</sup> The projections of the high scenario group ('A' lines) are too high while those of the low scenario group ('EurA') lines are too low. In the first case, this is because the impact on the religious population of the net migration of secular women will decline as the nonreligious source population declines, yielding fewer 'emigrants' (i.e. converts). Meanwhile, the net outflow of male apostates from a growing religious

Figure 10.



Given the results of our multivariate analysis, fertility differentials are unlikely to decline. But in any case, the difference between the zero and (nearly) 20 percent fertility difference scenarios has roughly the same impact on the population balance a hundred years hence as does the difference between conversion/apostasy scenarios 'A' and 'NA'. This is clear when comparing lines F0-A and F20-NA, which nearly overlap. However, the difference between the zero apostasy ('NA') and Europe-wide apostasy ('EurA') scenarios is much larger - twice that of the 'A'-'NA' difference. Overall, the projected religious population in early secularising western Europe for 2104 ranges from over sixty percent to as low as twenty percent. This on its own tells us little. More revealing are the temporal patterns caused by the age, sex and fertility structure of each population today.

Demographers stress that while migration (i.e. conversion/apostasy) is critical for predicting short-run change, fertility increasingly gains in importance in the long run.

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population will have a larger impact on a declining secular population. The same holds true for the secular

(Preston, Heuveline and Guillot 2001: 134; Voas 2003: 94) Notice, for example, that the difference between the zero and (nearly) 20 percent fertility lines widens steadily, thus fertility becomes increasingly important after mid-century and will lead to a greater than 10-point difference after 2104. Assuming that fertility differentials between the religious and non-religious remain as they have for cohorts throughout the twentieth century, we can see how age, sex and fertility structures constrain the direction of future religio-demographic change. First, in the event of long-term fertility-driven religious growth (the 'A' lines), the religious proportion of the population continues to decline slowly for roughly thirty years due to the demographic momentum of a younger secular population moving through its childbearing years. After about 2034, however, the proportion of religious people in the six (mainly Protestant) societies which first began to secularise increases steeply. Should surveys show the religious population remaining stable in the early secularising countries in the next decade or two, longer-term religious growth will become increasingly likely.

On the other hand, if conversion/apostasy trends in France and Protestant Europe revert back to those of the past, i.e. rapid apostasy, then the younger age structure of secularists will accelerate the religious decline in the first three decades of the twenty-first century. Finally, we should bear in mind that we may have been conservative in our view of religious population growth in early secularising western Europe. First, none of our projections allow for a major cultural revival of religion. Second, current trends actually support the highest growth scenario in figure 10. Even if apostasy rates in these countries revert to pre-1981 levels, the relative female skew among those who remain religious, together with overall secular-religious fertility differences, will constrain

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population in the low scenario group.

secularising forces in the *longue durée*. This is especially likely insofar as a smaller religious population will yield fewer apostates for secular population growth (see footnote 13). This dovetails with Austrian projections showing a long term slowing or reversal in the growth of the religiously unaffiliated population in that country. (Goujon et al. 2006)

The other great wildcard is the immigrant stock population. Austrian projections, for instance, indicate that Muslims will form 14 to 26 percent of the population by 2051 on the basis of an annual net immigration of just 20,000. (Goujon et al. 2006) Afro-Caribbean immigrants also tend to be more religious, though they often adhere to Pentecostalist and other evangelical Protestant sects. (Martin 2001) With European population decline, levels of immigration may be much higher, and we could well see nonwhite immigrants forming half the population in many countries well before 2104. In the United States, for instance, this point will be reached by 2050. (Kaufmann 2004: 211) The religious behaviour of second and third generation Muslims and Afro-Caribbeans remains to be determined, and is the subject of several current studies.<sup>14</sup> However, our 2004 ESS data had a small Muslim sample of about 1.5 percent, and these data show that younger Muslims are as religious as their elders. Trends across the wider range of countries sampled in the ESS show the same pattern, reflecting widely reported trends such as the relative youth and vitality of Muslim congregations in Britain.<sup>15</sup>

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<sup>14</sup> For example, the 'Muslim Communities in Europe' study or the new NORFACE research programme on the 'Re-emergence of Religion as a Social Force in Europe' <<http://www.norface.org>>.

<sup>15</sup> See, for example, 'UK Mosque Goers to Double Church Attendance: Stud', Ureader.co.uk 29 October 2005 <<http://www.ureader.co.uk/message/2123353.aspx>>

## Conclusion

This essay has tried to address some of the weaknesses in the current literature on secularisation in Europe which have been caused by either an insufficient consideration of demographic dynamics, the lack of a historical dimension, or both. Most participants in this debate tend to frame their arguments in the form of either secularisation theory or supply-side theory. In the ten west European societies we have sampled, we find evidence of generational decline in both participation and belief, suggesting that the secularisation theory has validity. However, France and most Protestant countries began to secularise earlier than most Catholic European countries. In traditional Catholic societies like Ireland and Spain, religiosity is much higher, but secularisation is proceeding rapidly. On the other hand, the early secularising societies have reached a level of developmental 'maturity' in which secularisation seems to have run its course. Religious attendance has flatlined at little more than five percent of the total, but the proportion of the population expressing religious beliefs is close to 50 percent, suggesting a 'believing without belonging' dynamic among a large segment of the population. (Davie 1994) Religious beliefs are not a lightly-held survival from a past era: indeed, religious beliefs are significantly associated with demographic behaviour.

In the absence of epochal shifts in a society's *weltanschauung* toward religiosity or secularism, the oft-neglected demographic dimension of religious change takes over. Ronald Inglehart and Pippa Norris have considered this aspect of religiosity, and claim that increased human security lowers both religiosity and fertility. The growing religiosity of the world's population, they add, is an aberration caused by high religiosity

and high fertility in developing countries. This will disappear once human development runs its course and apostasy defeats religious demography. However, secularism's victory is far from assured. Our models show that religiosity maintains its association with fertility - even with controls for human development variables - in both developing and developed countries. This relationship holds across both the European Values Surveys of 1981, 1990 and 1999-2000, and in the 2004 European Social Survey. Likewise, there is no evidence that this link has altered among more recent birth cohorts. Consequently, religiosity appears to be having an effect on fertility which is independent of an individual woman's level of education or income. Second Demographic Transition (SDT) theory makes the case for the relevance of cultural-historical factors in the transition to below-replacement fertility in Europe, with those bearing traditional cultural orientations having significantly higher fertility. (van de Kaa 1987; Surkyn and Lesthaeghe 2004) This study supports many of the contentions of SDT.

Finally, we attempt to project the religious share of the population in the early-secularising countries of Protestant Europe and France, which are based on 1991 survey data. Differences in the age and sex structure of religious and secular base populations, and among the flow of converts and apostates, combine with secular-religious fertility differentials to produce some surprising contrasts. First of all, the long-term predicted trend in these societies is toward a *growing* religious population. There are several reasons for this. First, the fertility difference between secular and religious populations will raise the religious share of the population by 10 points over the course of the twenty-first century. Second, females are overrepresented in the religious population, and among those remaining with the faith or becoming religious. Females are critical to population

growth and childrearing, and thus their disproportionate religiosity has a major effect on the overall trend. Set against these currents is the younger age structure of the secular population stock and apostate population flow. The demographic momentum of previous generations of secularisation will take three or four decades to pass, and will keep the religious share of the population at bay for some thirty years. Thereafter, de-secularisation will begin to escalate unless patterns of religious apostasy return to their pre-1981 levels.

This is not the end of secularisation, which will continue with vigour in Catholic Europe, as it may in the United States. (Hout and Fischer 2002) However, in the 'post-secular' atmosphere of France and Protestant Europe, the steady-state outlook for secularism after 2035 is that of long-term reversal. When we add in the cumulative impact of European Islamic growth and religious retention, a picture emerges which is quite unlike that predicted by developmental 'End of History' narratives.<sup>16</sup> Religious adherents may take heart from these trends, but we can only speculate what the response will be from those concerned with the Enlightenment heritage. One possibility may be a shift from *laissez-faire* and multicultural models of religious toleration to a more Gallic, Republican conception emphasising 'positive' liberalism.<sup>17</sup>

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<sup>16</sup> For example, Fukuyama 1992.

<sup>17</sup> In political theory, this is analogous to a shift from a 'reformation' model emphasising toleration of cultural practices (even if counter to personal autonomy), to an 'Enlightenment' model based on an overt ideal of personal autonomy and an intolerance for illiberal cultural alternatives. (Kymlicka 1995) This also maps on to Isaiah Berlin's distinction between mere negative (procedural) liberty and the 'positive' liberty which seeks to promote a liberal version of the good life. (Berlin 1958: 13-14) One could argue that France and Holland, among others, have moved sharply in this direction in the past decade.

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