

Human Development and the Demography of Secularisation in Global Perspective¹

One variant of secularisation theory argues that private religiosity declines as societies modernise. Supply-side theorists, by contrast, emphasise how modernity can sometimes deregulate religious economies, spawning religious diversity, competition and, ultimately, greater religiosity as individuals' diverse religious demands are catered for. There is also a third, often hidden, element governing the religiosity of a society: demography. This paper attempts to integrate insights from all three perspectives and test these against contemporary data. This necessarily brings us into contact with the important work of Norris and Inglehart (2004), which marshals demographic and sociological arguments into a comprehensive theory of human development-driven secularisation. These authors 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. Their landmark book makes many important contributions to our knowledge and this article supports their demographic propositions. However, the paper takes issue with some of the claims they make with respect to the sociological aspects of their theory. This includes their overarching thesis that human development ultimately leads to a decline in religiosity. This paper contends that this argument has not been systematically tested with individual-level data or national-level time-series data.

The Secularisation 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. (Gerth and Mills 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 Ronald Inglehart and Pippa Norris dovetails with Bruce's argument. Whereas Bruce focuses on social differentiation, Norris and Inglehart claim that rising material wealth and political stability reduce the existential insecurities that drive people to seek supernatural explanations of terrestrial events. They show that countries which score higher on indices of economic development, wealth and equality ('human development') tend to be less religious than those with poorer human development scores. 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.² (Norris & Inglehart 2004: 110) Others have charted a growth in the proportion of Americans identifying as nonreligious to 14 percent by 2000, and Norris and Inglehart suggest that this proportion will increase in the years to come.³ Elsewhere, Norris and Inglehart claim that 'one can easily think of striking exceptions [to the rule that human development reduces religiosity] 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)

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 so-called 'big questions' of human existence are forced into the background of human experience by the pace of modern life. For Daniel Bell, the key elements of modernism: novelty, change and immediacy, repress the impulse toward reflection in art and culture, thereby enabling a masking of the major existential questions of life. (Bell 1996 [1976]: 47; Giddens 1991: 194-5) However, Giddens also suggests that major life events - especially death or other family traumas - permit existential questions to burst through the routines of modernity. These tragedies are less common in an age of modern medicine and enhanced human security, but they still inevitably occur. Here Giddens and Robert Bellah emphasise the role that psychotherapy plays as a surrogate for religion in late modernity. (Giddens 1991; Bellah 1996 [1985]) Psychotherapy attempts to re-orient people away from the disturbing questions thrown up by tragic events and toward a readjustment to modern routines, but it is unclear whether this technique always succeeds in relegating existential questions beneath the surface of everyday life. For Giddens, such shocks can lead to a '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: 207-8)

Whereas much 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 markets 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)

Some recent researchers take issue with supply-side theory. 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. All told, pluralism

seemed 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)

Somewhat of a 'third way' is represented by other theorists, who propose that the story is more complex than a linear theory of either revival or 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) Finally, when we come to the developing world, we see a pattern of religious vitality, with no evidence of religious decline across the generations - in contrast to much of Europe. This is confirmed in the World Values Survey (WVS) data by Norris and Inglehart (2004).

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 choices of individuals or

changing structural contexts. However, it is apparent that even in the absence of socially-inspired revivals or 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 into, or dissimulation out of, 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)

Religiosity and fertility

One postulate of second demographic transition theory is that religious commitment predicts higher fertility, hence secularisation is linked to falling fertility rates. (Surkyn and Lesthaeghe 2004; van de Kaa 1987) Others confirm a link between religiosity and fertility. Berman, Iannacone and Ragusa (2005), for example, employing a pooled model for four Catholic European countries in the period 1960-2000, found that church attendance is associated with fertility at the aggregate level, but only in interaction with an indicator for the number of nuns per head. This is attributed to the salutary effect of nuns (not priests) in providing ancillary social services at church which help raise the total fertility rate in Catholic countries. Norris and Inglehart also find a strong correlation between religiosity and fertility based on an analysis of aggregate, country-level data. Their multivariate analysis of national-level indicators (aggregated from individual responses) for some 65 countries sampled in the four waves of the WVS during 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 (on religiosity) for population growth and population age structure intimate that religiosity is linked with higher fertility at the global level. (Norris & Inglehart 2004: 62-3)

Other 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.⁴ 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, pronatalist 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)

In addition to attendance and religiosity, measures of theological conservatism have also been linked to high fertility. Berman (2000) and Fargues (2000), for instance, find that Ultra Orthodox Jews in Israel have fertility rates several times that of secular Israeli Jews. Berman and Stepanyan (2003), in a study of fertility behaviour among radical Islamic sects in Indonesia, Bangladesh, India, and Cote D'Ivoire confirm that in most cases, fertility is significantly higher among families with members attending Islamic religious schools. Similar findings have been recorded for radical Anabaptist Protestant sects like the Hutterites in North America. (Kraybill and Bowman 2001)

Long Term Religio-Demographic Shifts

These 'silent' demographic effects can be profound in the long-term and outweigh the shorter-term flows of apostates and converts. 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)

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 considerable 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. Of course, the secular/unaffiliated population has also grown, from 4 percent in 1981 to 10 percent in 2001, and is projected to grow in the near future. However, the religiously unaffiliated in Austria have a total fertility rate (TFR) of just .86 children per couple, rendering them extremely reliant on religious apostates to maintain growth. 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)

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 figure 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.

Fig. 1 The Norris-Inglehart Secularisation Thesis

[Figure 1 here]

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

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. Thus they write, 'human development leads to cultural changes that drastically reduce (1) religiosity and (2) fertility rates'. (Norris and Inglehart 2004: 26)

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 developing countries like Brazil, Tunisia and Iran now reporting below-replacement fertility. (Lutz, Sanderson and Scherbov 2004) Overall, demographers predict that the developing world as a whole will reach below-replacement fertility 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) Here it is interesting to note that the demographic transition in Europe typically occurred well before mass-secularisation.⁵ 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, such as Egypt or Saudi Arabia, younger people are more religious than their elders. (Wickham 2002)

The main problem with Norris and Inglehart's technique is an attempt to test a developmentalist (i.e. time-series) theory with cross-sectional data, often on the basis of 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 support for the Democratic Party. (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 - such as being traditional centres of wealth, power or religious learning.⁶ This unit effect persisted throughout the course of 1961-71. (Ali 1978)

Overall, the Norris-Inglehart modernisation thesis lacks a systematic multivariate test of the proposition that development indicators predict *both* religiosity and fertility. It has no time-series dimension. It fails to differentiate between aggregate and individual levels of analysis or to specify the mechanisms linking human development to religiosity/fertility at the two levels. Short of these tests, there is no basis for the authors' claim that despite current setbacks, religious apostasy will one day win the battle over religious fertility. In order to address some of these shortcomings, this paper will employ

multivariate analysis to consider the relationship between religiosity and fertility in developed and developing societies. Moreover, we use time series techniques to interrogate some of Norris-Inglehart's macro-level conclusions and move on to employ multilevel analysis to parse out individual and national level effects.

We expect to confirm many of Norris and Inglehart's findings. For example, we predict that individuals who are more religious will have higher fertility when controls are applied. We expect that the more religious their country of residence, the more religious an individual will be, controlling for other individual characteristics. On the other hand, in contrast to Norris and Inglehart, we expect the relationship between country-level and individual-level variables to change as countries develop. In developing countries, we postulate that 'tradition' mediates the relationship between individual religiosity and fertility. Religiosity and high fertility are part of an unreflexive village outlook linked to the rhythms of rural underdevelopment.⁷ Society remains less culturally differentiated. In more developed societies, by contrast, new subcultures spring up, often rooted in 'lifestyle enclaves' coalescing around shared age or income. (Bellah 1996 [1985]) Religious identity is more self-conscious: individuals and subcultures, often rooted amongst older people or married couples with children, consciously identify against the secular mainstream, and these sub-national dynamics become more important than collective tradition. (Bruce 1998: 147) Atheists are also increasingly likely to raise their heads above the parapet given the less conformist social climate.

There is an analogy here with the crystallisation of ethnic identity among the third-generation descendants of immigrants to modern host societies like the United States. Those who connect with their ethnicity must do so self-consciously rather than

unreflectively. In other words, the third generation had to consciously *choose* to identify as Italian, whereas their grandparents simply *were* Italian without thinking about it. (Novak 1972) Likewise, many nationalist movements took shape when distinctive features of the vernacular culture had atrophied. Irish or Welsh nationalism, for instance, emerged precisely as these respective groups' language was being replaced by English in the early nineteenth century. Identity, based on romantic historicism and a political project, substituted for traditional culture. (Connor 2004; Hutchinson 1987) The awareness of a secular mainstream, and the active rejection of it by the religious, distinguishes modern religiosity from its traditionalist ancestor. The modernisation process thus loosens the relationship between national traditions and individual-level religiosity. This relationship is in turn mediated by stronger subcultures anchored in age, income or marital status.

As a result, we predict that:

H₁: Religiosity among individuals in a society varies more around the mean within developed countries than in developing ones

H₂: There is little or no association in multivariate, time-series models between a nation's degree of religiosity and either: a) its GDP per capita or b) its school enrolment level

H₃: There are different relationships between religiosity and human development at the aggregate and individual levels of analysis

Two other hypotheses, related to second demographic transition theory, flow from our

de-traditionalisation argument. These concern the notion that, as societies develop, human development indicators become progressively less important than the value choices of individuals and their subcultures in determining religiosity and fertility levels. One's position on the traditional-modern spectrum becomes less important for fertility and religiosity choices in developed societies, where most people have had the opportunity to acquire education and financial security and to move to urban areas. If they remain religious or more fertile, these are more likely to be the result of self-conscious choice or membership in a self-conscious religious subculture than the result of ascribed tradition. In other words, aggregate (national)-level predictors should weaken at the expense of individual ones when it comes to predicting individuals' religious and fertility behaviour. Hence we would predict that:

H₄: The aggregate level of religiosity in a country will have a greater impact on individual-level religiosity in developing countries than in developed ones

H₅: Aggregate-level indicators of human development will have a greater impact on individual-level religiosity and fertility in developing countries than in developed ones

H₆: National-level religiosity is less important in predicting fertility in developed than in developing countries

Data and Methods

Data are drawn from the 1981, 1990, 1995-7 and 1999-2000 waves of the European

Values Survey (EVS) and 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. Unfortunately, World Bank GINI coefficient data is too incomplete to be of use, so we are unable to test for inequality, one of the three elements of Norris and Inglehart's human development measure. Note that almost all of the developing countries have only been sampled in the 1999-2000 wave of the WVS hence we limit our analysis of the WVS (tables 4-6) to that wave. The time series analysis employs Prais-Winsten regression with panel-corrected standard errors and uses aggregate data for the ten European countries sampled in all three waves of the EVS (1981, 1990, 1999-2000). These countries were chosen because they are the only ones consistently sampled across all three waves of the EVS. (See note 10 for a list of countries) The multi-level logistic regressions use national-level data as level 2 regressors and EVS/WVS data as level 1 estimators. All analysis uses Stata 7.0. Data

Individual Variables, from the WVS:

Dependent: Individual Religiosity: 'a religious person' (1), 'not religious person' or 'atheist' (0)

Independent: Children: number of children ever born (resident or otherwise); Marital Status: unmarried (1), married (0); Age: years; Sex: male (1), female (2); Income: constant Year 2000 US\$; Education: age completing education

Results

H¹: Individual Variations in Religiosity around their Country Mean

We begin our investigation by noting that there is indeed an aggregate bivariate correlation between GDP per capita, a major determinant of human security, and national religiosity. The picture is, however, far more complex than a straight line developmentalist approach would allow. The relationship between GDP per capita and religiosity, for instance, is actually curvilinear (see figure 2), with increased national income associated with lower religiosity in developing countries and higher or flat religiosity in developed ones⁸.

Fig. 2 GDP per Capita and National Religiosity, WVS, 1981-2000

[Figure 2 here]

One way to evaluate our H¹ - that religiosity among individuals in a society varies more in developed countries than in developing ones - is to examine the relationship between religiosity levels and their standard deviation in different regions of the world. Two datasets are used, the WVS for 1999-2000 and a combined dataset which includes the 1999-2000 WVS as well as the mainly European 1981 and 1990 survey waves. The pattern is strikingly similar in both datasets. Figure 3 graphs the mean religiosity (as measured by the WVS religiosity question outlined above⁹) of different regions of the

globe against the standard deviation of individuals from their region's mean religiosity. This arrays regions from the least religious, East Asia, where the mean approaches 2 (i.e. all responding 'nonreligious'), to the most religious, sub-Saharan Africa, where the mean is close to 1 (i.e. all respondents answering 'religious'). Note the common topography of the two sets of lines: regions which display lower religiosity exhibit higher variation around that mean while the most religious regions show the opposite tendency. This suggests that religious norms constrain individual beliefs more than nonreligious norms. More developed societies seem to be less religious, as per secularisation theory, but they also manifest a greater spread of religious practice within their populations, as we would predict from our theory of growing religious voluntarism with modernisation.

[figure 3 here]

H²: Human Development and Country Religiosity

We will revisit the question of religious deviation later, but for now, we shall proceed to test hypothesis H². We start with a replication of Norris and Inglehart's aggregate, bivariate analysis based on World Bank development indicators, presented in table 1. (Norris & Inglehart 2004, ch. 3) Like Norris and Inglehart, we find the expected negative bivariate correlations between per capita GDP and country religiosity, and between levels of secondary schooling and country religiosity. However, these correlations are modest, and disappear when both education and GDP per capita (which are in fact strongly correlated) are input together in a simple multivariate model.

[Table 1 here]

Multivariate analysis seems to remove the developmental effects which Norris and Inglehart cite as crucial for secularisation. But perhaps these effects will reappear in a more robust model. Our next methodological step, therefore, is to aim for time-series depth by restricting our analysis to the ten West European countries covered in all three waves of the EVS.¹⁰ The availability of repeated measures for each country (for 1981, 1990 and 2000) allows us to use proper time-series techniques to control for serial autocorrelation. At this point, we must add the caveat that sample size is small due to the lack of a long time series for many countries, thus the importance of limiting the number of predictors and placing these results in proper perspective. In particular, the r-squared in a model this size is not very meaningful, hence the need to focus on the coefficients. The resulting model (shown in table 2) reinforces our contention in table 1 that national income per capita has no impact on the degree of religiosity in a country for these ten cases over the 1981-2000 period. Depending on the methodology used, national education levels either have no effect, or have a small *positive* effect on national religiosity. Only the proportion of people aged over 65 - a demographic indicator - is strongly significant over time and place in lowering the degree of religiosity in a country. As we shall see, there are powerful reasons to suspect that this finding is related less to development than to the unique secularisation and fertility histories of Catholic and Protestant European countries. Thus a country's level of 'human development' does not seem to affect its degree of religiosity in these developed societies, as predicted by H².

[Table 2 here]

As stated, the most clear association seems to be between a higher proportion of older people (over 65) and *lower* levels of religiosity. At first glance, this may seem puzzling since older people would be expected to be more rather than less religious and hence an older society should be more religious than a younger one. As Europe's population ages, surely - all else being equal - it should grow increasingly religious?

However, the mystery disappears when we see that countries with a higher proportion of older people like Norway or Sweden have very low religiosity as compared with more youthful and religious societies like Ireland or Iceland. This is essentially a cross-sectional effect and *not* a developmental one. We can show this with enhanced precision by comparing the results of fixed-effects and between-effects regressions in these ten countries. The former model controls for differences between countries ('fixed effects') to focus purely on changes over time, while the latter screens out differences between survey waves (between effects) to zero in on variation between countries. The results¹¹ show that the cross-sectional (between effects) model has ten times the predictive power of the historical (fixed effects) model, and the proportion of older people only attains significance in the cross-sectional model. This technique thereby illustrates that the statistical significance of the proportion of older people for religiosity is actually a purely cross-country effect (likely caused by the historical specificities of each country's trajectory of secularisation) and has no predictive power over time. All told, as predicted by H², the relatively high religiosity of developed countries like Ireland,

Iceland or the United States cannot be explained by variations in education or income levels. This casts doubt on the notion that variations in 'human development' explain patterns of religiosity.¹²

H³: Human Development and Religiosity: Comparing National and Individual Levels

Having addressed the multivariate and time-series issues at the aggregate level of the nation, we now are ready to move on to a multilevel approach which considers individuals in their national contexts. Consider table 3. It compares two models of religiosity in our sample of ten developed European countries: one at level 2 (country), taken from the last column of table 2, and the second at level 1 (individual). Notice that the signs of the standardised coefficients are *reversed* for one of three predictors (age) between the two levels of analysis while in the other cases, education and income, the signs match but only the individual-level coefficients are significant. This tallies with hypothesis H³ which predicted dissonance between country and individual-level patterns. Even allowing for differences in the World Bank indicators used for the country analysis and WVS survey questions used for individuals, this result is striking. A higher level of personal education leads - on balance - to lower religiosity for an individual, but if the proportion of secondary-educated population in a country increases, this produces no significant drop in a country's level of religiosity. Finally, older people are significantly more religious than young people across Europe. We would therefore expect that as countries age they become more religious, but the reverse seems to be true: 'older' countries (in terms of age structure) like Sweden and Belgium are less religious than

'younger' ones like Ireland or Iceland. This should alert us to the pitfalls of analyses like Norris and Inglehart's which imply that individual-level relationships can be read off aggregate-level ones, and vice-versa.

[Table 3 here]

H⁴: The Declining Effect of Country Norms on Individual Religiosity as we move from Developing to Developed Countries

In order to explore these findings further, we employ a multilevel logistic regression of the impact of various individual (level 1) and country (level 2) variables from the WVS and World Bank on individual religiosity. Table 4 presents the standardised coefficients and odds ratios for all countries in the period 1999-2000 and breaks these down into developing (GDP per capita <\$5,000) and developed (GDP per capita > \$20,000) countries. One of the most glaring results is the minimal predictive power of individual-level variables in the analysis. For instance, for all countries, a model which only uses country dummies achieves a pseudo-R² of .161: a *better* result than the .157 recorded for a model which adds individual-level variables to the country terms! For developing countries, both models attain the same fit of .225. These results are partly an artefact of listwise deletions caused by sample sizes decreasing substantially when individual-level variables are added. Yet models which drop the country dummy terms leaving just individual-level parameters show pseudo R-squareds no higher than the .02-.06 range. It seems that country characteristics count for a good deal more than

individual-level variation in explaining individual religiosity.

[Table 4 here]

The one brighter spot to note is the performance of the developed country model. Among individuals residing in countries with a GDP in excess of \$20,000, we find that individual characteristics become far more important: they improve the model fit from .157 to .177, and individual-level coefficients are much stronger - especially as compared to the model for countries with a GDP under \$5000 (i.e. developing countries). The direction of the coefficients defies any easy interpretation. Older people and low earners are more religious than youth and those on high incomes, and these 'developmentalist' effects are stronger and more significant in rich countries. Conversely, better-educated people are less religious in developing countries, but not in developed ones. Women are consistently more religious than men, a finding echoed in a good deal of the literature on European religion. (Hayes 1996)

These results make for a difficult fit with developmentalist theory, with age, income and education often pulling in different directions. To further complicate an already messy picture, the coefficients at individual-level may be reflecting relative, rather than absolute effects. Richer individuals may, for example, manifest lower religiosity than the poor within a country, but it does not follow that as countries grow wealthier, their populations become more secular. This is the gist of our hypothesis H³ (of disconnect between levels of analysis) which dovetails with the results of table 3.

H⁵: Aggregate-level indicators of human development will have a greater impact on individual-level religiosity and fertility in developing countries than in developed ones

Human Development and Individual Religiosity

Table 5 plumbs the data still further by replacing the country dummies with level 2 parameters based on World Bank data for income, education, proportion female and total fertility rate. We also add country religiosity to the model, as calculated from the mean of individual-level data. The individual-level results, as expected, are consonant with those from the previous analysis in table 4, based on country dummies. The coefficients for country religiosity show strength across all regions, and this appears to refute H⁴, which predicted that country religiosity would have a weaker association with individual religiosity in developed countries.

[Table 5 here]

Country Religiosity and Individual Religiosity

On the other hand, this seems at odds with figure 2 which showed a link between lower country religiosity and higher religious deviation among individuals. Part of the explanation lies with the nature of the dependent variable since figure 2 is based on the three-item WVS question ('religious'/nonreligious'/atheist') rather than the dichotomous 'religious'/nonreligious' dependent variable used in the models in table 5. When we

replace our logistic regression on 'religious'/'nonreligious' with a linear regression on 'religious'/'nonreligious'/'atheist', we find that the coefficient for country religiosity is stronger in developing than in developed societies. The same is true when we remove country indicators for GDP per capita, education, proportion female and fertility from the model, some of which are strongly correlated with country religiosity. These level-2 predictors are strongly significant in developing countries - and thereby weaken the coefficient for country religiosity somewhat - but play no role in developed societies.

Finally, we need to pay attention to the residuals in these models. We saw that country intercepts predicted .225 of the variation in private religiosity in developing countries but only .157 in developed ones. Evidently there is more individual-level variation among respondents from developed countries that cannot be explained through reference to characteristics of countries such as mean country religiosity.

Country Human Development Indicators and Individual Religiosity

Looking in detail at the country-level human development indicators in table 5, we see that a country's average level of income and education only seems to be important for individual religiosity in developing societies. Comparing developed (>\$20000) and developing (<\$5000) countries, we find that developmentalist effects fall away for developed countries as predicted by our H⁵. Recall that these suggested that human development will have a greater impact on individual-level religiosity and fertility in developing countries than in wealthy ones. Education, meanwhile, behaves in a manner utterly at odds with the Norris-Inglehart paradigm since higher levels of secondary school

enrolment seem to predict greater, not lesser, individual religiosity. A nearly identical result was obtained when substituting tertiary for secondary education levels. Apparently a rising tide of income and education does not float all individual boats toward a secular endpoint. Lower total fertility rates - as with a high proportion of those aged over 65 - predicts lower individual religiosity, but only in developing countries. As with our country-intercepts model, we find that various development indicators pull in opposing directions while individual and contextual variables fail to tell the same story.

Human Development and Individual Fertility

In table 6, we continue our examination of H^5 by regressing the individual fertility of female respondents on a series of variables from the 1999-2000 WVS. The first aspect to note about this model is how more of the 'human development' indicators seem to be speaking with one voice. In developing countries, national GDP per capita, individual income and individual educational attainment all carry significant coefficients in the expected, developmentalist direction (i.e. fertility-reducing). Secondary school enrolments, however, confound even this finding, since higher levels of secondary school enrolments are associated with higher individual-level fertility after other controls are applied. Critically, the country-level variables lose much of their predictive power in the developed country model. Hence, despite stronger individual-level coefficients, the developed country model is less than half as powerful as the developing country model.

[Table 6 here]

H⁶: National Religiosity and Individual Fertility in Developed and Developing Countries

This reinforces many of the findings of our religiosity models, which found that country-level variables are far more potent in developing countries while individual-level estimators are more powerful in developed societies. It likewise reinforces our H⁵ (regarding the fading explanatory force of human development variables as we move from developing to developed countries) since GDP per capita and national education levels lose significance in the developed country model. Our sixth hypothesis, which predicted that national religiosity would be more important for fertility in developing countries, is dramatically confirmed since country religiosity is highly significant in predicting individual fertility in countries with an average GDP under \$5000 and insignificant in countries with a GDP per capita in excess of \$20000.

At the individual level, the role of private religiosity shows no slackening tendency as a predictor of a woman's fertility as countries develop. Indeed, one of the striking findings in this model is that individual religiosity is a significant predictor of higher fertility, and the magnitude of the coefficient remains the same across developed and developing regions. We also find that personal education and income remain significant predictors of lower fertility among women in both developed and developing countries. This stands in clear contrast to religiosity, where these human development variables worked at cross purposes and were often insignificant.

Theoretical Implications

What are some of the wider theoretical implications of this research? The most important finding is that while some national-level human development indicators do, on balance, reduce religiosity and fertility in developing countries, this effect fades in developed countries. In developed countries, a greater proportion of individuals' religious beliefs and fertility behaviour is explained by individual-level characteristics or remains otherwise unexplained by country characteristics. Hence rising levels of national education and income in societies which have progressed beyond a basic stage of development are unlikely to reduce religiosity, whether directly, or indirectly through lowering fertility.

This paper accepts that the secularisation thesis provides a valid explanation for certain changes in modernising societies. Social differentiation does constrict the influence of religion in people's lives and relativise particular faiths; the rise of new sources of scientific authority and improvements in human security help secular institutions usurp many of the functions which religion once provided. However, the demographic advantage accruing to religious people (through higher fertility, a more female-dominated sex ratio, and, for Europe, religious immigration) continues as societies develop. This means that secularism literally has to keep 'running to stand still'. (Kaufmann 2007a)

Our research suggests that higher levels of education are associated with lower fertility, much as Norris and Inglehart would predict. But the same cannot be said for religion, where personal educational attainment shows no signs of predicting lower

religiosity. Indeed, a recent study reports no relationship at all between education and religiosity in Europe. (Halman and Draulans 2006: 279) The picture is somewhat more mixed for rising levels of income. We find that higher income has a pronounced impact in lowering fertility across both developing and developed countries, but seems to predict low religiosity only in developed countries.

The results of our analysis show that somewhat different relationships hold between dependent variables and parameters at the individual and national levels. This pattern can be interpreted two ways. One possibility is that individuals' relative income and education become more or less important as determinants of their private religiosity/fertility as societies develop. A rising tide of aggregate income or education could exacerbate or reduce inequalities of income and education within society, altering their power as predictors of individuals' religiosity and fertility. This would result in the direction or size of income and education coefficients being out of phase with their aggregates at national level. Thus a rising tide of human development may spur secularisation among some while reversing it among others.

Another explanation is that rising absolute income and education simply become less effective in reducing individuals' religiosity and fertility as development proceeds. This seems to be the pattern which emerges from our models in tables 4 through 6 where national-level indicators often lost their predictive power to (specified or unspecified) individual characteristics. The link between human development and religiosity/fertility at the aggregate level proceeds from this individual-level relationship, and tends to weaken as societies develop. Indeed, even if we examine the results obtained by Norris and Inglehart, the human development index becomes an insignificant estimator of

aggregate religiosity within postindustrial societies despite being significant at the $p < .001$ level within the wider global sample. Let us be clear: there is no evidence that human development continues to have an impact on religiosity in developed societies. (Norris & Inglehart 2004: 66, 99) The authors admit as much when they write that the human development process lowers religiosity/fertility 'most dramatically during the first stage of human development'. Nonetheless, the authors' subsequent comment that 'this process does not reverse itself' seems weakly supported by their WVS evidence. (Norris & Inglehart 2004: 54)

This paper would make a far more circumscribed claim about human development and secularisation. On the one hand, human development is important for fertility, and has a dramatic effect on fertility decline in developing countries. This effect weakens, but remains present in developed countries. Lower fertility in the developing world (which is more religious than the developed world) will lead to slower growth in the world's total religious population, in line with developmentalist secularisation theories. On the other hand, human development is less clearly related to religiosity. Higher GDP per capita will modestly reduce religiosity in the developing world, but rising education and generational turnover will make little difference, and country-level dynamics (possibly related to politics, culture and ideology) will be a more important determinant of religious trends. The transition to higher levels of human development will eliminate the secularising impact of rising GDP per capita, and will lead to a greater variety of religious belief. Meanwhile, religious people will continue to have higher fertility in both the developing and developed worlds, leading to general growth in the religious population unless checked by a renewed spirit of secularism (which seems

associated with particular places in certain historical periods).

Figure 4 shows how human development leads to fertility decline within nations, and may - in some cases - prompt religious decline. This is particularly true in cases where religious conformity accompanies political conformity. In Spain, for example, the end of Franco's dictatorship in 1975 led to both political and religious freedom, and many Spaniards opted to leave Catholicism while others became attracted to Protestant sects. This created a greater degree of religious pluralism, but also a net decline in Spanish religiosity.

Fig. 4 Human Development and Religiosity

[Figure 4 here]

Increasing religious pluralism does, however, enhance the significance of secular-religious fertility differentials. To return to the case of Spain, adherence to religion became a stronger predictor of a woman's fertility because the remnant of religious Spaniards were 'true believers' rather than social conformists and hence more pronatalist. (Adsera 2004) Growing secularism is also associated with lower national fertility, which tends to prompt a demand for immigrants (in Spain these are mainly Latin American and North African) who tend to be more religious than the host population. In the long run, the combined effect of these demographic forces is to stabilise or revive the religious proportion of the population. This model thereby combines insights from both the secularization and religious markets approaches in that deregulation of the religious

economy may lead to initial secularisation as some choose to be nonreligious, but can ultimately feed religious revival through secular-religious differential population growth.¹³

The global, macro model reflects what is happening at the national level. Global fertility decline affects poorer, more religious countries more dramatically. Fertility rates drop, lowering the growth rate in the proportion of the world's population residing in strongly religious countries - which Norris and Inglehart correctly observe. (Norris and Inglehart 2004: 5, 22-24) Note, however, that global religious decline depends on secularisation, and there is as yet no evidence for this outside the West. Nonetheless, in previous eras, secularisation clearly did occur. The English Church census and English Methodist Church records, for example, suggest that weekly attendance may have peaked in the 1850-70 period, falling steadily ever since. Declines in both religious belief and attendance in the twentieth century in Europe are also clear from survey data. (Bruce 2002) This said, we should not commit the fallacy of over-generalising such results into a 'myth of past piety' applicable to all eras and places. (Stark and Finke 2000: 63-66) Secularisation seems to wax at certain times and places, and wane in others. Currently, for instance, there is no evidence (from cohort trends) that secularisation is occurring outside the West, though it is proceeding swiftly in much of Catholic Western Europe.

The combination of these forces points in an indeterminate direction. The world may become less religious, more religious or remain as it is. In the near-term, global religiosity will continue to grow (albeit at a decreasing rate due to the demographic transition in the third world), but we cannot predict where and when a new secular social movement like Soviet socialism or Italian nationalism will arise. Unit effects related to

the particular history and politics of each country will almost certainly be an important determinant of cross-national variation in religious behaviour. In effect, human development in the developing world could lead in a West European or East Asian direction (low religiosity) or take an American route to modernity (high religiosity). To read a multilevel, multivariate, time-series relationship into unilevel, bivariate, cross-national patterns, as Norris and Inglehart do, is to engage in a statistically dubious exercise, as illustrated by our earlier analyses in tables 1 through 3.

This is not to say that we should throw the baby out with the bathwater. At the macro level, the demographic strand of Norris and Inglehart's theory holds up well under both multilevel and multivariate analysis. Human development *does* lower individual fertility, especially during the early stage of a country's development, and this reduces the growth of the global religious population. On the other hand, the macro-level links between human development and religious decline remain unsupported. As the authors admit, 'we have very little time-series data from low-income societies, and thus no direct measure of whether secularization or a resurgence of religiosity is occurring in them'. In the Muslim world, for example, they remark that 'younger generations in Islamic societies remain as traditional as their parents and grandparents'. (Norris & Inglehart 2004: 149, 240) This paper would thus propose to revise the Norris-Inglehart paradigm along the lines shown in figure 5.

[Figure 5 here]

Earlier we remarked that different developing countries could modernise along

either a religious (American) or secular (European) pathway. Nevertheless, neither American nor European religious trajectories can be taken for granted. We know that there has been a growth in the proportion of Americans without religious affiliation in the 1990s. (Hout 2002) Likewise, it is worth outlining that an alternative scenario of religious growth is possible for western Europe. Specifically, when we examine EVS and European Social Survey (ESS) data from 1981-2004 on those nations which underwent secularisation earliest (France and five Protestant European nations), the evidence suggests that secularisation has effectively ceased among those born after 1945.¹⁴ Figure 6 shows that weekly attendance has flattened out in these 'cutting edge' secular countries, albeit at the very low level of 5 percent. Meanwhile, figure 7 indicates that while religious belief drops across generations in these cases, it rises with age, and the two effects cancel each other out, or point to a slight increase in religious sentiment. Notice that if this represents a new 'post-secular' equilibrium, close to half the population 'believe', though few belong.

[Figure 6 here]

Source: Kaufmann 2007a

* Data for 2000 uses Norway responses from 1997

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

[Figure 7 here]

Source: Kaufmann 2007a

* No data for Norway in 2000;

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

Finally, it is worth returning to our earlier point that more favourable demography means that secularism literally must 'run to stand still'. In these six countries, the religious

population maintains a 10-15 percent fertility advantage, and a more favourable (i.e. female) sex ratio among those in the 15-44 childbearing age range. A recent attempt to project the religious proportion of the population of these countries is reproduced below in figure 8, and suggests that if religious apostasy continues to remain flat in the face of favourable religious demography, the secular proportion of the population of the most secular western European societies will begin to decline by the mid-twenty-first century. The delay in reaching the desecularisation point is strictly related to the demographic momentum of previous generations of secularisation. Furthermore, this projection excludes the highly significant impact of religious immigration! Overall, it seriously questions the notion that the secularisation process 'does not reverse itself'. (Norris and Inglehart 2004: 54) This does not mean that religious revival is inevitable either, but merely casts doubt upon the teleological picture sketched by some exponents of the secularisation thesis.

[Figure 8 here]

Source: Kaufmann 2007b

Conclusions

This paper assesses the claims of developmentalist secularisation theory using data from the WVS, EVS, ESS and World Bank. Though higher income and education, two key human development indicators specified by Norris and Inglehart (2004), appear to be linked to lower religiosity in national-level bivariate correlations, these relationships

break down under even the most basic multivariate analyses. Moreover, a multilevel model of the relationship between human development and religiosity suggests that raising per capita income levels will have no effect on religiosity beyond an early stage of development. Indeed, rising national education levels seem to be associated with *higher* religiosity. Within developed countries, high earners are less religious than low earners, but in view of the insignificant national-level effects, this probably reflects relative rather than absolute income dynamics. Meanwhile, higher education levels play no role in lowering religiosity in rich countries.

For Norris-Inglehart, high fertility in developing countries is a key driver of global religiosity. This paper endorses this part of their analysis. Human development is clearly linked to lower individual fertility, but, as with religiosity, this effect falls away dramatically in developed societies. Overall, we find that human development generally exerts a weaker effect on religiosity and fertility in developed countries than in developing ones. Moreover, individuals in rich countries tend to deviate more widely from national religious norms than their counterparts in developing countries. In developed societies, the specified and unspecified characteristics of *individuals* come to play a greater role than national features in explaining variations in private religious belief. One explanation is that as societies develop, individuals and their subcultures become more detached from national patterns and traditions of religious behaviour. Traditional religiosity comes to be replaced by self-conscious religious identity in the same way that unreflexive traditional ethnic cultures were superseded by self-conscious ethnic or nationalist movements. One can conceptualise this as a form of deregulation of the religious marketplace, which can lead to secularisation as religious conformity

declines and some choose not to classify themselves as religious. However, the ensuing secular-religious fertility differentials and, possibly, religious immigration can reverse these trends. In this sense, this paper combines elements of the religious markets, secularisation and religious demography paradigms.

These findings cast doubt on the role of higher education and income levels in promoting secularisation - especially after the earliest stages of development. However, this research is compatible with Steve Bruce's theory of secularisation. It accepts that differentiation can lead to mainstream secularisation while religious subcultures survive by self-consciously orienting themselves against the mainstream. The only issue remains the relative size of these religious subcultures. While theorists of secularisation imply that such subcultures will be relegated to the fringes of society, our research posits that religious individuals and subcultures may well expand because of a reduced *rate* of secularisation, religious fertility advantage over the nonreligious, and religious immigration. Eventually, it is conceivable that the religious may re-emerge as the mainstream. An examination of those northwestern European societies which have secularised earliest shows that, based on current demographic and religious indicators, we are likely to see a reversal of secularising trends in the twenty-first century. This is the case even in the highly unlikely event that immigration to these countries - which tends to be disproportionately religious - ceases.

We might think of the problem as analogous to the relationship between immigration ('religious demography') and assimilation ('apostasy') into a secular population. Assimilation may conquer demography, but the outcome is never predetermined. If we examine the history of human migration and ethnicity, even in a

restricted setting like the British Isles, there are cases where demography has culturally triumphed (i.e. Anglo-Saxons displacing Britons as the dominant ethnic group from the sixth century) and cases where assimilation has emerged the cultural victor (i.e. Normans in England and Ireland becoming assimilated to their host cultures after 1066). The religious future of mankind will be determined by the balance between these competing processes rather than purely by assimilation to secularism.

This paper maintains that secularism currently has an inbuilt demographic disadvantage which transcends developing and developed countries and can only be overcome through mass assimilation to a dynamic secular message. The evidence presented here shows evidence of 'post-secular' exhaustion in northwestern Europe. It indicates that the worldwide fate of secularism has little to do with material advancement. Instead, secularism's future may be determined by its ability to return to an earlier dynamism, with origins in Renaissance Italy's resistance to papal control and an early efflorescence during the Enlightenment in the eighteenth century. Secularism subsequently gained popular traction in alliance with liberal, socialist and nationalist movements in the nineteenth and twentieth centuries which attempted to wrest state power from conservative religious opponents. (Baycroft and Hewitson 2006) In the absence of such inspiration, secularism could well lose momentum, in which case today's developing countries may become even more likely to avail themselves of a more religious, 'American' route to modernity.

References

- Adsera, A. 2004. 'Marital Fertility and Religion: Recent Changes in Spain', Bonn: Institute for the Study of Labor (IZA) Discussion Paper 1399
- Ali, K. 1978. *Agricultural Modernization and Human Fertility in Developing Countries* (Nashville, TN; Vanderbilt University, Unpublished PhD Dissertation)
- Baycroft, T. and M. Hewitson. 2006. *What is a Nation?: Europe: 1789-1914* (Oxford: Oxford University Press)
- Bell, Daniel. 1996 [1976]. *The Cultural Contradictions of Capitalism* (New York, NY: Harper Collins)
- Bellah, Robert N. 1996 (1985) *Habits of the Heart*, 2nd ed. (London: University of California Press)
- Berghammer, C., D. Philipov and T. Sobotka, 'Religiosity and demographic events: a comparative study of European countries', paper delivered at European Population Conference (EPC), Liverpool, 2006
- Berman, E., 2000. 'Sect, subsidy, and sacrifice: an economist's view of ultra-orthodox Jews', *Quarterly Journal of Economics*, 115 (3), 905-953.
- Berman, E., L. Iannaccone and G. Ragusa. 2005. 'From Empty Pews to Empty Cradles: Fertility Decline Among European Catholics,' *National Bureau of Economic Research* working paper <<http://papers.nber.org/papers.html>>
- Bruce, Steve. 1998. *Comparative Protestant Politics* (Oxford: Oxford University Press)
- Bruce, Steve (ed.). 2002. *God is Dead* (Oxford: Blackwell)
- Connor, Walker, *Ethnonationalism: the quest for understanding* (Princeton, N.J.: Princeton University Press 1994)

- Davie, Grace. 1994. *Religion in Britain Since 1945: Believing Without Belonging* (Oxford: Blackwell)
- Davie, Grace. 2002. *Europe: the exceptional case : parameters of faith in the modern world* (London : Darton Longman & Todd)
- Durkheim, Emile. [1893] 1984. *The Division of Labour in Society* (Houndsmills & London: Macmillan)
- Durkheim, Emile. 1995. *The Elementary Forms of Religious Life* (New York, London: Free Press)
- Fargues, P. 2000. 'Protracted National Conflict and Fertility Change: Palestinians and Israelis in the twentieth century,' *Population and Development Review*, Vol.26, No.3, pp.441-482
- Fargues, P. 2001. 'Demographic Islamization: Non-Muslims in Muslim Countries,' *SAIS Review*, vol. XXI, no. 2, pp. 103-16
- Frejka, T. and Westoff, C. F. 2006. 'Religion, religiousness and fertility in the U.S. and in Europe,' Rostock, MPDR Working Paper WP-2006-013.
- Gerth, H.H. and C. Wright Mills. 1946. *Max Weber: Essays in Sociology* (New York: Oxford University Press)
- Giddens, Anthony. 1991. *Modernity and Self-Identity* (Cambridge: Polity Press)
- Goujon, A., V. Skirbekk, K. Fliegenschnee and P. Strzelecki. 2006. 'New Times, Old Beliefs: Projecting the Future Size of Religions in Austria', VID Working Papers 01/2006 (Vienna: Vienna Institute of Demography)
- <http://www.oeaw.ac.at/vid/publications/p_vid-workingpapers.shtml>

- Greeley, A. 2002. *Religion in Europe at the End of the Second Millennium: A Sociological Profile* (New Brunswick, NJ: Transaction)
- Halman, Loek and Veerle Draulans. 2006. 'How secular is Europe?', *The British Journal of Sociology*, Vol.57, Iss. 2, pp. 263-88
- Hayes, B. 1996. 'Gender Differences in Religious Mobility in Britain', *British Journal of Sociology*, Vol. 47, No. 4, pp. 643-56
- Hout, M. and C. Fischer. 2002. 'Why More Americans Have No Religious Preference,' *American Sociological Review*, Vol. 67, No. 2, pp. 165-90
- Hout, M., A. Greeley and M. Wilde. 2001. 'The Demographic Imperative in Religious Change in the United States', *American Journal of Sociology*, Vol. 107, No. 2, pp. 468–500
- Hutchinson, John. 1987. *The Dynamics of Cultural Nationalism* (London: Allen & Unwin)
- Kaufmann, Eric. 2007a. 'The End of Secularisation in Europe?: A Demographic Perspective', working paper, available at: <<http://www.sneps.net/RD/religdem.html>>
- Kaufmann, Eric. 2007b. 'A Dying Creed?: The demographic contradictions of liberal capitalism', ESRC UPTAP briefing paper, March. Also available at: <<http://www.uptap.net>>
- Kraybill, D., Bowman, C., 2001. *On the Backroad to Heaven: Old Order Hutterites, Mennonites, Amish, and Brethren* (Baltimore, MD: The Johns Hopkins University Press)
- Lehrer, Evelyn L. 1996. 'Religion as a determinant of marital fertility,' *Journal of Population Economics*, vol. 9(2), pp. 173-96.
- Lesthaeghe, Ron & L. Neidert. 2005. 'The "Second Demographic Transition" in the

US: Spatial Patterns and Correlates', ID working paper

<<http://www.vub.ac.be/SOCO/Lesthaeghe.htm>>

Lutz, Wolfgang, Warren C. Sanderson, and Sergei Scherbov. 2004. *The End of World Population Growth in the 21st Century: New Challenges for Human Capital Formation and Sustainable Development* (London: Earthscan)

Marx, Karl. 1973. *The Revolutions of 1848* (London: Penguin)

McCleary, R. and R. Barro. 2006. 'Religion and Political Economy in an International Panel', *Journal for the Scientific Study of Religion*, Vol. 45, No. 2, pp. 149–75

Norris, Pippa and Ronald Inglehart. 2004. *Sacred and Secular: Religion and Politics Worldwide* (Cambridge: Cambridge University Press)

Novak, Michael 1972 *The Rise of the Unmeltable Ethnics: Politics and Culture in the Seventies* (New York, NY: Macmillan)

Roof, Wade Clark and William McKinney. 1987. *American Mainline Religion: Its Changing Shape and Future* (New Brunswick: Rutgers University Press)

Sherkat, Darren E. 2001. 'Tracking the Restructuring of American Religion: Religious Affiliation and Patterns of Religious Mobility, 1973-1998', *Social Forces*, Vol. 79, No. 4, pp. 1459-93

Smith, M. 1995. 'Time Serial Designs and Cross-Sectional Designs: Uncovering the Structural Logic of Pooled Analyses', paper presented at the *American Political Science Association*

Stark, R. and Roger Finke. 2000. *Acts of Faith: Explaining the Human Side of Religion* (Berkeley; University of California Press)

Stark, Rodney and Laurence R. Iannaccone. 1994. 'A Supply-Side Reinterpretation of the "Secularisation" of Europe,' *Journal for the Scientific Study of Religion*, Vol. 33, No. 3, pp. 230-52

Stark, Rodney. 1996. *The Rise of Christianity : a Sociologist Reconsiders History* (Princeton, N.J : Princeton University Press)

Surkyn, J. and R. Lesthaeghe, 2004, 'Value Orientations and the Second Demographic Transition (STD) in Northern, Western and Southern Europe: An Update,' *Demographic Research*, Special Collection 3, Article 3 <www.demographic-research.org>

van de Kaa, D. 1987. 'Europe's Second Demographic Transition', *Population Bulletin*, 42:1, pp. 1-57.

Voas, D. 2003. 'Intermarriage and the Demography of Secularisation', *British Journal of Sociology* 54(1): 83-108

Voas, D. and A. Crockett. 2005. 'Religion in Britain: Neither believing nor belonging', *Sociology* 39(1): 11-28

Wattenberg, Ben. 2004. *Fewer: How the New Demography of Depopulation will Shape our Future* (Chicago: Ivan R. Dee)

Westoff, Charles F. and E. Jones. 1979. 'The End of "Catholic" Fertility,' *Demography* 16(2), pp. 209-217.

Wickham, Carrie R. 2002. *Mobilizing Islam: Religion, Activism, and Political Change in Egypt* (New York: Columbia University Press)

¹ This paper has been made possible by a grant from the Economic and Social Research Council's 'Understanding Population Trends and Processes' (UPTAP) Programme.

² This relationship was not, however, tested through multivariate analysis.

³ These trends appear to be related to political developments (i.e. the association between religiosity and the Republican party), and a majority of the nonreligious hold conventional religious ideas such as believing in God. (Hout and Fischer 2002)

⁴ The difference is especially marked in the progression from the second to the third child. (Adsera 2004)

⁵ 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)

⁶ Perhaps since wealth used to be linked to both higher fertility and higher literacy.

⁷ Though this link may not be present in strongly socialist or Confucian less developed countries. For more on the connection between reflexivity and tradition, see Giddens 1991.

⁸ This graph incorporates repeated measures data for ten West European countries for 1981, 1990 and 1999-2000.

⁹ The WVS question is 'Are you a religious person?', with 1 as 'religious', 2 as 'not religious' and 3 as 'atheist'. Note that in subsequent analysis, we collapse categories 2 and 3 into the 'nonreligious' category, assigned a value of zero. Geographic regions are mutually exclusive, though 'developed' and 'developing' countries encompass all regions. 'Anglo-Saxon' refers to Canada, the US, New Zealand and Australia.

¹⁰ These countries are Belgium, France, Denmark, Sweden, Spain, Iceland, Ireland, Britain, Netherlands, and Norway (surveyed 1997 but not 2000).

¹¹ Tables available upon request.

¹² It is of course possible that the third major leg in the human development stool, income inequality (high in the US and Ireland, low in Iceland), could account for this variation, but we have no way of testing this proposition given the lack of pre-2000 Gini coefficient data.

¹³ I am indebted to an anonymous IJRR referee for this insight.

¹⁴ These cases were also selected because they are the only ones surveyed across all EVS waves and the 2004 ESS.