

Islamism, Religiosity and Fertility in the Muslim World

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Abstract:

Religious politics, in which there is a dominant cleavage separating believers (especially if literalist) from moderate believers and nonbelievers is important in Muslim countries in the Middle East, Africa and Asia. Will Muslim societies become secular or continue to become more religious? Within the religious majority, are Islamists (supporters of Sharia Law) more fertile than non-Islamist Muslims? How are these trends affected by modernization? Social scientists have not been very attentive to the role that demography - notably fertility and migration - plays in the secularization/religious revival story. Work on religious fertility in Muslim countries is particularly scarce. This paper summarizes existing work, then analyzes data from the World Values Survey of 1999-2000, supplemented by the Youth, Emotional Energy, and Political Violence survey of 2005 in Egypt and Saudi Arabia. It performs multivariate analysis on three dependent variables: fertility, Islamism and religiosity, to provide a glimpse into the demographic future of Islamism, moderate Islam and secularism in the Muslim world.

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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 West, which is supposed to represent the *telos* of developmental models of modernisation? This study interrogates the problem through the prism of ten west European countries, arguing that these societies will start to become more religious by the mid-twentieth century due to both immigration and religious-secular fertility differences within the majority population.

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. Though they admit that higher religious fertility is currently powering a growth in the proportion of the world that is religious, they claim that, once begun, the secularisation process 'does not reverse itself', with religiosity surviving in advanced societies principally among those with lower levels of human development. (Norris and Inglehart 2004: 54)

However, this demographic theory of secularisation has not been systematically tested with individual-level data - even in the developed world where time series data is available. Moreover, research which uses inputs from models of

past behaviour to make demographic projections of future secularisation scenarios is missing for western Europe. Finally, we know almost nothing about the degree to which the children of immigrants to Europe - particularly Muslims - retain their religiosity. Finally, while there is a literature on fertility and secularisation in Europe, Israel and the United States, almost nothing has been written about the Muslim world, mainly due to a paucity of good data. This article attempts to fill these lacunae in the literature and map their theoretical significance.

The Secularization Debate

The singular event which historians use to demarcate the modern era, the French Revolution, was defined by its rejection of religious authority. Since then, secularisation and modernisation have been intimately linked in the minds of many. 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) 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, in Gerth & Mills 1946: 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. Social differentiation drives a relativism that leads to a constricting sphere of influence for religion in both public and private. (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) 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'. The work of Pippa Norris and Ron Inglehart dovetails with that of Bruce, and especially Giddens. They claim that rising material wealth and political stability reduce the ontological insecurities that drive religiosity. (Norris and Inglehart 2004) However, while Giddens foresees a 'return of the repressed' in response to high modernity's inability to address the ultimate questions of human existence, Norris and Inglehart tie religion's appeal exclusively to its ability to dispel insecurity, and thereby predict its obsolescence. (Giddens 1991)

Whereas much of the work on secularisation stems from the European context where declining religious attendance and/or belief seems more apparent, some largely US-based 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, they contend that religious beliefs there 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 and Finke. 2000)

Recent research which tests these competing theories using European data suggests that the secularisation approach provides a more convincing explanation than supply-side theories. (Voas et al. 2002; Halman and Draulans 2006) 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 use of demographic methods in the study 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)

For Michael Hout, 'demography helps shape the religious landscape ... The combination of differing demography and stable intergenerational religious socialization would be sufficient to equalize or even reverse the relative sizes of the religions.' (Hout 2003): 79-80). 'Silent' demographic effects can be profound in the long-term. For example, Rodney 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)

Demography and Conservative Religiosity

Many have noted a relationship between literalist theology and tight community discipline, and higher levels of fertility within sects such as the Hutterites and Mennonites. (Kraybill and Bowman 2001) Those who study the religious marketplace in the United States, for example, 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 in the 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 (1987) noted that Southern Baptists had roughly twice the fertility of Jews and secular (unaffiliated) Americans. 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 et al. 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)

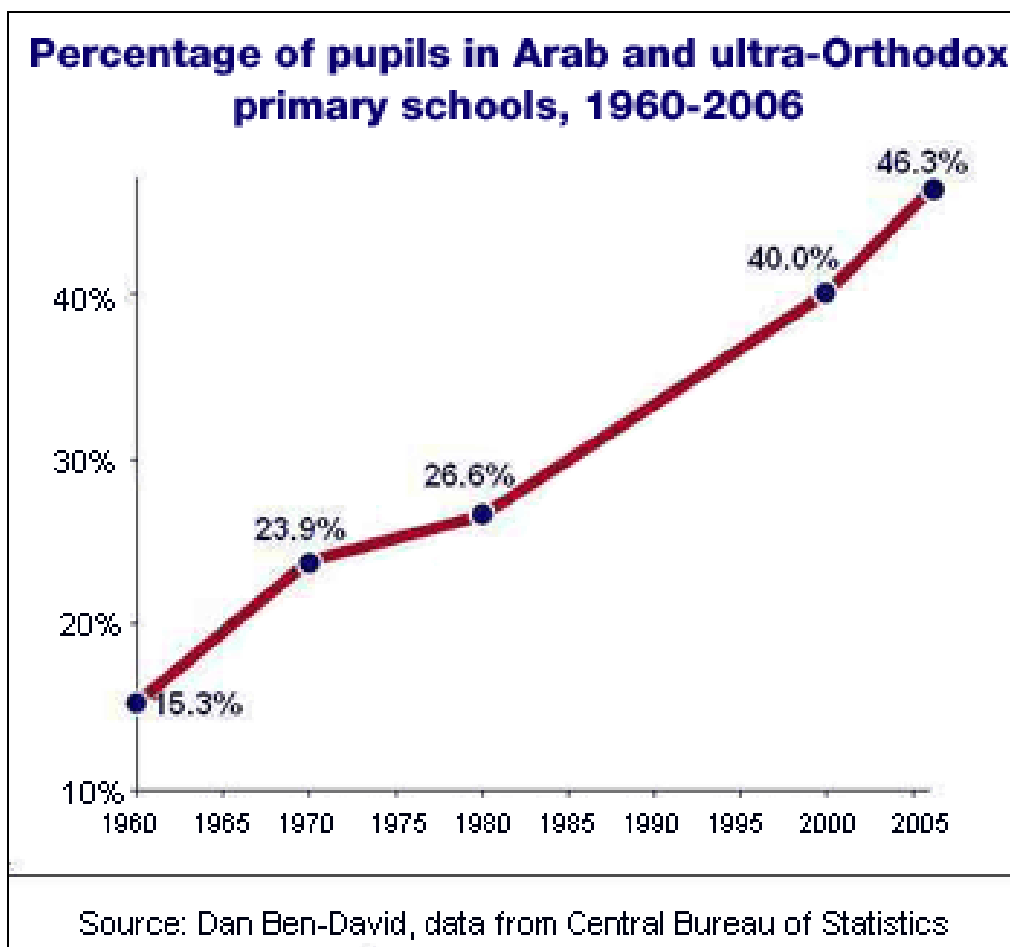
Similar trends, albeit with a more dramatic trajectory, can be observed within Judaism. Across western Europe, Jews who respond that they are 'religious' in the European Values Surveys of 1981, 1990 and 1997 report almost twice the number of children as those who consider themselves 'nonreligious' or 'atheists'. (Kaufmann 2007b) The picture comes into even sharper relief when we look at Orthodox Jews, a fast-growing segment of European Jewry. A recent study of Britain's Jewish community found that most British Jews were well-to-do, with below-average fertility, low religiosity, residential integration and a substantial rate of inter-faith marriage. By contrast, ultra-Orthodox Jews were completely the opposite, and '...are bucking the demographic trend in a remarkable way. There can be little doubt...that

the demographic makeup of British Jewry, and probably also its religious structure, will be very different in just a generation or so.' (Graham et al. 2007: 99)

The ultra-Orthodox are also transforming Israel. On 8 February, 2007, Israeli economist Dan Ben David wrote in Ha'aretz:

It is difficult to overstate the pace at which Israeli society is changing. In 1960, 15 percent of primary-school pupils studied in either the ultra-Orthodox or the Arab-sector school systems (these are today's adults). In 1980, this rate reached 27 percent, and last year it was 46 percent. The trends sketched by Ben David have radical implications in a society founded by secular Zionists (see Figure 1). Both Israeli Arabs and the ultra-Orthodox were opponents of the Zionist project prior to 1948 and are economically less successful than non-Orthodox Jews, yet both groups will be increasingly important players in the Israeli polity due to their growing demographic weight. At present, the ultra-Orthodox even hold the balance of power in the Knesset.

Figure 1



Source: 'The Moment of Truth', Ha'aretz, 8 February 2007

The Israeli case simply illustrates, *in extremis*, a dynamic whose effect moves from the demographic to the social and then to the political sphere. Among ultra-Orthodox Jews, for instance, fertility rates rose from an already staggering 6.49 children per woman in 1980–82 to 7.61 during 1990–96; among other Israeli Jews, fertility declined from 2.61 to 2.27 (Fargues 2000). In the absence of a large-scale 'switching' of allegiance by the children of the Orthodox, Orthodox Jews will increase their share

of Israel's Jewish population from 5.2 per cent today to 12.4 per cent in 2025, with almost a quarter of the population under seventeen being ultra-Orthodox at that time. The idea that Israel is becoming more secular is simply untenable in the face of these demographic trends. What, we might ask, does this mean for the future of Israeli policy with regard to land for peace, the settlements and the status of the holy places of Jerusalem?

The increase in the evangelical Christian population achieved its political 'tipping' point under Reagan in the 1980s, when the potential of this growing constituency was first unleashed. Ancient Roman Christians reached this point in 300 A.D. It remains to be seen when the ultra-Orthodox will achieve the same status within Israeli and diaspora Jewry. On current trends, the question seems one not of 'if' but 'when'. Yet an ultra-Orthodox takeover is not inevitable. An equilibrium could, in theory, be reached well before the arrival of an ultra Orthodox majority if the children of high-fertility sects lose the zeal of their parents, intermarry, or otherwise 'assimilate' into the more moderate mainstream. This secularisation effect is sometimes overlooked by proponents of the religious demography thesis. (Darwin 2005; Longman 2005) However, it is a critical component of a more complete explanation of religious change, and any attempt to make projections of religious populations must incorporate trends in religious decline.

European Patterns of Religio-Demographic Change

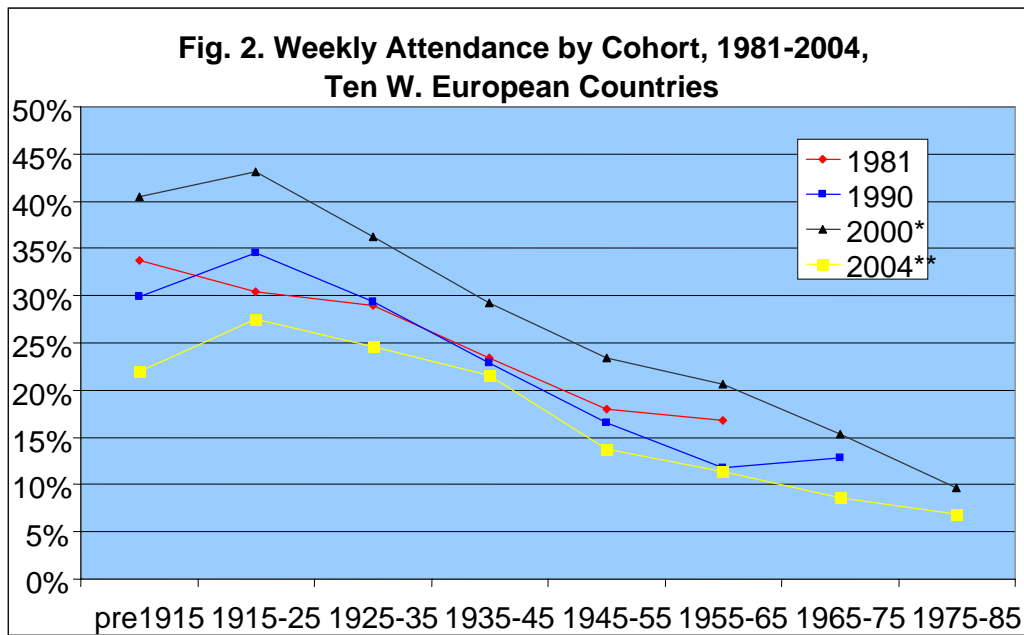
In Europe, there has been less attention paid to fertility differences between denominations. However, the growth of the European Muslim population through immigration is a trend that is widely acknowledged. (Buijs and Rath 2006) Several

studies have discovered that immigrants to Europe tend to be more religious than the host population and - especially if Muslim - tend to retain their religiosity. (Van Tubergen 2006) Though some indicators point to religious decline toward the host society mean, other trends suggest that immigrants become more, rather than less, religious the longer they reside in the host society. (van Tubergen 2007) 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 (excluding apostates) 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 increased 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) All of which suggests that secularisation may fail even if the secularisation thesis is correct. We will thereby test the hypothesis that *a combination of higher religious fertility and immigration will lead to a growth in the religious population (defined in terms of belief) of the most secular nations of Europe that exceeds the net loss of communicants through religious apostasy.*

Results & Methods

The first component of this study examines the ten western European countries which were consistently sampled by both the EVS and ESS during 1981-

2004 using cohort analysis.¹ Figure 2 shows that the level of religious (mainly church) attendance has fallen with each successive generation in all survey waves of the EVS (1981-2000) and ESS (2004). Moreover, we find no 'stacking' of the survey lines, hence no evidence of people returning to church as they age across the life course. Much of the debate over secularisation in Europe has been based on single-year survey research which fails to prise apart aging and generational effects. This evidence shows more clearly that there is a generational effect and hence a clear secularising pattern. However, there are important countercurrents.

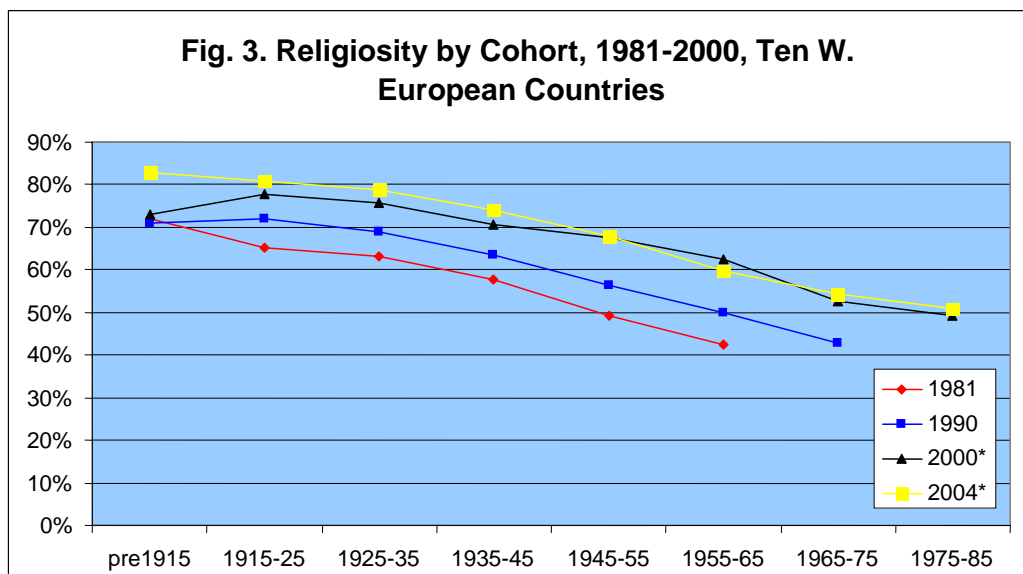


* Data for 2000 uses Norway responses from 1997

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

In particular, secularisation of religious *belief* has been much less pronounced than secularisation of religious attendance. Figure 3 shows that while belief falls as we move from older to more recent birth cohorts, the lines now *do* stack with each survey

wave, demonstrating a pronounced life cycle effect in which people return to religious belief as they age. Thus this pattern differs from the attendance evidence and supports a 'believing without belonging' interpretation. (Davie 1994) This is not to say that there has not been secularisation of belief as well as attendance. Some have indeed ceased to both believe and 'belong'. However, a majority of respondents in these western European countries continue to remain believers even if most do not belong.

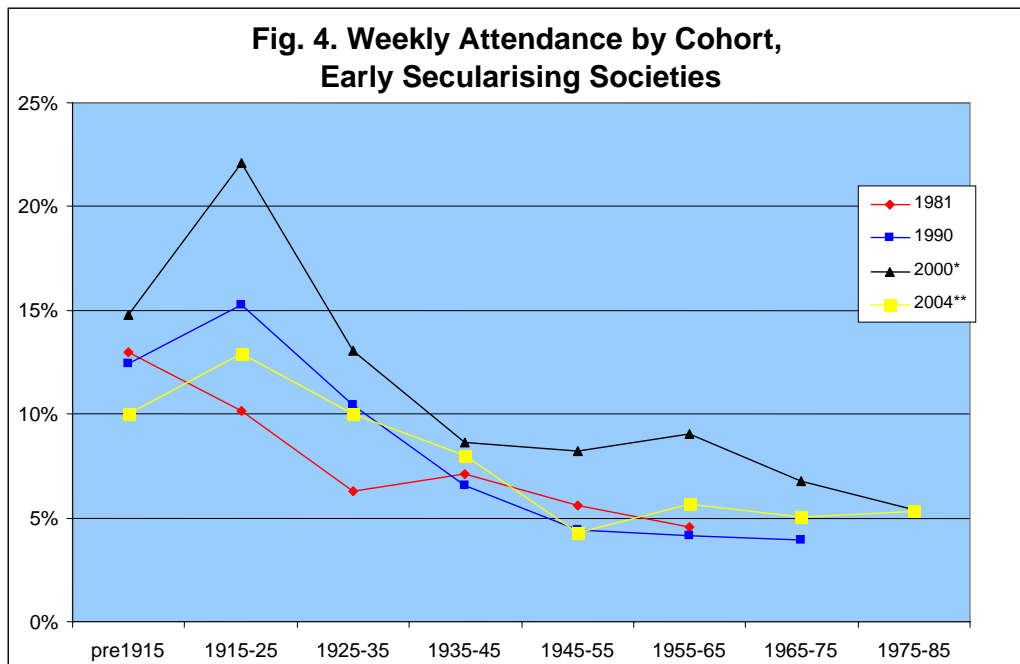


* Data for 2000 uses Norway responses from 1997

** Data for 2004 from ESS which uses different question and different methodology

However, there is more to this picture than meets the eye. This emerges when we split the sample into countries where secularisation took place earlier in the twentieth century (France, Britain, Nordic Protestant countries) and those where secularisation came in the mid-to-late twentieth century (Catholic Ireland, Spain, Belgium and part-Catholic Holland). It is striking that *while secularisation seems to be occurring with force in the Catholic countries, it has stalled in the early secularising societies of*

Protestant Europe and France. In the latter group, we find that the downward sloping line of church attendance across cohorts flattens out by the time we reach cohorts born in 1945 ('baby boomers') or later. (See fig. 4) It seems that in these countries, which are in the vanguard of secularisation, declining attendance has reached a floor of around 5 percent and there is no indication of further slippage.



* Data for 2000 uses Norway responses from 1997

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

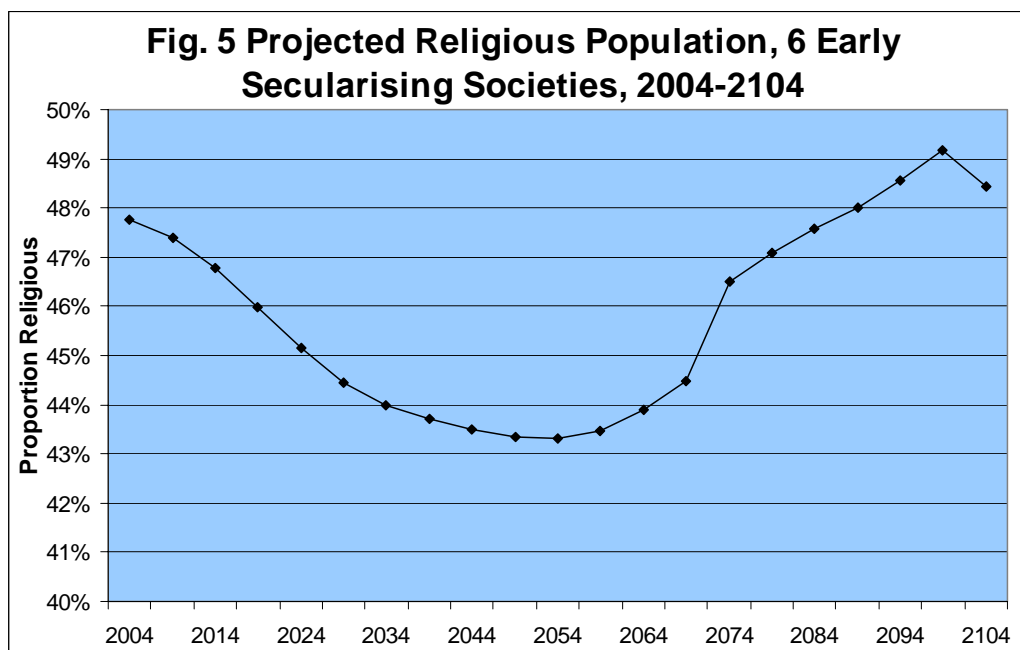
The same patterns emerge with religious belief. Indeed, on this indicator, there seems to have been a modest revival of religiosity in western Europe. This is entirely down to native Christian trends rather than the increase in (more religious) non-Christians. Overall, in 2000, just under half the population of the 'early-secularising' societies answered 'yes' to the question 'are you a religious person?' and this figure seems to be holding. On the other hand, in the mainly Catholic countries, secularisation continues

to proceed rapidly. Though church attendance is much higher, the most recent cohorts in these countries have attendance rates little higher than their counterparts in early secularising countries. Religious belief has also declined, but to a much smaller extent. It seems that Catholic Europe is following the 'believing without belonging' trajectory of Protestant Europe, but there is as yet no evidence of where the 'floor' of secularism will appear. One might surmise that Catholic Europe will follow Protestant Europe in reaching a very low (i.e. 5 percent) steady-state figure for attendance and a much higher (45-50 percent) level for belief. However, future data is needed to substantiate this assertion.

Some claim that those answering that they are 'religious' are merely espousing a lightly held belief, almost a relic from a previous era, that has no hold over human behaviour. But if this were the case, how can we explain that *religious belief is a powerful predictor of fertility*. The large constituency of people who describe themselves as 'religious' even if they do not attend church meant that the study was more interested in looking at them than at attenders. Whether one uses attendance or religious belief, religiosity emerges as a significant predictor of the number of children ever born - more important than education, class or income, which are traditionally seen as the key determinants of fertility after marital status. There was no indication of a slackening of the effect with subsequent survey waves. Indeed, the religiosity-fertility link seems to be a pervasive one across time.

In order to properly assess secularisation theories, one must focus upon the 'cutting edge' of secularisation: namely those societies that secularised earliest. Projections were accordingly made of the proportion of religious and nonreligious population in

the six 'early secularising' (mainly Protestant) countries of western Europe.² These were based on fertility and apostasy/conversion assumptions derived from the EVS of 1981-2000. Interestingly, the main projection, which appears in figure 5, shows that *the proportion of religious people in the most secular societies of western Europe will be higher at the end of the twenty-first century than today - even without immigration.* Three-quarters of the reason for the change has to do with a decline in religious apostasy, and about a quarter is related to higher religious fertility and the fact that women in the childbearing age ranges are significantly more religious than men (and thus likely to impart such beliefs to children). In the short and medium-term, however, secularisation will merely slow, buoyed by the population momentum of twentieth century secularisation which has produced a younger secular age profile and an older population of religious people. By 2050, however, the proportion of secular people will have peaked and de-secularisation will begin, albeit gently. The net result is a pattern of religious stability in the majority population.

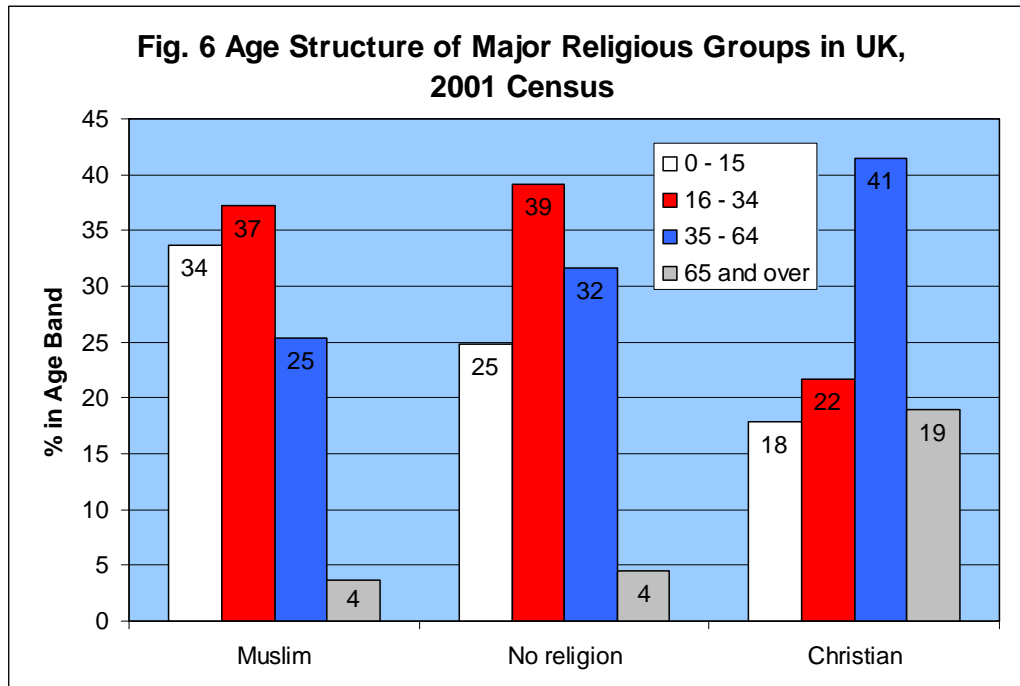


Source: Kaufmann 2007a.

Nonetheless, all of this ignores a factor which is likely to be far more important for west European religiosity levels in the near-term: immigration. The respondent pool in the 2000 EVS and 2004 ESS is only about 2-3 percent Muslim. This is a slight undercount, and also a small sample with which to work. However, the pooled ESS Muslim sample, as with the total EVS sample, shows that Muslim religious attendance and belief does not vary with age. (See fig. 18) Similar trends appear in UK ethnic minority surveys of 1994, 2001 and 2003 where sample size was not a problem and one could compare the immigrant generation with a second generation sample. (Home Office 2003; ONS 2005) The evidence clearly shows that while Afro-Caribbean Christian immigrants become more secular in the second generation, this is not true of Muslim ethnic groups, who have an almost perfect rate of religious retention. This accords with evidence from Dutch studies. (Van Tubergen 2006)

In other words, there is no evidence for Muslim secularisation. With Muslims set to comprise around half of non-European immigrants to western Europe in the coming half-century, this has important ramifications for the overall level of religiosity in the most secular countries of western Europe. In a period in which the native majorities of western Europe are experiencing the population decline predicted by thirty years of below-replacement fertility, immigration takes on greater importance as an agent of de-secularisation. For example, figure 6 shows that the age structure of Muslim and Nonaffiliated (secular) Britons was similar in the 2001 census. Both are young populations, but the engine of growth is demographic in the Muslim case and sociological in the secularist case. In the future, as secularisation wanes, we would expect the nonaffiliated British population to begin to age, the

Christian population to become slightly younger, and the Muslim population to remain broadly similar. Overall, religious-secular fertility differences and a slowing of Christian secularisation mean that immigration will lead to a more religious northwestern Europe before 2050.



Source: Kaufmann 2007a.

Where will the loyalties of the new immigrants - especially the Muslim ones - lie? Recent research claims that immigrants to Britain and Germany are more conservative than the native-born, though they tend to vote for leftist parties. (Dancygier and Saunders 2006) Yet immigrant loyalty to the Left may lead to an indeterminate electoral effect. The present study revealed a significant two-stage association flowing from religiosity to ideology to voting behaviour within the general population. This suggests that west European religiosity, far from being a relic of past beliefs, has a real impact on attitudes and, through them, upon voting behaviour. A growing

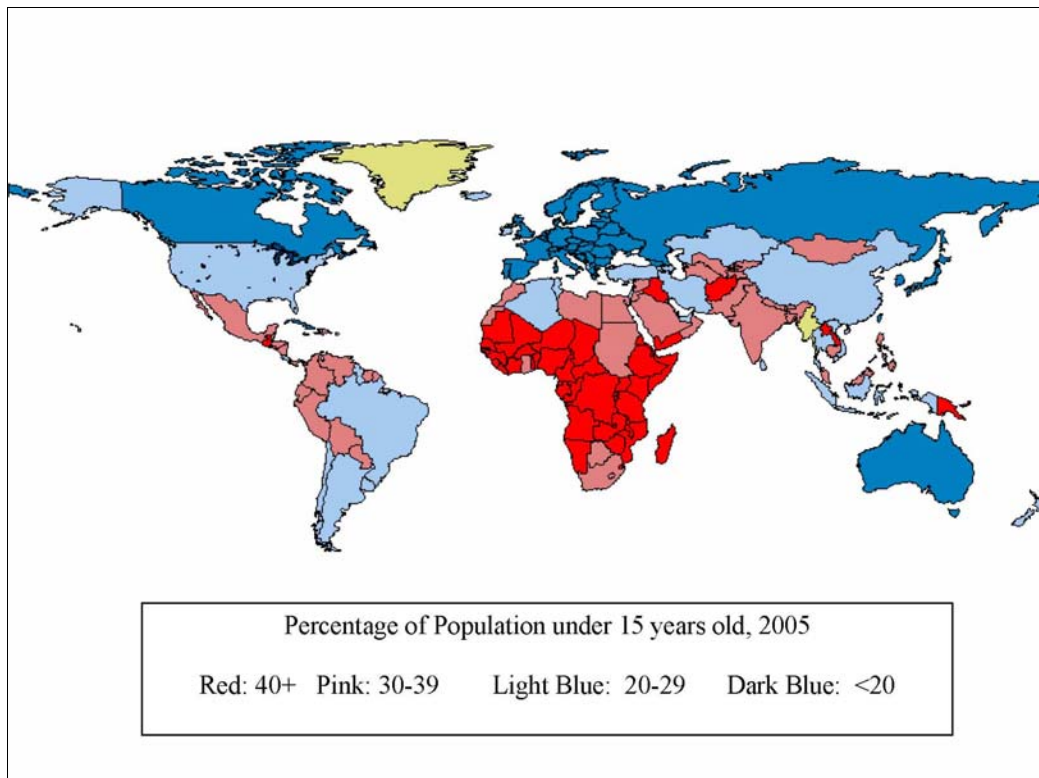
religious population may therefore lead to a more conservative electorate and a more traditionalist drift in the cultural mood, as we currently see in the United States. Much will depend on how west European political parties craft their appeal in response to a growing population of religious voters of both native-Christian and immigrant provenance.

Patterns in the Muslim World

Northwestern Europe may experience de-secularisation in the twenty-first century, but it begins from a relatively low religious base. In much of the rest of the world, religion has a much stronger position as both a private belief system and a force in politics. (Norris and Inglehart 2004) In particular, many have remarked upon the relatively high fertility of Muslim countries (see figure 7). The Arab world's population alone has grown from 80 to 320 million in the past fifty years and half its population is under 20. In Pakistan, 40 percent of the population is under 14. Total fertility rates in Somalia, Afghanistan, Yemen and the Palestinian Territories, for example, exceed 5 children per woman. (Jenkins 2007: 8, 21; Fargues 2000) Europe's 'southern hinterland' of Muslim and sub-Saharan African countries, which equalled the EU-25 in population in 1950, outnumbers it 3:1 today and will outnumber it 7:1 by 2050. 'Should [potential immigration] flows materialize...[they] could radically change the demographic makeup of the receiving countries,' remark two leading demographers. (Demeny & McNicoll 2006: 261) Moreover, the prospects for continued growth remain strong. In Jack Goldstone's words, 'Some countries – mainly those with large Muslim populations – have been quite resistant to a reduction in birth rates; thus their population growth rates have remained high.' (Goldstone 2007)

Of course, there are exceptions such as Iran, Turkey, Algeria and Tunisia which have recently attained below-replacement fertility rates as part of a longer-term demographic transition which emerged in the late twentieth century. (Jenkins 2007: 21) In addition, the fertility of Muslim immigrants to Europe is expected to fall in the second generation. In Austria, for instance, the Muslim TFR declined from 3.09 in 1981 to 2.34 in 2001. (Goujon, Skirbekk et al. 2006: 13) On the other hand, Europe's Muslim fertility rate need not decline in parallel with either the hostland or homeland. Germany's Turkish Muslim fertility rate, for instance, stands at over 3.0 despite Turkey's TFR of 1.91 and Germany's 1.3.

Figure 7



Source: Goldstone 2007

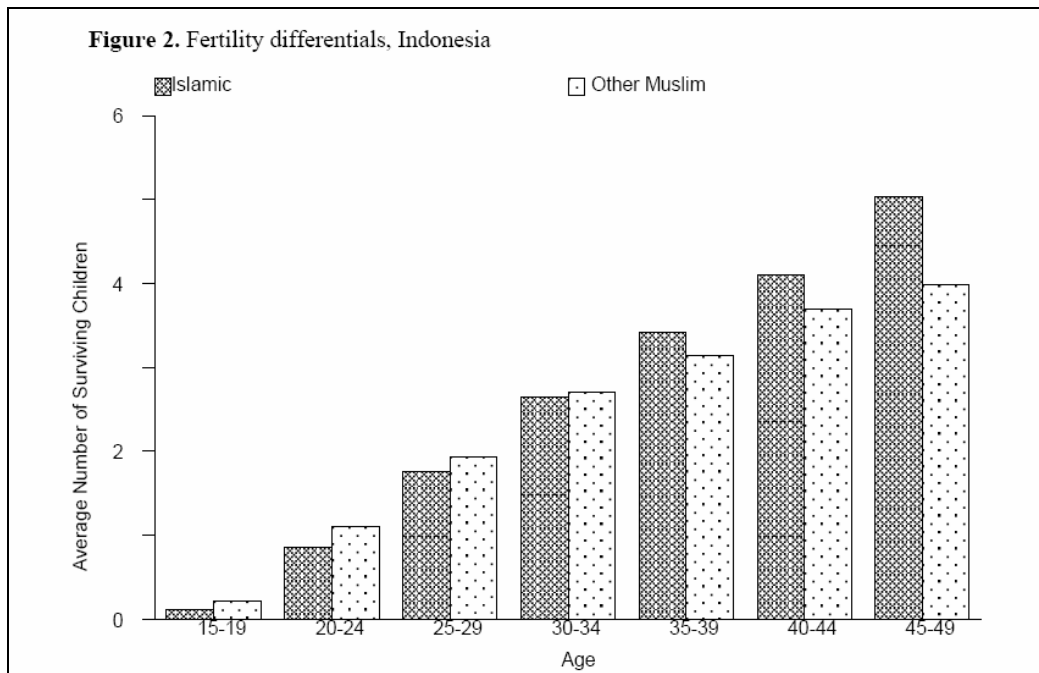
Islamism, Religiosity and Fertility

One of the few attempts to examine the link between Islamist religious beliefs and fertility comes from a study by Eli Berman and Ara Stepanyan in 2003 which 'investigates every data source the authors could find on radical Islamic communities' to examine Islamist fertility. (Berman & Stepanyan 2003: 1) The datasets compiled came from disparate corners of the Muslim world: Indonesia, rural Bangladesh, rural parts of the Indian states of Uttar Pradesh and Bihar, and Cote D'Ivoire in West Africa. The principal indicator of Islamism was whether children were sent to *madrassas*, or Islamic religious schools. Some 13 percent of Indonesians sampled attended *madrassas*, but the proportion attending elsewhere was only about 2 to 3 percent. The authors found that 'fertility is higher and returns to education are generally lower among families that send children to Islamic schools'. (Berman & Stepanyan 2003: 30)

However, the model coefficients for Islamic schooling were much weaker than those for overall education and were strongest in the Indian states of Uttar Pradesh and Bihar. Elsewhere (Indonesia, Bangladesh, Cote D'Ivoire), attendance at *madrassas* proved significant, but only in some models. Figures 8 and 9 show that the Islamist fertility premium varies considerably between different societies but is nowhere greater than about 30 percent. These results confirm that Islamism is a significant determinant of fertility, but not to such an extent as to suggest imminent growth in the Islamist population on the scale of the ultra-Orthodox Jews in Israel who have a 3:1 fertility advantage over non-Orthodox Jews. (i.e. Fargues 2000) Let us

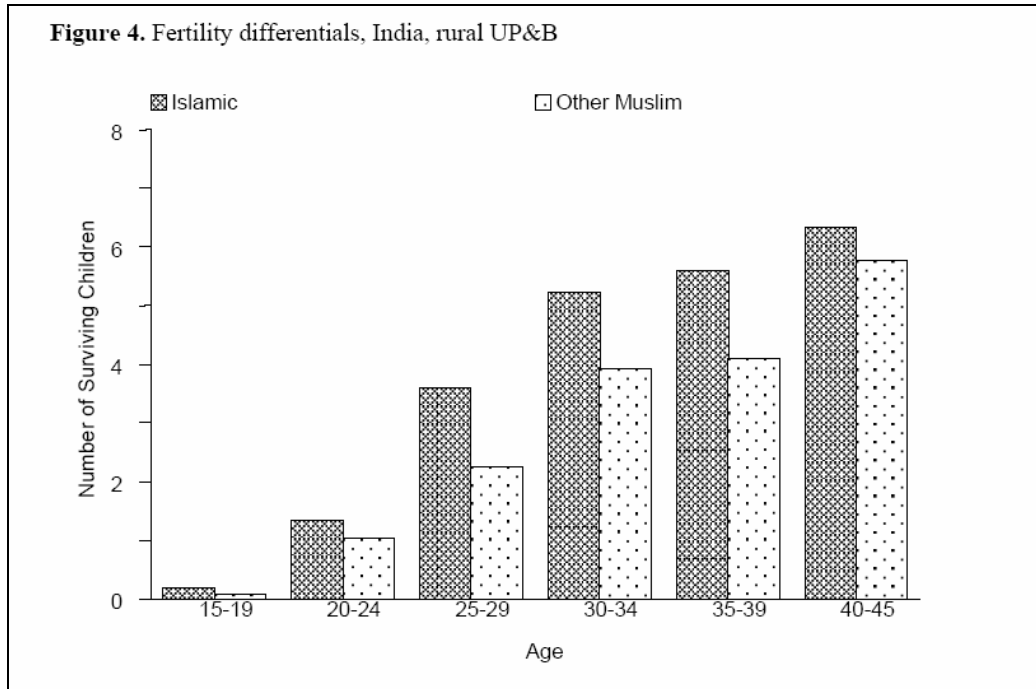
also bear in mind the generally small numbers (2-3 percent) of Islamists in these samples, though the proportion of those sympathetic to Islamism may be much wider than the madrassa-attending population. A better point of comparison therefore is the United States, where the fertility premium of conservative over mainline Protestants appears to be very similar to that between Islamist and non-Islamist families. (Roof and McKinney, 1987) The 15-20 percent fertility advantage enjoyed by religious west Europeans over their nonreligious fellow citizens is also of similar magnitude. (Kaufmann 2007c) They intimate that demographically-driven radical change may occur in Islamic countries, but over a period of a century or more rather than a generation.

Figure 8.



Source: Berman and Stepanyan 2003

Figure 9.



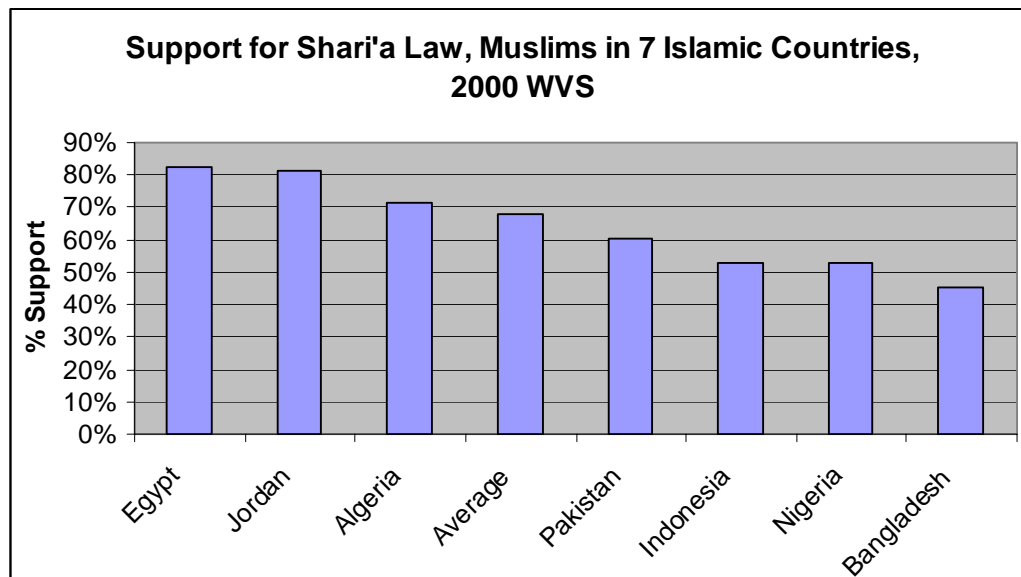
Source: Berman and Stepanyan 2003

These findings are somewhat suggestive, but are drawn from parts of the Muslim world that are relatively peripheral to political Islam. Yavuz' recent research on Turkey, based on bivariate analysis of the Turkish Demography and Household Survey of 2003, finds that the Kurdish/Turkish ethnic fertility differential is far more significant than religiosity³ when it comes to predicting fertility. Traditionalism, as measured by arranged marriage, payment of a dowry, membership in a patrilocal family, rural residence and illiteracy was also much more important. On the other hand, Kurdish and traditional respondents were more likely to express religious commitment, thus an interactive religious explanation for higher fertility is possible.

This research must therefore be treated cautiously until more sophisticated models, using a wider battery of questions, can be applied. (Yavuz 2006)

Censuses and fertility surveys, which are widely available for most Muslim countries, are notoriously poor at detecting the influence of religion because they tend to ask about religious affiliation while neglecting religious intensity (i.e. belief, attendance) data. The World Values Survey provides an exception in that its recent 1999-2000 wave surveyed a number of largely Muslim countries for the first time. This allows us to correlate fertility with specific indices of religious intensity. In that year, the WVS asked respondents in Islamic countries whether they agreed that the state 'should implement Shari'a only' as the law of the land. Responses, restricted to Muslims only, were highest in the Middle East/North Africa, and lower in Asia and sub-Saharan Africa. (See figure 10.)

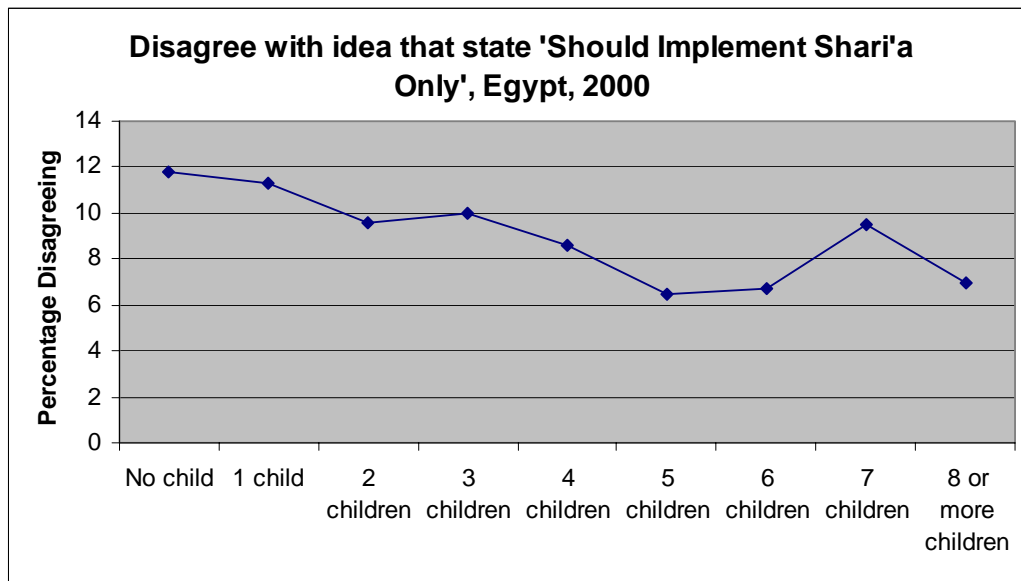
Figure 10



Source: WVS. N=8544 cases.

A glance at the Shari'a question crosstabulated with fertility shows some interesting patterns. In Egypt, for example, we find that those with lower fertility are more likely to disagree with the idea that Shari'a should be implemented as the law. (See figure 11)

Figure 11



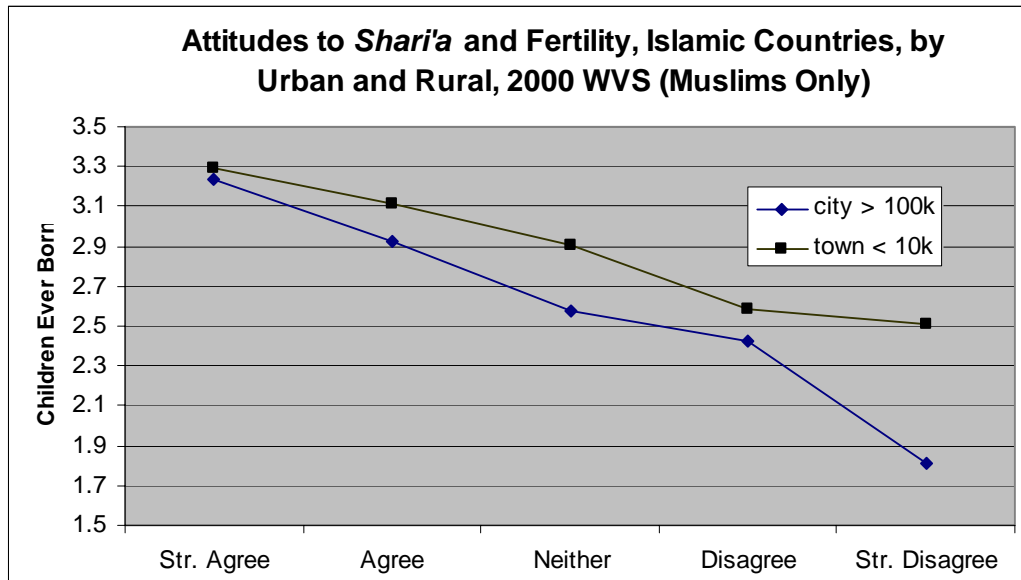
Source: WVS 1999-2000. N = 2113 respondents.

In the wider universe of majority-Muslim countries where this question was asked (Bangladesh, Indonesia, Jordan, Pakistan, Nigeria, Egypt, Algeria), a similar pattern could be discerned. Yet we know that fertility rates are falling in many of these countries due to urbanisation and education. It could be the case that education and a shift of population to the cities lowers fertility and the belief in the appropriateness of Shari'a law. Or perhaps older people, who are more likely to have completed their fertility and/or had more children, are more supportive of Shari'a law. On its own, therefore, our finding that supporters of Shari'a law have higher fertility could be an

artefact of unspecified factors like age, education and urbanisation. Urban, educated or younger individuals in Muslim societies might be less supportive of Shari'a and also prefer smaller families.

Let us consider each of these counter-explanations, beginning with rural-urban geography. When we break up the sample into rural and urban residents, we find that the pattern of Islamist fertility holds. Moreover, as figure 12 shows, the *effect seems more marked among urban populations*. Among city dwellers, fertility is almost twice as high (3.2 v. 1.8) amongst the most pro-Shari'a sector of opinion than amongst those least in favour, whereas in rural areas, the ratio is less than 3:2. We might hypothesize that in rural, underdeveloped areas, religious beliefs take a back seat to material realities, such as access to family planning or the economic benefits of larger families, in discriminating between the more and less fertile. In urban areas, where economic incentives for children are lower and costs higher while birth control technology is more widely available, it may be the case that values are a better discriminant of reproductive behaviour. Such behaviour could encompass a range of issues, including the nature of appropriate gender roles, the decision to use contraception or other forms of family planning, and whether to have children for pronatalist religious reasons. Indeed, it is well-known that political Islam has drawn strength in urban areas like the Nile Delta in Egypt, and is associated with migration to the cities. (Munson 2001; Kepel 2002; Halliday 2000)

Figure 12

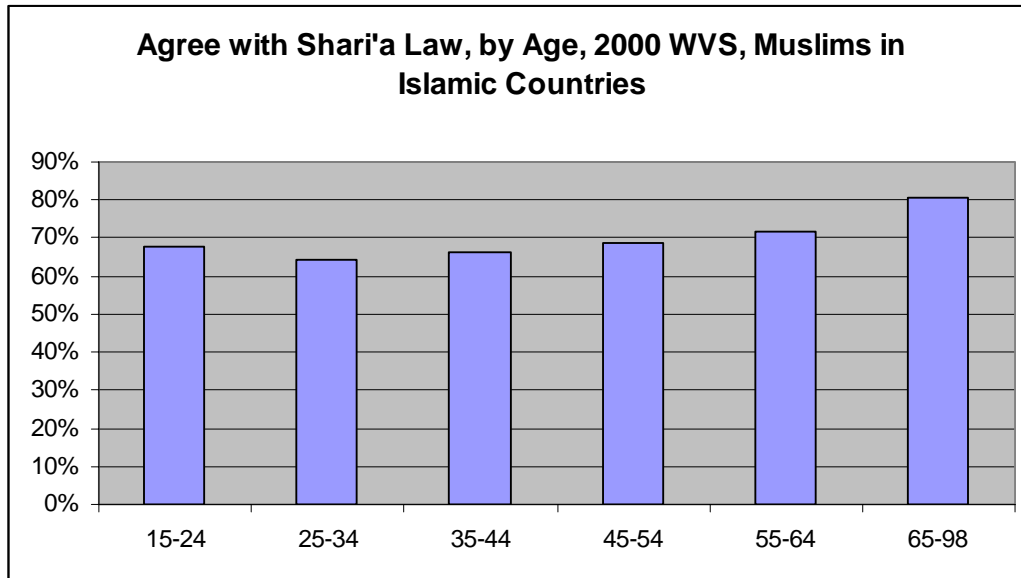


Source: WVS 1999-2000. N = 2796 respondents in towns under 10,000 and 1561 respondents in cities over 100,000. Asked in Algeria, Bangladesh, Indonesia, Jordan, Pakistan, Nigeria and Egypt.

In terms of other standard background variables, we find that age tends to predict a modestly stronger pro-Shari'a orientation, especially among those 65 and older. (See figure 13) Higher education, like youth, tends to moderately depress support for Shari'a law, with the important caveat that this only seems to be true of secondary education rather than university - which appears to be associated with *more* pro-Shari'a attitudes (see figure 14). This could be related to the more politicised context of universities, hence an identity with Islamism in the context of international or domestic politics may be more likely. In support of this view, Zubaida remarks that Shari'a's appeal is more a function of its political symbolism of defiant identity than its ethical attractiveness. (Zubaida 2003) This finding is especially interesting given

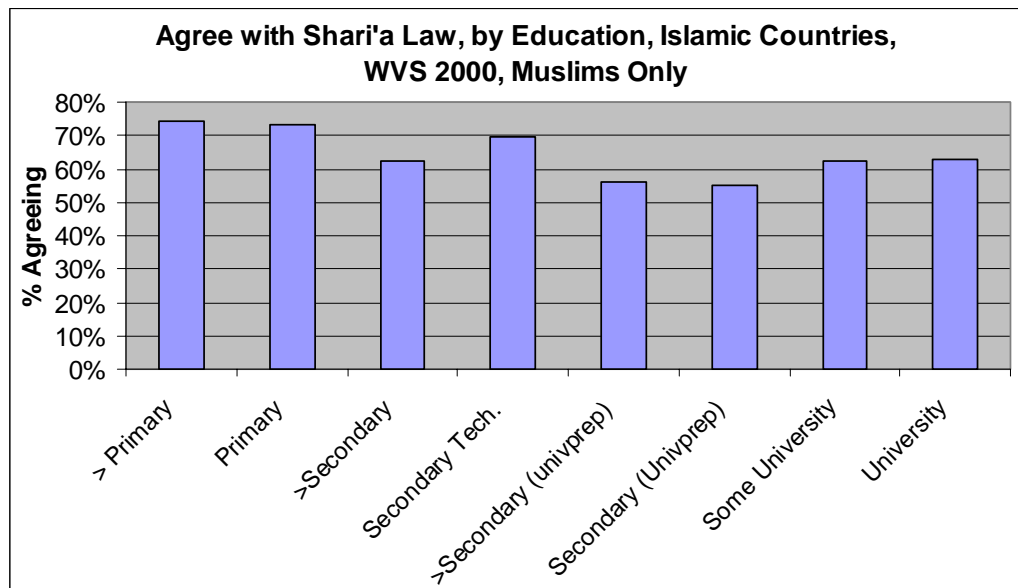
the observation that jihadis from Islamic countries tend to have a more educated, often university-trained, profile than the general populace in those countries. (Pape 2005)

Figure 13



Source: WVS 1999-2000. N = 7436 respondents. Asked in Algeria, Bangladesh, Indonesia, Jordan, Pakistan, Nigeria and Egypt.

Figure 14.



Source: WVS 1999-2000. N = 7412 respondents. Asked in Algeria, Bangladesh, Indonesia, Jordan, Pakistan, Nigeria and Egypt.

Returning to our earlier discussion of fertility, it is also evident that education has an enormous impact on fertility in Muslim societies. This may be linked to the effect of education on contraceptive use. A recent study of contraceptive use in Iran, based on a 2002 Iranian fertility survey, finds that attitudinal variables are much weaker predictors of the odds of using contraception than education levels. Note the high odds ratios for education in all models in table 1 and the weak score for the attitudinal variable. Further tests using a battery of seven attitudinal items related to women's employment find little or no significant relationships between gender role traditionalism and contraceptive use. (Abbasi-Shavazi et al. 2006) The authors therefore suggest that secularisation and 'modern' attitudes are not a factor in Iranian contraceptive behaviour. Abbasi-Shavazi et al. view 'the new [contraceptive] behavior as conservative, maintaining relatively early marriage' rather than an indicator of

liberal secularism. 'A new behavior, birth control use, can be seen as strengthening and sedimenting the [Islamist] traditional schema because contraceptive use is interpreted and motivated by the traditional schema. This schema was legitimated by religious leaders' reinterpretation of family planning as fundamentally Islamic (and not as "originating in modern Western society").' (Abbasi-Shavazi et al. 2006: 16)

[Table 1 here]

Source: Abbasi-Shavazi et al. 2006

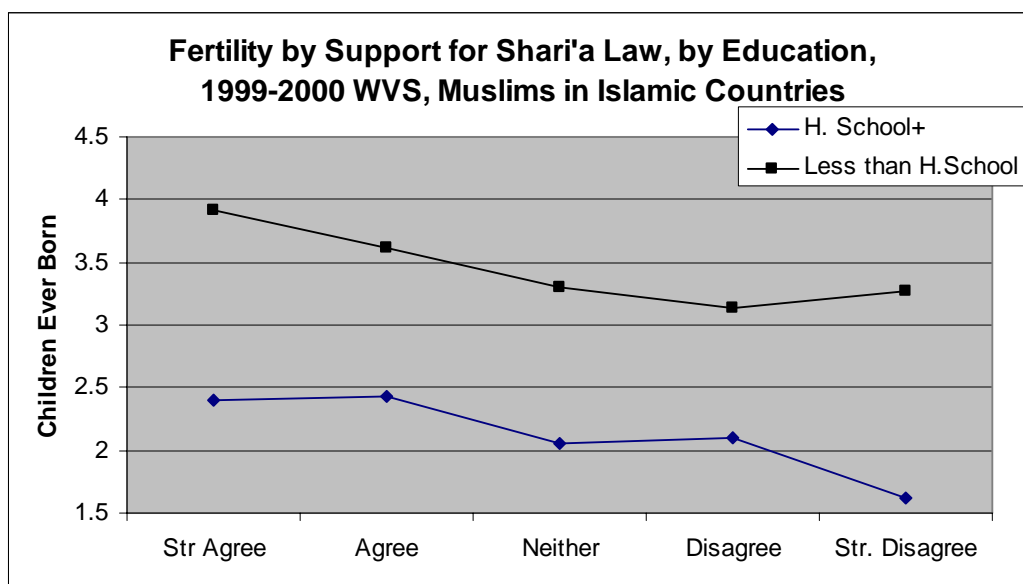
The new low-fertility behaviour, encouraged by the Iranian Islamist regime after 1989, led to a decline in the Iranian TFR from over 6 to under 2 today. Yet this is not the end of the story: the pendulum can swing the other way. Khomeini initially issued a fatwa after the Revolution suggesting birth control was not contrary to Islamic Revolutionary principles. However, the emphasis quickly returned to pronatalism, fanned by the Iran-Iraq war in the 1980s: ' the legal age of marriage for girls was reduced from 18 to 9; contraceptive supplies were restricted; day-care centers were closed, women were discouraged from seeking employment; and wartime rationing favored large families...norms were also changed and religious prohibitions enacted: public campaigns endorsed early marriage and traditional female roles; women's dress in public was restricted, as were women's leisure activities outside the home, such as television, movies, and restaurants....' (Berman & Stepanyan 2003: 4)

After 1989, things veered sharply back toward a strongly pro-birth control orientation. For pro-contraception Islamists, 'only by ending population growth,

relying on their own resources, educating their populace, and achieving political stability could Muslim governments hope to eliminate chronic dependence on Western powers and to assume a respected position in the international community'. More recently, though, Iranian President Mahmoud Ahmadinejad has appealed to Iranian legislators to take steps to boost the country's population from 70 to 120 million, condemning the country's new below-replacement fertility and challenging its family-planning policies. (Cincotta, forthcoming)

WVS evidence for the seven countries where the question on Shari'a law was asked seems to support some findings of the Iranian fertility study, but not others. For instance, while there seems to be a large fertility gap of some 1.5 children between those with less than secondary and those with greater than secondary education, there remains a distinct relationship between support for Shari'a and higher fertility. This seems to hold for both the well-educated and poorly-educated strata of the population, as shown in figure 15.

Figure 15.



Source: WVS 1999-2000. N = 1649 respondents with High School or More, 3318 respondents with Less than High School. Asked in Algeria, Bangladesh, Indonesia, Jordan, Pakistan, Nigeria and Egypt.

In order to test these relationships more robustly, we test a multilevel model of fertility based on the WVS.

Data and Methods

Data are drawn from the 1999-2000 waves of the World Values Survey (WVS). Aggregate data comes from World Bank Development Indicators for the relevant year, except for country religiosity which has been computed by taking the arithmetic mean of the individual responses to the WVS question 'are you a religious person' and apportioning 'not religious' and 'atheist' responses into a nonreligious total. The multi-level logistic regressions use national-level data as level 2 regressors and WVS data as level 1 estimators. All analysis uses Stata 7.0. The regression sample only consists of women as is standard practice in demography. For previous tables, however, we have included males since male fertility is also of interest to us.

Individual Variables, from the WVS:

Dependent: Children: number of children ever born (resident or otherwise);

Independents:

Marital Status: married (1), living together as married (2), divorced (3), separated (4),

widowed (5), single/never married (6), divorced, separated or widow (7)

Age: years;

Income: constant Year 2000 US\$;

Education: highest level of education completed (8 levels arrayed ordinally);

Sharia: Q: 'Now, what's your opinion about a good government? Which of the following characteristics a good government should have?' A: 'It should only implement Sharia's laws.' Strongly Agree (1), Agree (2), Neither (3), Disagree (4), Strongly disagree (5). Question asked in Algeria, Bangladesh, Indonesia, Jordan, Pakistan, Nigeria and Egypt.

Religious Belief: Factor produced from five questions related to religious belief. See appendix 1 for details. Question asked in Algeria, Bangladesh, Indonesia, Jordan, Pakistan, Nigeria, Egypt, Azerbaijan, Bosnia, Iran, Morocco, Turkey, Uganda and Tanzania.

Religiosity: Are you a religious person? Yes (1), No (2), Committed Atheist (3). Question asked in Algeria, Bangladesh, Indonesia, Jordan, Pakistan, Nigeria, Egypt, Azerbaijan, Bosnia, Iran, Morocco, Turkey, Uganda and Tanzania.

Religiosity (Binary): Are you a religious person? Yes (1), No (0). No is a recoding of 'No' and 'Atheist'.

Income category: lowest to highest

National Pride: How Proud are you of your nation? Very Proud (1), Quite (2), Not Very(3), Not at all(4)

We begin our modelling by regressing individual female fertility on measures of religiosity, Shari'a support and the standard control variables listed above. Model 1 includes the Shari'a question (limited to six countries), and Model 2 only includes the

religious traditionalism question (asked in thirteen countries) and so generates a sample almost twice as large. Yet the coefficients and their significance do not show major differences between the two models. The results, shown in table 2 show some expected findings, and some less expected.

[table 2 here]

Marital status and age are standard controls which show similar strong relationships to individual female fertility in all countries. Otherwise, education, at both the individual and country levels, has the strongest effect, along with the proportion of elderly people in a society (an indirect measure of a country's fertility and age structure).⁴

Higher GDP per capita is related to lower individual fertility. However, the story is not purely structural. We see, for example, that religious traditionalism (with respect to hell, heaven, sin, afterlife) and approval of Shari'a law are significant predictors of fertility. This casts some doubt on the generalisability of the 2002 Iranian fertility study's findings to the rest of the Islamic world. It seems that religious traditionalism *does* matter for fertility in most Islamic countries.

Traditional religious belief shows a robust effect in these models, and support for Shari'a law - a measure of political Islamist attitudes - is also a significant predictor of fertility at the $p < .01$ level. Tests with religious attendance show no significant effects when a control for religious traditionalism remains, but attendance emerges as significant when belief is removed from the model. Questions which measure female respondents' view of whether nonreligious people are fit for public office or whether it is better for political leaders to be 'strongly religious' are also significantly correlated with fertility (though slightly more weakly than is true for the

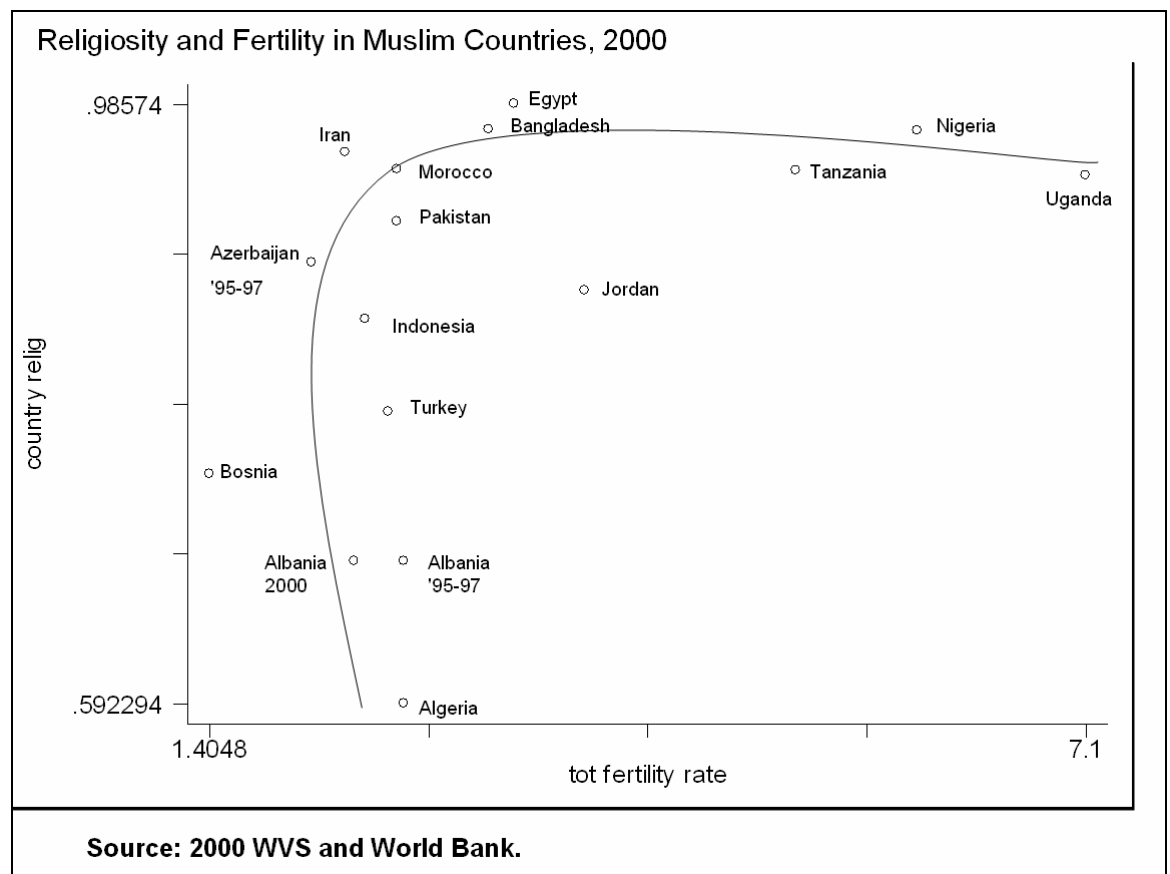
Shari'a question).

This brings us to the conundrum that higher country religiosity is strongly and significantly correlated with lower fertility. This is particularly surprising in view of the fact that the relationship is precisely the opposite across the full WVS dataset. Upon closer examination, we find that the difference is particularly pronounced in developing countries. As table 3 shows, a more religious country is associated with lower individual fertility in developing Muslim countries, but with higher individual fertility in non-Muslim developing countries. Note here that the religiosity of a country is compiled as an aggregate of individual responses to the question, 'Are you a religious person?' with the answers being 'yes', 'no', or 'committed atheist'. This could therefore be interpreted as a measure of the strength of religion as a social norm rather than of religious traditionalism or Islamism.

[Table 3 here]

A crosstabulation of religiosity and fertility at country level in the Muslim world sheds some light on this. (See figure 16)

Figure 16. National Religiosity and Total Fertility Rates



Iran, Azerbaijan and Indonesia are relatively religious yet have lower-than-average fertility for Muslim countries while Uganda and Tanzania have higher average fertility despite middling religiosity. This finding suggests that Muslim countries which have strong religious norms do not, *ipso facto*, have higher fertility (i.e. Iran, Azerbaijan) while high fertility Muslim countries may not be particularly conformist in religious terms (i.e. Uganda, Tanzania). On the other hand, at the individual level, the strong correlation between traditional religious belief and fertility, and the weaker but still important one between support for Shari'a law and fertility suggests that there *is* potential for the traditionally religious and politically

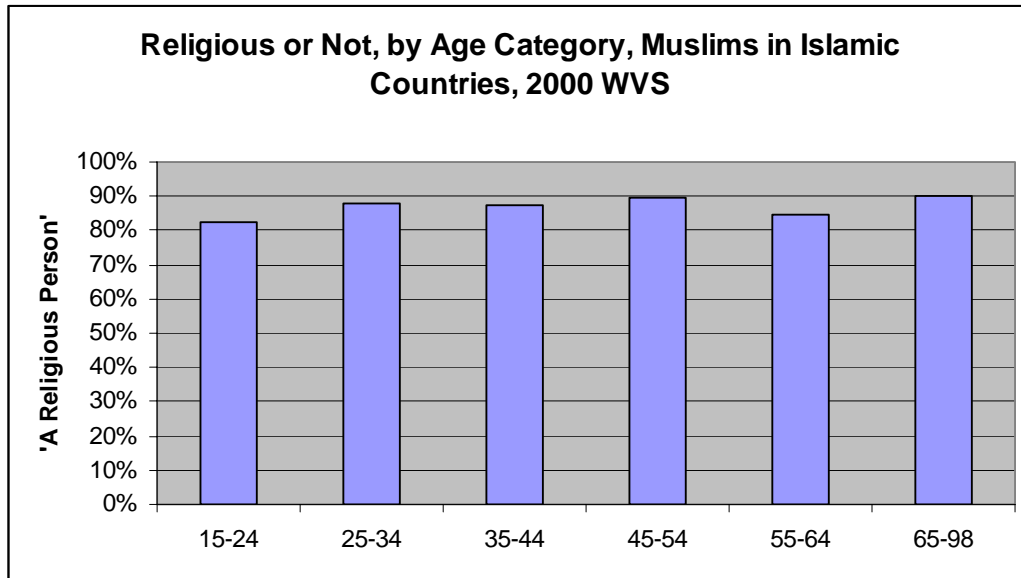
Islamist populations to expand. This may be particularly true in large urban areas. Indeed, this finding has more pungent political implications than our former, counterintuitive finding that there is a link between the degree of conformity to unspecified religious norms and lower fertility.

Religiosity in the Muslim World

Clearly religious fertility is only one part of the equation when it comes to religious change. Muslims who are religious, and those who hold Islamist beliefs, are more fertile than nonreligious Muslims, though the differential is not as striking as in the Mormon or Israeli-Jewish cases. (Hout, Greeley and Wilde 2001; Fargues 2000) Muslim secularisation - both in terms of a decline in religious belief or a decline in support for Islamist political values like Shari'a law - could offset the fertility advantage of religious and/or Islamist Muslims in Islamic societies.

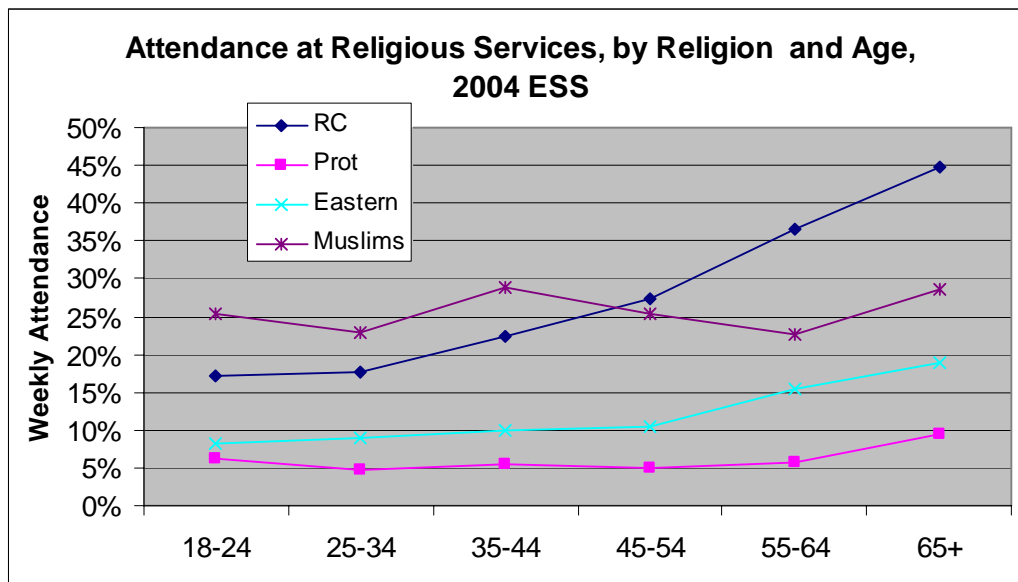
Thus we next turn our attention to patterns of Muslim religiosity in the WVS. The WVS data on Muslim countries are limited to the 1999-2000 survey wave, so we cannot parse out life-cycle from cohort effects. That said, multivariate models of whether an individual is religious (1) or not (0) show that age does not correlate well with religiosity. Unlike most western societies, younger Muslims in Islamic countries (apart from those under age 24) are no more likely to be nonreligious than their parents. (See figure 17) Curiously, this reinforces intra-European survey data from the 2004 wave of the ESS, which finds that there is no pattern of decline in religious attendance across European Muslim age categories, in contrast to the pattern for other (Christian) religious affiliations. (See figure 18)

Figure 17



Source WVS 1999-2000. N=15197 cases. Question asked in Algeria, Bangladesh, Indonesia, Jordan, Pakistan, Nigeria, Egypt, Azerbaijan, Bosnia, Iran, Morocco, Turkey, Uganda and Tanzania.

Figure 18



Source: ESS 2004

These findings are confirmed in logistic regressions of a religious dummy variable (1=yes, 0=no) on a series of estimators. Table 4 shows the results of this analysis across between nine and thirteen Muslim countries, depending on the model. Model 1 provides estimates for a fixed-effects model with a control for town size. Model 2 estimates a model which controls for town size but uses World Bank country indicators as level 2 controls. Finally, model 3 drops town size (not asked in four countries) and thereby expands the dataset but reduces model specificity.

Model 1 shows that all age categories are more religious than the youngest, 18-24 category, and the over-65 group is most religious. However, there is fluctuation in religiosity across age groups rather than a linear trend, suggesting an absence of clear evidence for secularisation as in the case of Catholic Europe, for example. Education also seems to reduce religiosity (as compared to those with less than primary), an effect which is clearest with regard to secondary schooling but encompasses both

primary and university education. On the other hand, aggregate secondary education levels within a country had no significance for religiosity.

Income was not significant in the first two models and led to over a thousand deleted cases. Moreover, controlling for it did not affect other estimates (including education) enough to warrant its inclusion. In model 3, however, income does emerge as highly significant, though not enough to affect the importance of the education coefficients. Wealthier individuals may be less religious than poorer people, but at country level, the wealthier Muslim countries tend to be more religious. This may be attributable to the fact that many wealthier countries are in the Middle East (oil producing or otherwise). Marital status had a significant impact in the expected direction, with increasingly less conventional non-married categories less religious than married.

Town size likewise had a significant effect in most models. The effect of larger town size (above the reference category of rural dwellers) is generally to increase rather than lower religiosity levels, contrary to popular perception. This seems to fly in the face of secularisation arguments which would place weight on urbanisation as a force for secularisation. Having said this, the fixed-effects model shows somewhat weaker results for both town size and education, both of which lose much of their significance when country intercepts are applied.

The salutary impact of national pride on individual religiosity was also a robust finding, casting some doubt on theories which juxtapose Islamism and nationalism. Nations may be western colonial inventions that divided the mythical Umma, and nationalist parties often oppose Islamists, but Zubaida seems correct to connect Islamism and nationalism to similar sentiments. (Zubaida 2004) In terms of particular nations, many countries showed significant negative coefficients when compared to

Uganda (whose Muslims are 94% religious), notably Algeria and Indonesia, but also Pakistan, Turkey and Iran. Note that these results must be interpreted relative to the high degree of religiosity prevailing in the Muslim world. Even so, given the strongly religious character of Iran (95% religious) and Pakistan (91% religious), among others, it may be premature to read too much into the country parameters apart from Algeria and Indonesia where nonreligiosity is at a higher level.

Support for Shari'a Law

Similar results can be found in linear regression models which specify support for Shari'a Law as the dependent variable. Table 5 shows models which differ only in their inclusion or exclusion of a variable for fertility (as this is a very significant variable but was often unanswered, and thus causes 25 percent of cases to be dropped). Before attending to the small differences between the models, let us examine where they agree.

First of all, the patterns here largely reflect those found in the religiosity models in table 4. Country religiosity is associated with more pro-Shari'a sentiment, just as it is associated with greater individual religiosity. Higher GDP per capita is also associated with greater support for Shari'a law, as with religiosity. National pride bears a similar relationship to religion: disproportionately predicting support for Shari'a Law and vice-versa. In addition, married respondents are more pro-Shari'a, as are those with children. Higher fertility rates in a country predict a more pro-Shari'a orientation. We found similar results in our religiosity models.

With respect to education, schooling at primary or above leads to a growing disagreement with Shari'a Law. In addition to individual education, country-wide

tertiary education levels significantly reduce pro-Shari'a sentiment (secondary levels were nearly as significant, in the same direction). The town size coefficients also look much the same in this model as in the religiosity ones. Namely, that town size behaves in a diametrically opposed way to education, with residence in urban areas of 2,000 to 500,000 generally associated with more pro-Shari'a views. This may be picking up some of what other observers have noted with respect to Islamism's popularity in small-city regions like the Nile delta.

The results for age are somewhat less conclusive, but are the only major predictor to differ markedly from the religiosity model's findings. In the second Shari'a model, those aged 25-54 seem less supportive of Shari'a than younger or older respondents, though the effect does not appear in model 1. This forms a notable contrast with the religiosity models, where older respondents seemed more religious than the 18-24s.

Conclusion

We began our analysis with an overview of demographic theories of religious change, noting that religious apostasy needs to be worked into any overall demographic model. In Europe, demographic forces (immigration, religious fertility) seem sufficient to reverse the secularising process during the twenty-first century. The same is true of the USA and Israel. In the Muslim world, the story looks more complicated and awaits detailed cohort component projections (the subject of future research). Our initial attempt to generate parameters comes from an emerging set of surveys, the WVS, rather than established time series datasets. Cohort analysis is necessary to separate life cycle, generational and period effects. Repeated longitudinal

measurements are needed to prise apart time series from cross-sectional relationships. It would therefore be premature to draw developmental conclusions.

We can, however, suggest some broad patterns in the data. Increased education levels are associated with lower fertility among Muslim respondents in Islamic countries. Second, contrary to some previous research, we find that both religiosity and support for Shari'a Law are linked to higher fertility, suggesting that there is potential for growth in the Islamist religious population of Muslim societies, though the impact of higher education may well counteract this. There is, however, a complex relationship between individual and national-level variables. The religiosity and education levels of a country, for example, seem negatively associated with fertility despite the positive coefficients at the individual level. This may reflect the conceptual difference between *relative* religiosity and education (possibly measured by individual responses) and *absolute* religiosity and education, as measured by aggregates.

We have spoken of demography, but what about the secularisation side of the equation? Secularisation, if rapid enough, could offset the demographic advantage of the religious. Here the signals are, again, mixed. Increased education seems to be linked to reduced religiosity and anti-Shari'a sentiment in Muslim countries while urbanisation appears to have the reverse effect (at least for cities with populations below 500,000). Age behaves in unexpected ways, with those over age 25 more religious than those under 25, yet simultaneously less supportive of Shari'a than the under 25s.

No pattern of generational secularisation can be read off the age coefficients as is the case, by contrast, in Catholic Europe, where each birth cohort seems much less religious than the previous. Aggregate indicators of fertility and education behave

more similarly to individual-level ones than in fertility models, but higher GDP per capita predicts greater rather than weaker support for Shari'a Law among Muslims in a given country. This may be an artefact of a cross-sectional model in which religious middle Eastern countries are wealthier and better educated than less religious and/or moderate Asian and sub-Saharan African Muslim societies. Overall, this research does not point to any trajectory of inevitable 'secularisation' (i.e. a decrease in Muslim religiosity or support for Shari'a) as the population becomes better educated, wealthier and more urban. The trends suggest stability, with certain forces of modernisation (notably urbanisation) pulling in a religious direction while other forces, especially education, lean toward a more secular path.

It is evident that religious literalism will not receive the demographic boost in the Muslim world that it has in Israel. That said, it seems possible that fertility dynamics could power increased religiosity and Islamism in the Muslim world in the twenty-first century in the same slow-moving way as transpired among evangelical Protestants in the twentieth century United States and as appears to be taking place among religious Europeans. This will be the subject of further research based on a wider array of data and cohort component population projections that are sensitive to parameters of fertility, migration, religious apostasy, sex and age-specific differences and mixed-faith marriage rates.

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¹ Countries sampled in 1981, 1990 and 1999-2000 are France, Britain, Spain, Ireland, Belgium, Holland, Sweden, Iceland, Denmark. Norway was sampled in 1981, 1990 and 1997, but not 2000, so we use 1997 figures for Norway.

² France, Britain, Sweden, Iceland, Denmark, Norway.

³ As measured by whether religion is important to the respondent.

⁴ Total fertility rate, by contrast, did not come up significant in this model, even with the variable for proportion aged over 65 removed.