

The Health of Nations

An Empirical Study on the Effects of Religion and Economic Policy

BY GREGORY PAUL

AFTER THE 1989 FALL OF THE BERLIN WALL AND THE 1991 collapse of the Soviet Union, many Americans saw the Cold War victory by the most religious and libertarian nation in the free world as evidence of the superiority of individual liberty and the Christian religion over the atheistic socialism exemplified by the USSR. But the competitive test between the extremes is long over. A culture war is now being waged within the United States on two fronts: religion and economics. The capitalist/socialist economic blend that leans leftward in most prosperous nations (particularly Europe) is tilted distinctly rightward in the United States toward more libertarian capitalism. The U.S. is also the most theistic and anti-evolution of the advanced democracies, with a majority of Americans believing that religion is the vital foundation for societal success, and atheists the target of discriminatory attitudes.¹

The various elements of this American culture war claim, often fervently, that their worldview produces the best societal results. One popular conservative talk radio host, for example, calls America “the greatest nation on God’s green earth,” while others proclaim that America is #1 in the world. The premises and promises of the contending viewpoints can be appealing. Liberty is a noble principle, and the libertarian socioeconomic hypothesis proffers that maximizing individual liberty by keeping government to a minimum allows each person to obtain the best results for themselves, which in turn produces maximal possible societal conditions, thereby creating the highest morality. Theism posits that a transcendent creator possesses perfect wisdom and morality and is the sole reliable source of the unconditional principles people must follow in order to enjoy successful lives and societies. The allure of these worldviews helps explain why many believe that the solution to the problems of America and the rest of the world are more religion and/or more libertarian policies. If compelling evidence for an ideal Creator really exists, and social science shows that the most religious countries enjoy the best social outcomes, then theism would be the log-

ical choice. The same would be true of maximizing private liberty if analyses verified its efficacy.

Despite all the claims and counterclaims, there has been remarkably little effort to use sound scientific methodology and social science research to test the contending assertions. Most of the attempts to justify a given position are based on limited and selective data sets, a form of confirmation bias that reinforces rather than tests the prior convictions of the proponents of these various positions.² No one has produced a comprehensive comparison of socioeconomic conditions between nations of varying religious, social and economic practices to see which systems actually work better, and why. As obvious as the need is, even the United Nations has produced only the Inequality Adjusted Human Development Report that uses just four core factors. Nor have any theo-conservative think tanks produced studies that show that the most successful democracies are the most religious. Libertarianism claims to be based on rational analysis, yet the well-funded movement has failed to produce the science showing that the more liberal egalitarian (progressive) democracies are being outperformed by the more libertarian ones. Atheism likewise claims to be rational, but it too has failed to support its belief that atheistic societies are superior to theistic societies. Same for progressives. As a result, the competing claims have all been unsubstantiated beliefs.

In order to fill the yawning data and analysis gap, I published an initial test of competing socioeconomic systems and their corresponding levels of religiosity in the *Journal of Religion and Society*. This was followed up with more extensive data sets and statistical analysis in the online journal *Evolutionary Psychology*.^{3,4} The latter includes the Successful Societies Scale (SSS) that was then based on two dozen basic measures intended to quantify overall socioeconomic health. Ongoing work has since doubled the SSS to four dozen indicators. Focusing on first world countries has the advantage of minimizing extraneous factors while maximizing data quality. The proportion of the population that



Illustration by Simone Rein

is at least marginally atheistic ranges from about a fifth in the U.S. to majorities in some advanced democracies.^{5,6} Lower income disparity indicates more progressive egalitarian economics than the higher inequality associated with more capitalistic economic libertarianism. Other researchers have recently conducted large-scale cross national and regional examinations. The scientific results are unambiguous. Although every nation has significant problems, no highly religious and/or libertarian country has been able to achieve the overall level of socioeconomic success present in the developed democracies that have less religiosity and more progressive economic policies. Equally important, the basic reasons for the observed pattern can be determined. They indicate that neither highly theistic nor overly libertarian societies have the practical means to be highly successful.

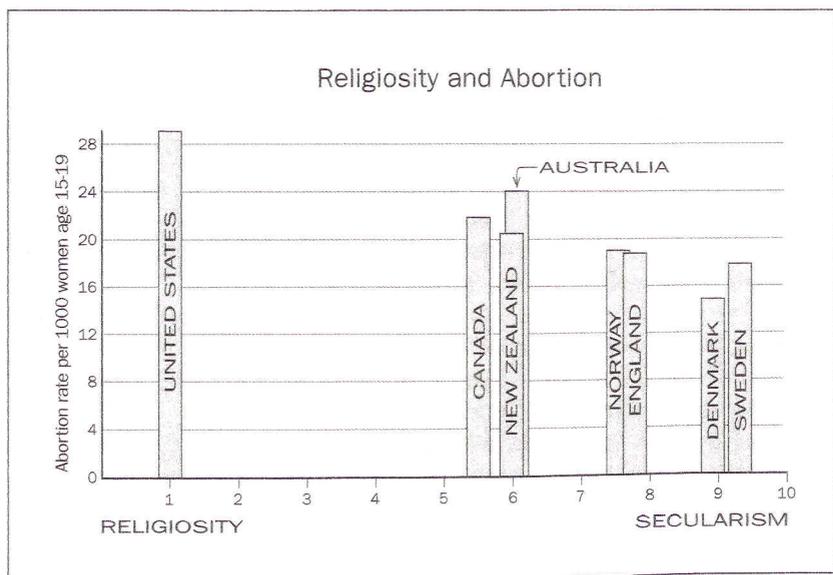
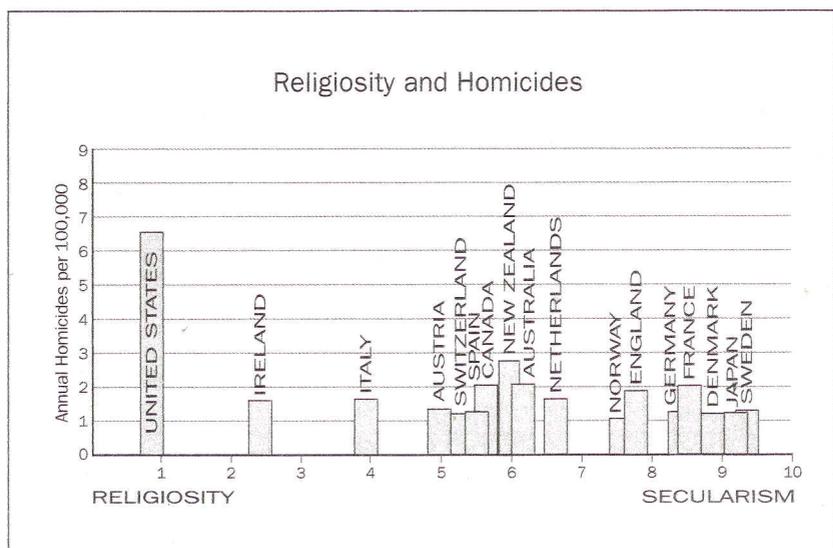
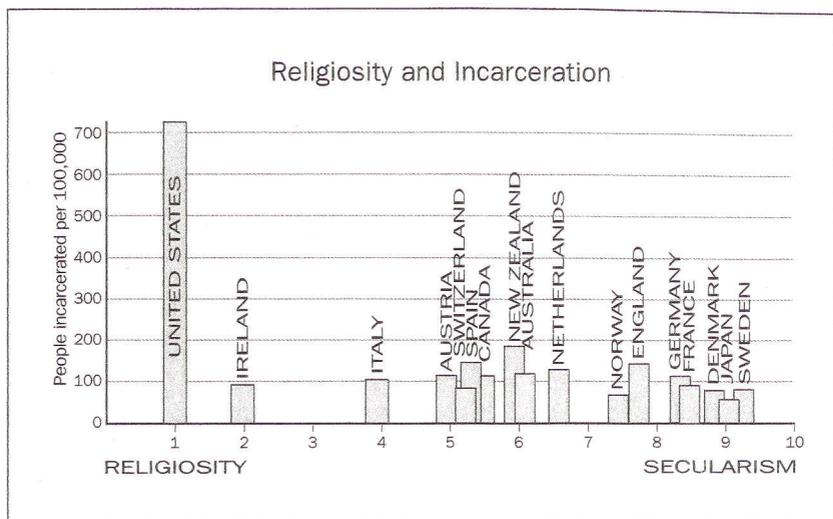
Data and Correlations

Many theists and libertarians boast of American “exceptionalism.” If the U.S. is truly exceptional,

then its success should be statistically measurable. Many of the following correlations are illustrated by the accompanying plots; other plots plus the Pearson correlations are found in ref. 3, and additional plots and correlations are presented in a supplement that further discusses the issues raised in this article.

Christian America, for example, is unsurpassed in having an extraordinary level of incarceration. The rate is many times higher than any other Western nation, and in absolute terms exceeds even that of much more populous China. Mass incarceration has been encouraged by the operation of for-profit prisons.⁷ A result has been serious disruption and disenfranchisement of low income and especially minority communities.⁸ In particular, although rates of drug use are broadly consistent among differing ethnic groups in the U.S., blacks are many more times at risk of being jailed for violations—an issue libertarians are increasingly concerned about.⁹

Most crimes are too inconsistently defined and reported in differing nations to be statistically



compared.¹⁰ Because it is based on forensic body counts, homicide is the one transgression that can be reliably compared between countries. In the first world the unusually religious and libertarian U.S. suffers by far the highest levels of murder; the very low kill rates in some of the most atheistic and progressive countries may be as minimal as is practically possible. Rapid-fire side arms, especially semiautomatics, are a radical technology that affords individuals potential weapons of mass destruction for the first time in history. America has the highest level of gun ownership of any country, and the correlation between higher levels of gun possession and more homicide is strong.¹¹ Most countries have dealt with the historically unprecedented risk by restricting firearms distribution with good results; the American experiment of widely distributing guns among the citizenry has proven comparatively deadly. The recent decline in American homicide has paralleled a major decline in households with firearms. Only a few percent of homicides involve mental illness. While the latter is frequently present among mass shooters in the U.S., less than one percent of murders are multiple-victim killings. Most support for gun owners' rights stems from the religious right. Experimental observation indicates that the extensive, God-ordained violence contained in scriptures has the potential to inspire violent actions,¹² as may Bible-based corporal punishment.¹³ Levels of lethal violence are especially high in the theistic and libertarian southeast U.S., and are less in the more secular, liberal northeast.

A core thesis of theism—that the ban on killing imposed by the absolute morality of a creator is a societal imperative—is fatally undermined by the exceptionally high rates of abortion in the U.S., as are levels of out of wedlock teen pregnancy, and some STDs. Statistical correlations between lower levels of adverse consequences of sexual activity and more atheism and progressive policies are well developed, in part because gonorrhea and syphilis are remarkably rare in some western European nations. The bulk of research indicates that abstinence-only sex education favored by conservatives backfires.¹⁴ Again, these problems tend to be most elevated in the American Bible belt, and are the least in the comparatively Europe-like northeast.

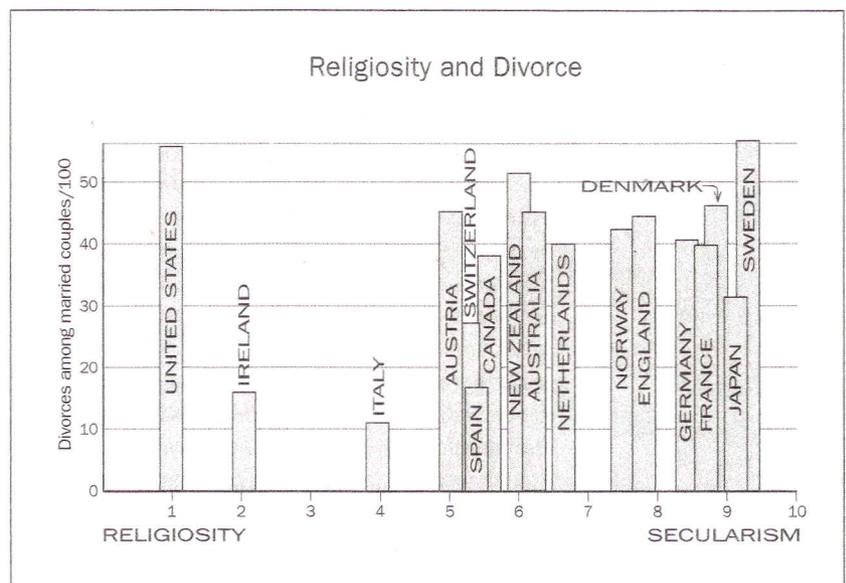
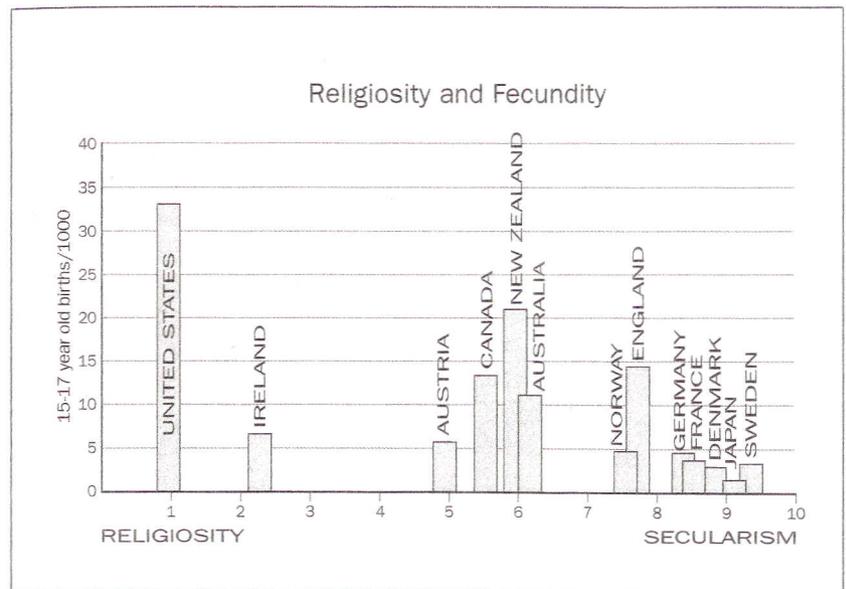
Conservatives frequently praise the high adult fertility of Americans, but rates are almost as high in some secular progressive democracies, and are notoriously low in strongly Catholic Italy and Spain. Marriage rates are uniquely high in the U.S., but they are low in some of the most religious

European countries such as Italy and Ireland. But divorce is also high in America, and not among ungodly progressives, but among patriarchal evangelicals.¹⁵ Gender equality and paid maternity leave are low in America but tend to increase with more atheism and progressive policies.

Suicides show no relationship with differing levels of theism or economics: the U.S. is typical in this regard, nor are irreligious and progressive Scandinavians particularly suicidal.¹⁶ Use of illicit drugs appears to be unusually elevated in the U.S., on the other hand alcohol and cigarette consumption are ordinary.

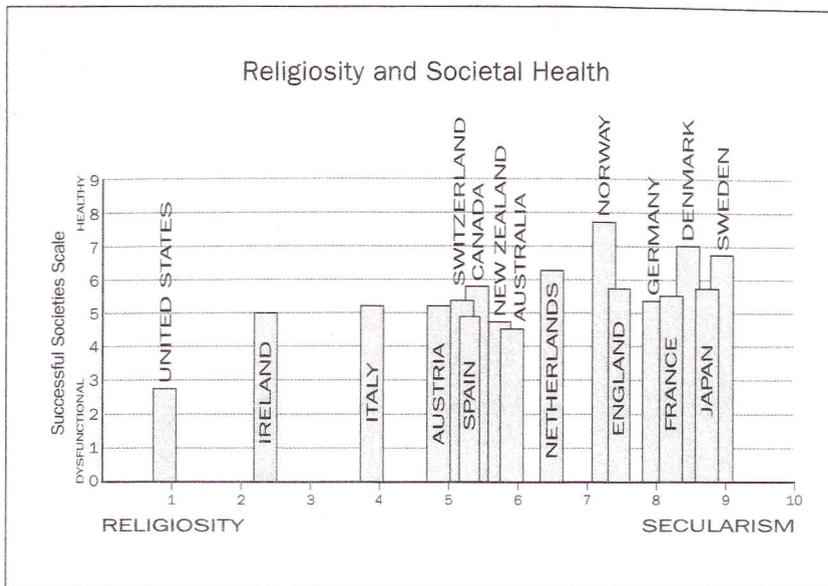
The correlations between higher childhood mortality and more religiosity and income disparity are disturbingly strong, with the U.S. being the worst.¹⁷ The U.S. has been losing relative ground in life expectancy, which is now the shortest in the first world, in part because lifespans are actually decreasing in parts of the Bible Belt.¹⁸ When I was young, Americans were proud of our exceptional height, which is a proxy for overall health. The U.S. has since lost relative ground in this indication,¹⁹ and scores the worst in obesity and mental illness. Making these failures of the American Way (which are prone to being worst in the south east) all the more remarkable is that its healthcare expenditures are far higher than in any of the other comparable nations, so the overly expensive U.S. system is astonishingly inefficient to the detriment of the general economy. All other first world countries have comparatively cost effective and efficacious universal medical complexes that do at least as well at handling most diseases,²⁰ yet are regularly denounced by the religious right and libertarians.

The American advantage is often seen as being economic. Per capita income is unusually high in the U.S., but the advantage is reduced when the detrimentally high per person healthcare expenditures are taken into account. Worker productivity is very high in America, but recent increases have not been matched by corresponding increases in income among workers. As a result, the per capita income growth of Americans since the mid 1990s has been mediocre by first world standards, and an increasing portion of the nation's wealth has been concentrated in the hands of the upper percentile. Income inequality is consequently highest in the U.S., correlates with less social mobility that is now notoriously low in America, with more entrenched poverty, more theism, and more libertarian policies.²¹ America was famous for high employment, but this advantage was somewhat



exaggerated, and the country has slipped in this regard since the turn of the century. American opportunity is not all it has been cracked up to be. Even the iconic symbol of the American Way—household ownership—is not as prevalent as it once was. American innovation is mixed—patent assignments are very high, but research and development expenditures are modest. America's infrastructure is mediocre, and innovation in digital technology has lately been losing ground.

Aberrantly low voter turnout in the U.S. is a sign of political dysfunction that probably contributes to social inequality.²² Nor does America score especially well on measures of governmental trust and lack of corruption, and it has been slipping in the latter.



There are not consistent trends between the nations in life satisfaction, which is normal in the U.S.—some measures score the exceptionally liberal and atheistic Danes as the happiest folks.

Although the U.S. performs well in some categories, it is so dysfunctional in so many others that it appears to be doing less well than more atheistic and progressive democracies. To compare the overall performance of the nations, all of the indicators for each are scored on a 0-10 scale, and then averaged for a total cumulative Successful Societies Score. The U.S. result is ~3, the lowest of the most prosperous democracies. SSS scores for the other less religious and libertarian democracies range from ~5 to over 7, with the most liberal and irreligious tending to do the best.²³ The correlation between more progressive socioeconomics and less religiosity is a very strong ~0.7;²⁴ the same value results when correlating superior socioeconomic performance and more popular acceptance of evolution. The correlation between higher levels of conservative theism and inferior SSS results is over 0.5; much the same is true when correlating higher levels of liberal-moderate theism with inferior cumulative conditions.²⁵ The relationship between superior SSS scores and the lower income disparity associated with progressive social and economic policies is a remarkable ~0.8. Because strongly progressive, atheistic countries score the highest on the Successful Societies Scale, and because they enjoy better health, mortality, poverty, employment, income growth, and socioeconomic values than the U.S., for all their defects these countries are most properly categorized as actual, practical opportunity societies.

Why Religion and Libertarianism do not Result in Societal Success

An increasing body of research is proving it is no longer viable to consider the godly, laissez faire American system as the very best way.²⁶ Theories that theism and individual liberty are crucial for success are therefore false. Nontheism and liberalism are producing superior overall results, and comparatively comprehensive statistical studies indicating otherwise are not appearing despite repeated challenges to produce such. The next question is why is the U.S. so inefficient at translating its immense wealth into better conditions when compared to other prosperous democracies. Apologists suggest that high population diversity is behind America's societal ills, but correlations between socioeconomics and racial-ethnic composition and foreign-born sufficient to explain the patterns are lacking.²⁷ The explanation that America's frontier past is at fault is contradicted by the frontiers of Canada, and especially Australia, which was founded by criminals who exhibited extreme violence towards the aboriginals. Nor does a violence-laden media provide an answer because the first-world media is highly Americanized.²⁸

Theists and libertarians often take the collapse of communism as a simple proof that the less atheism and/or socialism there is, the better off are societies. But trends are not always linear. Contrary to libertarian theory, less income inequality and private charity, and more taxes, public social spending and unionization are generally correlated with better socioeconomics.²⁹ All these in turn correlate well with more atheism and less religiosity. This interrelated pattern indicates that these factors are causally linked in some fashion.

Excessive socialism tends to redistribute rather than grow wealth. But too little government gives the top percent the excess power they need to game the system and capture most or all income growth through schemes that can emphasize financial manipulations instead of true growth—crony capitalism—resulting in dysfunctional economics.³⁰ On the large scale the wealthy can transfer massive funds up the income ladder through “rent seeking.” This includes encouraging and compelling the lower and especially middle classes to take on large chronic debt loads—either to meet consumerist material desires driven by mass advertising, or to meet dire needs that send interest payments up. The resulting debt load hinders upward mobility. While extreme taxation suppresses the wealth creation enjoyed by the top percent, dropping tax rates

too low can cause them to slack off in their efforts when they meet their arbitrary desires. The theory that lowering taxes increases tax revenues by expanding the tax base exposes the folly of linear thinking; even if partly correct, the logic ultimately predicts that revenues will be maximized at zero duty rates.

A significant degree of inequality is necessary in order to maintain the meritocracy that drives progress and prosperity. But it is particularly fascinating—and should be disturbing—that a growing body of science indicates that excessive socioeconomic disparity directly and adversely impacts physical and mental health in the middle and lower classes. Part of the problem stems from the psychological stress created by being in, or fearing being in, dire circumstances, and the middle class pressures of striving to gain wealth to stave off financial disaster and compete with the upper percent.³¹ Lower income status degrades mental motivation and decision making, language acquisition and education performance. Particularly remarkable is that income disparity may have epigenetic effects that damage mental abilities in the bottom percentage.³² These effects further explain why the U.S. has become a more rigid class society. At the peak of the economic pyramid a competitive race to acquire more possessions, and the addictive compulsion to garner more income as an indicator of self worth³³ motivate the financial manipulations that diverts wealth to the top few.

In specific quantitative terms, what economic factors are designated by the SSS as those that produce the best socioeconomic results? Income disparity should be 25-35 as measured by the GINI index, total taxes should be around 35-50% of income, government social spending ought to be about 20-30% of GDP, and union membership should be at least 15% of employees.³⁴

Why do high rates of religiosity and societal success never seem to go together, and what are the circumstances that favor atheism over theism and vice-versa? In progressive democracies the risk that a given person or family will suffer financial ruin and physical endangerment is minimized. Universal health coverage guarantees any given citizen that they and their relatives will receive effective modern medical care regardless of their personal finances. Medical security translates to greater financial security which frees individuals to become self employed entrepreneurs. Worker's paid leisure and family care time are ensured, and child care support is extensive. Financial security is further sheltered by

some blend of extensive job security and/or support during periods of unemployment—which reduces the pressure to opt for low income jobs that can damage higher income career tracks—as well as unionization. Upward mobility is further boosted by aid to the lower classes, including quality public education. The less intense rat race reduces physical and mental stress. The high level of physical and financial security that results from progressive socioeconomic systems leaves many no longer interested in seeking the aid and protection of religious institutions or supernatural deities in their daily lives. This lowered religious interest reduces attendance at spiritual ceremonies, further attenuating the influence of the religious industry upon individuals. So does the displacement of faith-based charitable institutions with government agencies. That there are no major first-world exceptions to this pattern, and that a significant religious revival has yet to occur in a secular democracy, indicate that the socioeconomic security process of democratic secularization is a highly effective side effect of progressive economic policies.

Members of the American middle class and even the upper few percent are more subject to sudden financial ruin due to career loss and/or medical expenditures than is normal for first-world countries; only in the U.S. has 99% of the population been vulnerable to bankruptcy due to medical bills, so that the majority have felt compelled to lobby for the assistance of supernatural powers, slowing down but by no means preventing the secularization effects of western modernity. The ultimate religious response to unstable socioeconomic conditions is economic libertarianism favoring a form of religion called Prosperity Christianity that promotes a Bible-based, creationist worldview. The promotion of faith-based charities as superior to government programs despite the lack of supporting evidence is part of the effort to turn back societal secularization. The result is the unusually large religious right found in America.

Why does more liberal theism correlate with poor societal conditions in the same way that conservative religion does? Progressive faith is, ironically, unable to thrive in the progressive societies that liberal theists support because liberal socioeconomic conditions reduce belief in all religious designs to petition the deity. The religious left suffers as much as the religious right when societies are well run. Consequently, the cause of the dysfunctional correlation is that superior circumstances suppress center-left faith.³⁵

It is inconsistent for atheist libertarians to cite

the results of the SSS as compelling evidence of the failings of theism while denying its implications of the ineffectiveness of libertarianism. Nor can progressive theists cite the SSS as discrediting libertarian theory while pretending it does not similarly overturn the capacity of religion to be popular in successful societies. The theories that religion and libertarianism are vital to societal success have been unsubstantiated due to lack of proper scientific verification.³⁶ Because all comprehensive cross comparisons have

now found that higher levels of religion and belief in God and/or libertarianism are strongly correlated with inferior socioeconomics, and credible causal factors for why neither can be dominant in successful societies are present, the hypotheses have been refuted. Unless similarly comprehensive objective, peer reviewed research reverses the observed pattern then the theist and libertarian socioeconomic hypothesis are opinion and faith-based ideologies rather than practical programs. **S**

REFERENCES

1. Cragun, R. et al. 2012. "On the Receiving End: Discrimination Toward the Non-religious in the United States." *Journal of Contemporary Religion* 27, 105-127; <http://goo.gl/avSrML>
2. Gregg, S. 2013. *Becoming Europe*. New York: Encounter Books. This is an exemplar in its total lack of any plots or correlations to scientifically back the book's libertarian thesis—not that most progressive works avoid similar defects.
3. <http://goo.gl/lAYa>
4. Paul, G. 2012. "Why Religion is Unable to Minimize Lethal and Nonlethal Societal Dysfunction Within and Between Nations." In T. Shackelford & V. Weekes (eds.), *The Oxford Handbook on Evolutionary Perspectives On Violence, Homicide, and War*. Oxford: Oxford University Press, 435-470. This is a more historical examination of the interaction between a/theism and socioeconomics.
5. Atheism is herein defined as per Oxford as being "without god," i.e., lacking theism. So any who are not theists are automatically at least marginal atheists, which constitute the great majority of the cohort.
6. <http://goo.gl/B90VUU>; <http://goo.gl/3nMLTh>
7. Dyer, J. 2000. *The Perpetual Prisoner Machine: How America Profits From Crime*. Boulder: Westover Press.
8. Alexander, M. 2012. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: New Press.
9. <http://goo.gl/nF9XDO>
10. Ref. 3 details the difficulties of comparing nonlethal crimes between nations.
11. Shermer, M. 2013. "Gun Science." *Scientific American*. May; Bangalore S. & Messerti, F. 2013. "Gun Ownership and Firearm-Related Deaths." *The American Journal of Medicine* 126, 873-876.
12. <http://goo.gl/zu214T>
13. American Academy of Pediatrics. 1998. "Policy Statement: Guidance for Effective Discipline." *Pediatrics* 101, 723-728; 2000. "Policy Statement: Corporal Punishment in Schools." *Pediatrics* 106, 343.
14. gregspaul.webs.com/Philosophy&Theology.pdf.
15. Strayhorn, J. and J. Strayhorn. 2009. "Religiosity and Teen Birth Rate in the United States." *Reproductive Health* 6, 14; Paul, G. 2009. "How Are Other First-World Nations Suppressing the Adverse Consequences of Violence and Youth Sex in the Modern Media Environment?" *Pediatrics*, 123, e364.
16. Bennett, L. 2007. *The Feminine Mistake*. New York: Voice.
17. President Eisenhower implanted the myth of Nordic dysfunction by claiming that nonambitious Swedes were into suicide, alcohol and nudity because of their dispiriting welfare state, but soon corrected himself because just the nudity charge is correct—among Scandinavians only Finns are highly suicidal. Yet Ike's apology has never quite taken.
18. Plotting this previously unknown relationship was important in spurring my deep involvement in this field of research.
19. <http://goo.gl/3W3EVT>
20. <http://goo.gl/dG9066>
21. Squires, D. 2011. "The U.S. Health System in Perspective: A Comparison of Twelve Industrialized Nations." *Issues of International Health Policy* 16, 1-14; Reid T. 2009. *The Healing of America*. New York: Penguin Press.
22. Plots and correlations are in ref. 7.
23. Because low voter turnout is concentrated among low income brackets and minorities, leaving their economic interests underrepresented; Leighy, J. and J. Nagler. 2013. *Who Votes Now: Demographics, Issues, Inequality and Turnout in the United States*. Princeton: Princeton University Press.
24. None scores a perfect 10 because none are utopias.
25. The +/- signs that indicate the trend direction are not included in these rounded figures, that are detailed in ref. 3.
26. www.infidels.org/kiosk/article847.html, and ref. 7.
27. Cross-national works includes: Barber, N. 2011. "A Cross-National Test of the Uncertainty Hypothesis of Religious Belief." *Cross-Cultural Research* 45, 318-333.18; Zuckerman, P. 2008. *A Society Without God: What the Least Religious Nations Can Tell Us About Contentment*. New York: New York University Press; <http://goo.gl/ywBvFj>; <http://goo.gl/TRmeBG>; an intra-U.S. study is <http://goo.gl/pzIsVa>
28. Because some highly functional countries are very diversified, see correlations and Figs. 23 and 24 in ref. 3, or ref. 7.
29. Tomlinson, J. 1991. *Cultural Imperialism: A Critical Introduction*. Baltimore: Johns Hopkins University Press.
30. Plots and correlations are in ref. 7.
31. A recent example of the top percent gaming to their advantage is the management of Boeing threatening to construct the improved 777 without the unionized Seattle workforce unless the latter agreed to massive pension cuts, while the executives and shareholders benefited from billion dollar-scale stock manipulations facilitated by the reduced income of the workers.
32. Sapolsky, R. 2005. "Sick of Poverty." *Scientific American* 293(6), 92-99; Mani, A., Mullainathan, S., Shafir, E. & Zhao, J. 2013. "Poverty Impedes Cognitive Function." *Science* 341, 976-980.
33. Hackett, J. et al. 2013. "Germline Demethylation Dynamics and Imprint Erasure through 5-Hydroxymethylcytosine." *Science* 339, 448-452; Borghol, N. et al. 2012. "Associations with Early-Life Socio-Economic Position in Adult DNA Methylation." *International Journal of Epidemiology* 41, 62-74.
34. DeVoe, S., Pfeffer, J. & Lee, B. 2013. "When Does Money Make Money More Important: Survey and Experimental Evidence." *ILRRReview*, 66, 1076-1096.
35. The classic study on the hypothesis is Norris, P., and R. Inglehart. 2004. *Sacred and Secular*. Cambridge, England: Cambridge University Press; also see refs. 3, 28.
36. Paul, G. 2010. "Religiosity Tied to Socioeconomic Conditions." *Science* 327, 642. This also means that while religion is popular only when the environment is sufficiently insecure, the latter does not always make theism popular.