Religious Disbelief and Intelligence: The Failure of a Contemporary Attempt to Correlate National Mean IQs and Rates of Atheism

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Abstract

In 2008 Richard Lynn, with the collaboration of Helmuth Nyborg and John Harvey, argued that one can predict the extent to which rates of disbelief in God will occur in 137 countries by considering the psychometric intelligence of their populations. They relied heavily on international statistics of atheism compiled by Phil Zuckerman and correlated these with data which Lynn had compiled about national mean IQ levels. It is argued in the present response to that study that it is severely flawed by a failure to appreciate the widely varying notions of divinity and what belief entails in diverse cultures, selective use of statistical data, downplaying many nations that do not fit the model, and untenable explanations for countries like the United States that squarely contradict the hypothesis. There is no firm evidence of a significant global correlation between national IQ levels and rates of disbelief in God.

Can one predict the proportion of atheists in a national population merely by considering its mean IQ? That has been contended by Richard Lynn, Helmuth Nyborg, and John Harvey in an article confidently titled "Average Intelligence Predicts Atheism Rates across 137 Nations." They hypothesise a notable correlation between non-belief in God and high psychometric intelligence and, consequently, that there is also a "negative relationship between intelligence and religious belief between nations." However, their argument fails to demonstrate satisfactorily either point. Indeed, as far as its international comparative dimensions are concerned, it actually underscores the virtual impossibility of

predicting national atheism rates merely by reference to mean IQ scores. The present response will examine several crucial flaws in their argument.

Written in the wake of, and clearly inspired in part by, the polemical bestseller *The God Delusion* by the Oxford biologist and celebrity atheist Richard Dawkins (2006) which received a great deal of attention in the British media, the article by Lynn *et al.* began to stimulate debate months before it was published. In an article about it in the *Times Higher Education Supplement*, Lynn responded to a journalist's query about what underlay varying rates of belief with a monocausal answer: "I believe it is simply a matter of the IQ." He explained that in Western countries religious belief had declined during the twentieth century while the intelligence levels of their populations had risen. Lynn did not refer to any other variables that might influence rates of belief and disbelief.¹

Intelligence and Religious Belief within Nations

Lynn *et al.* explicitly link their study to the Dawkins phenomenon. "Dawkins' (2006) recent book *The God Delusion* suggests that it is not intelligent to believe in the existence of God," they state in their opening sentence. "In this paper we examine (1) the evidence for this contention, i.e. for whether there is a negative relationship between intelligence and religious belief; (2) whether the negative relationship between intelligence and religious belief is a difference in psychometric g; and (3) whether there is negative relationship between intelligence and religious belief between nations" (Lynn *et al.* 2009: 11).

Lynn et al. open their argument with a discussion of "intelligence and religious belief within nations," in which they adduce evidence from four sets of data. The first of these they label "negative correlations between intelligence and religious belief." Under this rubric they refer to two pages in an article published in 2002 in the popular Mensa Magazine where P. Bell had found negative correlations between high intelligence and religious belief in a majority of studies considered, though positive correlations were also found. Lynn et al. provide no further details about such fundamental matters as where or when the investigations had been conducted, what kind of people had been included, or what they had been asked. They supplement it with a Dutch study published in 1964 indicating that "agnostics scored 4 IQ points higher than believers" and a much more recent study done by Kanazawa that showed that among young adults in the United States there was a negative correlation between IQ and religious belief. No other countries are cited in this section of the article.

Lynn *et al.* then include a paragraph about "lower percentages holding religious beliefs among intelligence elites compared with the general population." They include a small number of "elites" in two countries, namely the United States of America and the United Kingdom. No findings from other countries

are cited. The data include a few surveys taken between the 1920s and the 1990s and indicate that, among the intellectuals polled, those who professed a belief in God varied greatly but were in any case below the national averages of the two countries in question. Little information is provided about the kinds of people surveyed, apart from identifying many of them as "scientists," "Fellows of the Royal Society," and "members of the American National Academy of Sciences." Furthermore, no information is given about the precise nature of the questions asked. Conspicuously absent is any mention of what one might assume would be the most obvious group within the cognitive elites to survey about their belief in God, namely specialists in theology, religious studies, and the philosophy of religion. The omission of specialists who, presumably, have greater familiarity with the concepts and terminology under consideration than do their counterparts in such secular subjects as physics and chemistry is consistent with the general neglect of the former in many such studies. Yet it is precisely such specialists who are in a position to sort out the welter of concepts of God-theistic, deistic, pantheistic, panentheistic, animistic, monotheistic, polytheistic, transcendent, immanent, tribal, ancestral, and so on-that bedevil attempts to compare and quantify in a homogenized way beliefs in different cultures and religions.

Lynn *et al.* proceed to look briefly at the "decline of religious belief with age among children and adolescents." Again, the data presented derives solely the United Kingdom (in the 1980s) and the United States (in the 1940s). The data suggest notable declines in both religious belief and favourable attitudes towards religion between the ages of five and sixteen among the British subjects. On the American side, during the Second World War fully 94 per cent of children aged twelve years affirmed the statement "I believe there is a God," while 78 per cent of those aged eighteen years did so. Conspicuously absent from the single sentence in which Lynn *et al.* cite this study is any explanation of the recovery of religious belief after the indicated ages; in the previous paragraph they state that a Gallup poll taken in the United States in 1948 indicated that 95.5 per cent of the Americans believed in the existence of God (Lynn *et al.* 2009: 12).

Finally, in the fourth stage of their argument concerning the relationship between religious belief and intelligence within nations, Lynn *et al.* consider the "decline of religious belief during the course of the twentieth century as the intelligence of the population has increased." Lynn had previously argued in 2008 that genotypic intelligence had *declined* globally during the course of the twentieth century (Lynn 2008), but now he and his co-authors accept that "the increase in intelligence is a well-documented phenomenon . . . known as the Flynn effect." They differentiate here between phenotypic intelligence and the genotypic decline Lynn had discussed in earlier publications, although in the article at hand no mention of that distinction is made. Instead, in support

of their sweeping generalisation linking a decline of religious belief and a concomitant rise in the intelligence of populations, Lynn *et al.* look at only two countries in this section and consider both belief and conduct in them. They declare, "the decline of religious belief has been shown by statistics for church attendance and for belief in God recorded in opinion polls." In a "for instance," Lynn *et al.* make some brief observations about a country which has one of the highest rates of disbelief in the world, namely England, where Gallup polls had indicated a decline in belief in God from 72 per cent of the population in 1950 to 58.5 per cent early in the twenty-first century. Most of the data given for England are not rates of belief, but of attendance at church services and Sunday schools, and by using these indicators they can also show a decline (Lynn *et al.* 2009: 12-13).

Lynn et al. then turn across the Atlantic and assert obliquely that "there has also been some decline of religious belief during the course of the last century in the United States," suggesting that at least to a degree trends there could be compared with those they demonstrate in England. Presumably because the religious beliefs of the American public were not gauged early in the twentieth century (or before), and because they stated that church attendance was an indicator of belief in God, in their consideration of the purported decline of theism in the United States of America Lynn et al. rely almost exclusively on students' beliefs and involvement in religious institutions for the first several decades of the twentieth century. In fact, data on historical trends in Americans' religious beliefs and membership in churches since the 1930s are readily available where one would most reasonably expect to find them, namely in standard histories of Christianity (or religion in general) in the United States. They indicate clearly that during the course of the twentieth century, which Lynn et al. emphasize was a time when intelligence increased, the percentage of the American population that belonged to churches rose significantly. As Philip L. Barlow and the eminent historian of American religion Professor Edwin Scott Gaustad have demonstrated in detail, fewer than thirty per cent of the people in the United States were church members in 1865, and not until the first decade of the twentieth century did this reach forty per cent. The proportion then climbed gradually, despite a dip during the economically depressed 1930s, and in the 1940s surpassed fifty per cent. Church membership crested in the 1960s before declining slightly, but by the 1990s it had recovered and was still over sixty per cent (Gaustad and Barlow 2000: 349). Another noted historian of American religious life, Professor Jon Butler, has summed up the matter by demonstrating that during many years of modernization in the nineteenth and twentieth centuries, religious practice tended to rise, not fall, in the United States (Butler 1990). Turning from official adherence to active participation in religious life, writing in the 1990s Professor Mark A. Noll underscored both the general consistency of and a moderate increase in "total church attendance" (i.e. that of all Christian denominations) over several decades in the twentieth century, from 30 per cent of the population in 1940 to 43 per cent in 1989 (Noll 1992: 476). Writing a decade later, he cited data recently compiled by Gallup and other researchers and concluded in a review of the twentieth century, "At the end of the 1990s, survey researchers found that perhaps as many as 40-42 percent of Americans attended religious services once a week, two-thirds claim membership in churches or synagogues, 96-98 percent profess belief in God, and a very large proportion tell the researchers that they hold to traditional Christian convictions" (Noll 2002: 277-278). Other writers, to be sure, have cited slightly lower figures for these categories.

Lynn *et al.* ignore all this evidence which undermines their hypothesis. Instead, in support of their generalisation they adduce evidence that is skimpy, inconsistent, chronologically truncated, and hardly representative of the American population in general. It consists chiefly of dated longitudinal studies of the beliefs and practices of students at Bryn Mawr College between 1894 and 1968, the University of Michigan between 1896 and 1968, and Harvard University, Radcliffe College, Williams College, and what is mistakenly called "Los Angeles City College" between 1946 and 1966. Another study cited briefly was published in 1969 and indicated that college students' belief in God had waned between 1948 and 1968. Looking at the general population of the United States, Lynn *et al.* cite Argyle's and Zuckerman's figures which indicate, respectively, that 95.5 per cent believed in God in 1948 and 89.5 per cent 56 years later (Lynn *et al.* 2009: 13).

Zuckerman's Attempt to Calculate International Rates of Nonbelief

Lynn et al. build the internationally comparative segment of their article largely on the foundation of a contribution by an American sociologist, Phil Zuckerman, to *The Cambridge Companion to Atheism* in 2007. Zuckerman in his "Atheism: Contemporary Numbers and Patterns" evinced little comprehension of the magnitude of the difficulty of gauging religious belief on a global scale. To be sure, he was aware that measuring what he called the "percentage of a given society" that "believes in God" is "fraught with methodological hurdles," and he stated a few of them, such as "low response rates" and a presumed unwillingness of many respondents in totalitarian countries to answer sincerely whether they so believe if their personal view runs counter to that of their government. Zuckerman was also aware that "terminology" posed a "methodological problem" and that accordingly "signifiers such as 'religious' or 'God' have different meanings in different cultures," but his article does not indicate that he understood that

this renders meaningful comparisons of belief in God virtually impossible when juxtaposing cultures in which, for example, a notion of theism (as in the Abrahamic religions) has been normative and cultures in which this is not the case, such as those where Theraveda Buddhism has prevailed. It becomes a comparison of apples and oranges. Other crucial methodological difficulties are unaddressed. For example, in many countries religious belief has been negatively correlated with educational attainment. Zuckerman's statistics do not take that factor into account. Nor are we told specifically what respondents were asked. It is one thing to ask people categorically whether they are atheists; it is another to ask whether they are "inclined" to think of themselves as such. Finally, it must be borne in mind that in some faith traditions unquestioning belief to fundamental dogmas is required, while in others some measure of doubt is condoned or even encouraged. Nevertheless, Zuckerman boldly insisted that "we *can* make reliable estimates" of rates of unbelief (Zuckerman 2007: 47).

The data compiled by Zuckerman from various surveys suggest otherwiseunless one interprets his words "reliable" and "estimates" so generously as to leave those terms virtually bereft of statistical meaning. In many of these studies the estimates vary wildly. In Sweden, for example, they are between 46 and 85 per cent, while in Denmark the gap is just as wide-43 to 80 per cent. In Finland, the high figure Zuckerman quoted is more than twice as great as the lower one-60 and 28 per cent, and in Russia the estimates fluctuate between 24 and 48 per cent. In Israel, one survey indicated that 37 per cent were unbelieversapproximately two and a half times as great as another study that indicated only 15 per cent. Proportionally, the same broad discrepancy marked the estimates for Italy-6 to 15 per cent. And even for his own country, the United States of America, where a large number of polls have been taken for several decades to estimate belief and unbelief, Zuckerman gave tabular estimates varying from approximately 3 to 9 per cent (Zuckerman 2007: 56-57). But not even that latitude of estimate is the greatest in the Americas. Looking south of the border, Zuckerman stated that only 2 per cent-or perhaps three and a half times that figure-do not believe in God. Other kinds of estimates are also problematic. In South Korea, for example, 52 per cent did "not believe in God" in 2003, but a year later a survey indicated that the figure was only 30 per cent (Zuckerman 2007: 53-55). Not even the explosive growth of the churches in South Korea can account for that kind of statistical development in one year.

Zuckerman acknowledged the difficulty of explaining with any precision "the staggering differences in rates of nonbelief between nations." He believed, however, that a "leading theory" was advanced by Norris and Inglehart (2004), who contended, as paraphrased by Zuckerman, that in "societies characterized by plentiful food distribution, excellent public health care, and widely accessible housing, religiosity wanes" while "in societies where food and

shelter are scarce and life is generally less secure, religious belief is strong." Zuckerman judged that Norris and Inglehart "convincingly argue" that "the levels of societal and individual security in any society seem to provide the most persuasive and parsimonious explanation." Zuckerman granted that there are "anomalies" and cited Vietnam, where nonbelievers in God comprise 81 per cent of the population and Ireland, where they are 4 or 5 per cent. "But aside from these two exceptions, the correlation between high rates of individual and societal security/well-being and high rates of nonbelief in God remains strong" (Zuckerman 2007: 55, 57).

At least as refracted through the prism of Zuckerman's interpretation, this is untenable and flies in the face of the data he presented. By no means is the Republic of Ireland the sole anomaly to the generalisation that high levels of security and well-being go hand-in-hand with elevated rates of atheism. One need only to consider the low or relatively low percentages of nonbelievers in the United States of America, Uruguay, Singapore, Switzerland, Italy, and other countries to find numerous instances of contradictory evidence.

Regional comparisons also undermine this "leading theory." According to the figures Zuckerman adduced, disbelief in Slovakia may be as low as 10 per cent (or as high as 28 per cent), while in the Czech Republic it is ostensibly 54 to 61 per cent–among the highest figures in the world. The two countries are not far apart in terms of prosperity; annual family income in Slovakia (which is more rural and has a lower cost of living) is more than 80 per cent that of the Czech Republic. Furthermore, in terms of personal security, as gauged by such indices as homicide rates, they are also comparable. Nevertheless, the rate of unbelief as reported by Zuckerman is twice as high–or perhaps approximately five times as high–among the Czechs. Turning to Southeast Asia, where the religious landscape is obviously much different, one must wonder why Cambodia, despite its much lower level of economic prosperity and security than Thailand, should have a far higher level of reported unbelief, if the Norris-Inglehart theory is accepted and the only "anomalies" are Ireland and Vietnam.

Zuckerman could not ignore the high level of religious belief in the United States. To explain it, he quoted approvingly, though in severely abridged form, the explanation offered by Norris and Inglehart: "The United States . . . is one of the most unequal postindustrial societies . . . relatively high levels of economic insecurity are experienced by many sectors of U.S. society. . . . Many American families . . . face risks of unemployment, the dangers of sudden ill health without adequate medical insurance, vulnerability to becoming a victim of crime. . ." (Zuckerman 2007: 62). But this explanation cannot be regarded as adequate. It offers a homogenised impression of American society in which the degree of insecurity actually varies greatly according to the factors cited. It is true, of course, that unemployment is always a threat lurking in the shadows,

but in fact in recent decades the unemployment rate in the United States has been significantly lower than in many European countries with higher rates of disbelief. Furthermore, while it is a lamentable fact that more than 40,000,000 citizens of the United States lack adequate private medical insurance, the overwhelming majority of their compatriots possess it and have convenient access to medical care. Finally, although crime rates in much of the United States are high, they vary greatly from region to region, city to city, and ethnic group to ethnic group-as do, it should be emphasised, indicators of religious belief and activity. In order to correlate religious belief with insecurity stemming from vulnerability to crime, one would at least have to examine in detail geographic and ethnic patterns of belief and crime. To illustrate the point, one wonders, for example, why as of 2010 there was a considerably higher than the national average rate of religious belief in economically prosperous states with low rates of homicide and other violent crime like North Dakota and Utah, while in New York City and Los Angeles, where, despite some decline in recent years, the level of violent crime remains relatively high and large numbers of people are economically insecure, secularisation is more pronounced. Clearly, other factors must be taken into account. Furthermore, when one compares the American rate of religious belief with that of the United Kingdom, the Norris-Inglehart appeal to insecurity and socioeconomic inequality again comes up short. Most of the factors they put forth in their portrayal of American society as insecure and unequal also apply to the still quite stratified United Kingdom. In that country as well there has been widespread public concern about high rates of crime in recent decades, when rates of unemployment have fluctuated significantly. Although considerable numbers of Britons now have private medical insurance, most have to resort to the National Health Service, about which complains, especially with regard to lengthy delays in receiving treatment, are commonplace.

In any case, the simplistic Norris-Inglehart explanation did not satisfy Zuckerman entirely. Despite his praise of it, he apparently believed a number of factors are at work to influence belief and unbelief. Rejecting as simplistic theories that belief in the divine are programmed in the human brain, Zuckerman suggested that with regard to the variance in rates from one country to another, "the differences are better explained by taking into account historical, cultural, economic, political, and sociological factors . . ." (Zuckerman 2007: 61).

Misuses of Zuckerman's Compiled Data

Zuckerman's data are problematic, and Lynn *et al.* compound the problems by misusing some of them while apparently not paying adequate attention to what the figures represent. They acknowledge their reliance on Zuckerman and assert

that he "gives data for 137 countries representing just over 95 per cent of the world's population." In fact, Zuckerman gave data for more than 140 countries. Lynn et al. also state that Zuckerman's data were compiled from surveys "mostly carried out in 2004, although in a few countries the surveys were a year or two earlier." That American sociologist, they assure readers, tapped figures from numerous surveys "in order to provide results that were as up-to-date as possible" (Lynn et al. 2009: 13). In fact, Zuckerman marshaled data not only from the years 2002-2004, but also going back to the early 1990s, as his citations and bibliography make clear. He relied on a study by Norris and Inglehart, Sacred and Secular: Religion and Politics Worldwide, which was published in 2004, but, as those two authors made clear, was based largely on the findings of the World Values Survey and European Values Survey, which were conducted between 1981 and 2001 (Norris & Inglehart 2004: xiii-xiv, 38).

Lynn et al. paraphrase part of Zuckerman's statement that there are "problems with this data set," downplaying his opening admission with its curiously mixed metaphor, "Determining what percentage of a given society believes in God - or doesn't - is fraught with methodological hurdles." They excuse their reliance on Zuckerman's admittedly imperfect data by uncritically accepting his facile appeal to authority, in this case that of the American political scientist Robert D. Putnam, who in his book Bowling Alone: The Collapse and Revival of American Community, adduced a wealth of statistical data concerning rates of participation in bowling leagues, youth soccer leagues, and other organizations to illustrate shifting patterns of community in American cities. Putnam justified his adduction of inconsistent data by stating that "we must make imperfect inferences from all the evidence that we can find" (Putnam 2000: 26). Obviously, organizational membership statistics in one country and responses to questions concerning religious beliefs in a multitude of cultures and belief systems are two vastly different kettles of fish. For Zuckerman to fall back on this kind of excuse, not least when one considers the vastly different and highly subjective data his own compilations from various sources involved, is questionable, and for Lynn et al. to endorse and then proceed to use it as part of their justification for building much of their mathematically dependent study on infirm, fuzzy evidence seems naïve and indefensible.

One also finds instances of carelessness in the use of Zuckerman's data. Lynn *et al.* state that where Zuckerman "published more than one survey result for a given country we took the most recent one where this was indicated, but averaged them out where it was not" (Lynn *et al.* 2009: 13). But they do not always practice what they preach. Zuckerman cited two figures for Mongolia, for example, namely 20 per cent in 1993 and only 9 per cent in 2001 (Zuckerman 2007: 53). Mongolia, according to Lynn *et al.*, is a country whose mean IQ is 101. Rather than giving the low 9 per cent rate of disbelief which would

militate against their hypothesis, however, they list it as 20 per cent (Lynn et al. 2009: 15).

The Impossibility of Predicting Rates of Disbelief from Mean IQ Scores

Can one "predict" the percentage of atheists in a country's population by knowing what its mean IQ is, as the title of the article by Lynn et al. suggests? Much of the data they adduce, even when the great divergences in Zuckerman's data are camouflaged through averaging and using only the most recent rates, underscores the great difficulty (or arguably the virtual impossibility) of making accurate predictions. Some examples will illustrate the point. If one considers the twelve countries whose mean IQs fall within the narrow band 90-93, one finds that the reported percentage of atheists varies from 0.5 per cent (Brunei and Malaysia) to 34 per cent (Bulgaria). Even if one looks at countries with similar IQs in the same part of the world that share a common religious heritage one cannot predict what the rate of atheists will be in any one of them. The Nordic countries of Europe offer a case in point. All of them, with the exception of Sweden, where ties between church and state were essentially cut in the year 2000, have long had Lutheran established churches, and the vast majority of their citizens have been nominally Lutheran for centuries. Their mean national IQs are all between 98 and 101. But, according to Lynn's data, the rates of nonbelief in God vary from only 16 per cent in Iceland to 64 per cent in Sweden. In East Asia, five countries with historically interrelated cultural and religious traditions, namely the People's Republic of China, Taiwan, Japan, South Korea, and Singapore, have tightly clustered mean IQs of between 105 and 108 with Singapore on the top end. But in these countries the reported rates of disbelief range from merely 13 per cent in Singapore to a staggering 65 per cent in Japan, one of the highest proportions in the world. Only for countries where the mean IQ is well below the global average can one even begin to predict what the rate of atheism might be. Despite the confident title of the article by Lynn et al., one cannot predict "atheism rates across 137 nations."

Furthermore, if rates of belief in God are closely correlated with and caused by increases in intelligence, one must wonder why the rates have changed so variously from one country to another. Again looking at data gathered by Norris and Inglehart and reported by Zuckerman, during approximately the latter half of the twentieth century the percentage of people who believed in God plummeted by 33 per cent in Sweden but by only 19 per cent in Norway, 7 per cent in Canada, and 3 per cent in Japan (Norris & Inglehart 2004, p. 90; Zuckerman 2007: 61). The variations in these rates of decline do not parallel the variations in the reported increases in IQ scores in those countries. One need

not belabour the point. It is all compelling evidence that, contrary to Lynn's prepublication assertion that it is "simply a matter of the IQ," other factors must be considered.

Dubious Attempts to Explain the Correlations

In a gross understatement, Lynn et al. acknowledge that there are "a few exceptions" to what they seek to present as a "generally linear relationship between IQ and disbelief in god across nations" and cite Cuba and Vietnam as among the "most anomalous." Lynn et al. also think the United States is "anomalous" because it is "a high IQ country" but nevertheless has a population in which nearly 90 per cent profess belief in God-much higher than in most European countries. Why this is the case they do not seek to explain conclusively. Lynn et al. cautiously suggest, "One factor that could provide a possible explanation for this is that many Americans are Catholics, and the percentage of believers in Catholic countries in Europe is generally much higher than in Protestant countries." Linked to this, they draw a geographic comparison, stating that the rate of disbelief is much higher in such countries as Belgium (43 per cent), France (44 per cent), the Netherlands (42 per cent), Denmark (48 per cent), and the United Kingdom (41.5 per cent), which they identified, oddly enough, as examples of countries "in north west and central Europe." Ignoring the fact that Catholics outnumber Protestants in the first three of these five lands with high rates of disbelief, as examples of Catholic countries they cite Italy, Ireland, Poland, Portugal, and Spain, in all of which disbelievers account for 15 per cent or less of the population (Lynn et al. 2009: 14). Lynn et al. do not mention that according to Zuckerman's statistics, in the populations of some other countries where Catholics outnumber Protestants, such as those previously listed and the Czech Republic, more than 40 per cent do not believe in God, and in Slovenia the figure is 35 per cent. Furthermore, the tabulations leave one wondering what the rates of belief and disbelief are for the various religious segments of populations in countries which include large numbers of both Protestants and Catholics, such as Germany and Switzerland. The weaknesses in the basis of comparison have not prevented Lynn et al. from offering their explanation, tentatively stated though it is.

But it immediately founders when one compares the rates of disbelief in the United States and Canada, countries which in many relevant respects are comparable. Both nations attracted chiefly European but also considerable numbers of non-European immigrants. In both the majority of the citizens are at least nominally Christian. Both countries have deeply rooted traditions of religious freedom and freedom of expression; neither has had an established church for more than a century. However, in the United States between 20 48

and 21 per cent of the "affiliated Christians" were Roman Catholics in the year 2000, while in Canada nearly 42 per cent of the "affiliated Christians" claimed that religious identity (Barnett *et al.* 2001: 170, 772). However, despite having a population twice as Catholic as that of the United States, Canada has a rate of disbelief of 22 per cent, more than twice as high as that of its southern neighbour. Indeed, in a poll published by Gallup and Lindsay (quoted by Zuckerman), fully "30 percent of Canadians do not believe in God or a 'Higher Power'." The same survey indicated that only 5 per cent of the people in the USA belonged to that same class of disbelievers (Zuckerman 2007: 48). Obviously, the explanation offered by Lynn *et al.* for the relatively high rate of religious belief among Americans fails to explain anything.

Lynn et al. then suggest that another "possible factor" for the ostensibly anomalous phenomenon in the United States might be that "a number" of its European immigrants went there "because of their strong religious beliefs" (Lynn et al. 2009: 14). What they mean by the vague phrase "a number" is anyone's guess. However, it suggests that Lynn et al. share the widely held belief that a large percentage of the people who migrated from Europe to the United States were motivated by a longing for religious freedom. This, for the most part, is sheer nonsense and contradicts decades of historical research. A reading of standard histories of American immigration and religious history would have disabused Lynn et al. of this common misconception. For the most part, Europeans who chose to leave their homelands and settle in the United States and its antecedent colonies were members of state churches and as such had no religious reason to uproot themselves. To be sure, there were exceptions. As early as 1620 Separatists from within the English Puritan movement sailed to Massachusetts; subsequently, a fraction of English Quakers settled in Pennsylvania as did members of certain Mennonite and other pacifist churches; in the nineteenth century tens of thousands of European converts to the Church of Jesus Christ of Latter-day Saints elected to take up new lives in the Mormon Zion of Utah. Part of the Jewish migration to North America was also prompted by persecution in Europe (Ahlstrom 1972; Gaustad & Barlow 2000; Noll 1992). But these and other exceptions are precisely that and cannot explain why the overwhelming majority of Americans in the late twentieth and early twenty-first centuries have professed belief in God.

Is there a genetic factor at work? Lynn et al. proceed from their unsubstantiated assertion that "a number" of Europeans emigrated to the United States because of their religious convictions to a truncated argument that perhaps "a number of religious emigrants from Europe had the genetic disposition for religious belief and this has been transmitted to much of the present population." They refer to recently published research by Bouchard et al. about the heritability of "religious belief" but do not pursue the matter, which in any case is in its infancy as a field

of investigation (Lynn *et al.* 2009: 14). To argue the matter further would require Lynn *et al.* to demonstrate, contrary to the consensus of opinion among historians of American religion and immigration, that the Europeans who emigrated to the United States were significantly more religious than those who stayed in Europe. It would also require them to explain why popular religiosity grew notably in the United States during the nineteenth and twentieth centuries.

As a broader theoretical explanation, Lynn et al. turn to The Golden Bough, a multi-volume study of early religions completed by the Scottish armchair anthropologist James George Frazer in its first edition in 1890. Frazer posited a general progression from "magic" through "religion" to "science" in mankind's attempts to relate to nature. Lynn et al. confidently assert, "Many rationalists no doubt accept the argument advanced by Frazer . . . in The Golden Bough that as civilisations developed 'the keener minds came to reject the religious theory of nature as inadequate . . . religion, regarded as an explanation of nature, is replaced by science'" (Lynn, et al. 2009: 14).

Frazer was heralded by many in his day as an analytical genius who was administering the *coup de grâce* to religion. However, he has long been regarded by both anthropologists and scholars of comparative religion as of little more than antiquarian interest, an exponent of his imperialist age who, in his zeal to shoehorn into a preconceived, Darwinian evolutionary framework a vast amount of information people in many countries had sent him, repeatedly failed to grasp the essence of his topic or the relationships between the various religions he discussed and the cultural milieu from which they had sprung. For at least half a century Frazer's biographers have acknowledged that this late Victorian writer was beholden to the Darwinian *Zeitgeist* that dominated much social scientific thought of his day and emphasized that his untenable work no longer plays any significant role on the intellectual stage (Orr 1959; Ackerman 1987). Indeed, his principal biographer, Robert Ackerman, labels him an "embarrassment" to the anthropological profession and generalizes that "no one wants him for a professional ancestor" (Ackerman 1987: 1).

Neglect of Scholarly Literature on Secularisation

As indicated above, some of the evidence on which Lynn *et al.* attempt to build their case does not deal with empirically documentable atheism *per se* but entails other dimensions of secularisation, such as rates of affiliation with religious organisations, without acknowledging that their study is not merely one of belief but of a broader phenomenon. To be sure, not all have agreed about the reality of secularisation, the extent of it, or whether it is irreversible. Hitherto it was widely perceived as an inevitable and irreversible trend of history but, as Martin has pointed out, the once "undisputed paradigm of secularization" fell

on hard times late in the twentieth century (Martin 2005: 18). Lynn et al. do not engage with any of the serious scholarly literature about secularization that has proposed a number of explanations for it in some countries and questioned its extent. One will not find in their article any reference to highly relevant works by such British or other authorities as Martin (1978, 2005), Bruce (1992, 2002), Gill (1993, 2003), Davie (2002), Beyer (1994), Casanova (1994), Greeley (1972), and Berger (1999). These and other scholars have suggested numerous causes for declining rates of belief in God and participation in religious activities. They have pointed to inter alia the general narcissism of much modern culture, the rational coordination of empirical inquiry that has led to a confutation of conventional supernatural conceptions of reality and a greater awareness of humanity's capacity to manipulate nature and society, an unquestioning faith in natural science and a concomitant unawareness of the transitoriness of many received scientific facts and theories, a loss of awareness of metaphysical reality owing to a concentration on physical science, a rejection of some religious teachings (such as the Catholic prohibition of artificial means of contraception stated in the encyclical of 1968 Humanae Vitae), a decline of religious education which has reduced popular understanding about conventional religious teachings and made them more vulnerable to caricatures which are incompatible with contemporary modes of secular thought, and the breaking of traditional patterns of religious belief and practice as a consequence of great social and geographical mobility. A discussion of secularisation theories lies outside the scope of the present article, but it is proposed that future attempts to establish correlations between intelligence levels and religious belief might profitably mine those theories rather than rely on a monocausal explanation as Lynn et al. have done.

Conclusion

The case made by Lynn *et al.* is flawed and fundamentally untenable. They attribute disbelief in God as a pivotal component of secularization to rising levels of intelligence but fail to engage with the extensive scholarly literature of secularization in which numerous causes of this multifaceted international-but far from universal-phenomenon have been identified. One specialist in it exaggerated but little in declaring, "To unravel completely the complex tissue of causal agencies contributing to secularization would be tantamount to reconstructing the entire web of social history" (Wilson 1987). Instead of taking on the unenviable task of addressing these factors, however, Lynn *et al.* seek to navigate through the mist chiefly with the faulty compass of a monocausal explanation. They rely uncritically on what both they and Zuckerman admit are problematic data compiled by Zuckerman and others which contain numerous large inconsistencies, and from these nebulous figures they extract precise

mathematical correlations with mean national IQs. They overlook or minimize the "anomalies" that contradict their hypothesis. They evince little understanding of the complexity of what is meant by "belief in God" and indeed of "God", particularly on a global scale involving radically different notions of the divine. They ignore or fail to deal adequately with variables that have a bearing on the diverse rates of unbelief in many countries. They offer untenable explanations for the persistently high rate of belief in God among Americans because they are uninformed about the distribution of Catholics both there and in Europe and incorrectly believe that religious factors were demographically quite important in prompting European emigration to North America, and they fall back on Frazer's discredited theory of an evolutionary progression from magic through religion to science. They build parts of their case on the extent of popular participation in religious activities but fail to account for the fact that while in some countries this fell during the twentieth century, in others it rose. Nor do Lynn et al. explain why, although in much of Europe conventional religious belief and practice have waned, in many countries in other parts of the world (not least in such Asian countries with very high mean IQ levels, such as the People's Republic of China, Taiwan, South Korea, and Singapore) such indicators as rapid increases in the number of Christians reveal that the situation is significantly different. But even apart from those crucial oversights, in the end much in their own selection of evidence squarely contradicts the claim that intelligence "predicts atheism rates across 137 nations."

It is tempting to conclude that if one could somehow control the multiplicity of variables inherent in a global study of this sort, it might be possible to arrive at meaningful estimates of disbelief. But what would be the sense of such an exercise? Even if it were possible to "predict" with any degree of accuracy what percentage of people in a country believe or do not believe in God by looking at their mean IQ, one wonders what the purpose of that roundabout way of measuring belief would be. If one has faith in the data compiled by Zuckerman and others, despite all the inconsistencies and other problems therein mentioned above, and on which many of the correlations presented by Lynn et al. are based, why not simply consult those figures? Lynn and many other advocates of psychometry have long defended the use of intelligence tests as a means of knowing whether individuals are suitable candidates for e.g. certain kinds of employment and education. Absent from their article is any indication of the purpose of knowing, or even guessing, what the rates of atheism in various countries might be.

Notes

1. For a general study of this controversial English psychologist see Hale, 2010.

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