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Futures 36 (2004) 1009–1023

FUTURES

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Religion and science[☆]

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Abstract

Employing data from a massive, international web-based survey, and from a variety of other sources, this essay explores three different models of the future: religion without science, religion with science, and science without religion. In so doing, it presents eight different scenarios for the future of religion that citizens of the world currently imagine: revival of conventional faith, proliferation of religious movements, the new age, fanaticism, religious conflict, the millennium, scientism, and secularization. Such social issues as population explosion or collapse and inter-denominational conflict render the future relationship between religion and science crucially important for the world.

Published by Elsevier Ltd.

1. Introduction

For over a century, social scientists have debated whether science and religion are necessarily antagonistic to each other [48,61]. If science is anathema to religion, then professional scientists would be non-religious. However, data from a survey of college professors indicated very substantial levels of religiosity among scientists, comparable to levels in the population at large [54]. Indeed, historians have argued that the modern emergence of science was facilitated by religion of a particular kind, either Protestantism specifically or monotheism more generally [41,59]. The belief that the universe was created by a single God embodying His unified laws provides a religious basis for the scientific assumption that there are natural truths capable of being discovered through research. On the other hand, it is widely

[☆] The views expressed in this essay do not necessarily represent the views of the National Science Foundation or the US.

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believed that science and religion concern two quite separate realities, and thus are irrelevant to each other.

There has not been very much serious social-scientific research on these theories, and the results have tended to be inconclusive. Thus, logically, we can imagine three quite different futures for religion, with respect to science:

1. Religion remains a strong and independent force in the world, and it changes according to its own dynamic principles unrelated to science.
2. Religion and science merge to some extent, such that scientific discoveries are incorporated into core doctrines of religious movements and entirely new denominations arise based on spiritual technologies.
3. Religion fades as the rise of science continues, both discrediting traditional doctrines and reducing the social–psychological factors that sustain faith in the supernatural.

This essay will examine data and implications related to all three of these possibilities, organized by the simple rubric: religion without science, religion with science, and science without religion. The discussion presents quantitative data from several sources but is organized around qualitative data from a massive Internet-based questionnaire, *Survey2000*, which was supported by the National Geographic Society [10,62]. About half of the 46,000 adult respondents wrote sentences or paragraphs in response to the following open-ended item: “Imagine the future and try to predict how the world will change over the next century. Think about everyday life as well as major changes in society, culture, and technology.” Following methods developed in earlier computer-assisted work [3,5,6,9], content analysis of the resulting vast corpus of text identified 2000 distinct ideas about the future, approximately 100 of which concerned religion of the year 2100.

2. Religion without science

Whether or not scientific progress continues, it may not be especially relevant for the future of religion. However, religions do evolve, partly in response to social change (which may be stimulated indirectly by science-derived technology) and partly according to their own internal socio-cultural dynamics. Thus, it is wise to begin by considering some purely religious transformations, and we will do so through six scenarios based on the ideas expressed by *Survey2000* respondents distilled directly from their verbatim responses.

2.1. *Scenario 1: revival of conventional faith*

One might think that the surprise-free scenario for the future of religion over the next century extrapolates current conditions without change, but religion is always changing so stasis is hardly conceivable. A more realistic surprise-free view of the future predicts that world-wide revival will occur in established religious traditions, allowing many of them to survive. Several *Survey2000* respondents felt there will

be a great awakening in the mainstream churches, and religion will play a large part in many peoples' lives a century from now. Denominations could be large in membership but few in number. New religious sects would have burned themselves out, leaving the more experienced denominations to sustain the faith.

There could be a great spiritual renewal as Christianity becomes increasingly missionary-focused. Former communist countries will experience a resurgence of the Church, becoming unusually religious, and Christianity may even be strongest in Africa and China, extending even into the countries in Indochina and the mountainous areas of Nepal and Tibet. Religious services will be conducted on the Internet. Monastic activity will bring the church back to harmony with nature. Belief in God and spirituality will grow, overcoming increasingly difficult worldly challenges.

In this scenario of conventional revival, people will turn to God in their search for help, solace, and the happiness they could not achieve through materialism. Many will be more interested in serving God and humankind than in material possessions. Some *Survey2000* respondents hoped that people in all walks of life will trust in the love of their divine Creator and renew a commitment to good moral and ethical living.

2.2. Scenario 2: proliferation of religious movements

Several *Survey2000* respondents argued traditional denominations will weaken, but new religious movements will thrive. For example, the rapidly growing Church of Jesus Christ of Later-Day Saints (Mormons) may be the largest religious denomination in the year 2100. The Baha'i Faith, which seeks to unify several religious traditions, could play a vital role in the emerging world culture, one respondent asserted.

The spiritual deadness affecting prosperous societies could lead to a proliferation of strange movements. Novel religions outside the traditional mainstream will be embraced by the general public. Small, distinctive sects and cults will proliferate. It will be common for people to build their own religions that address the particular needs they feel in complex modern society.

It is possible that prophetic religions like Christianity and Islam will fade, and more nature-oriented religions will flourish. That would imply a resurgence of the old Earth-based religions that worship a female deity. Already, there are feminist currents in the diffuse neo-pagan movement, notably the various Wiccan (witchcraft) groups and the Covenant of the Goddess [1,39]. A century is ample time for the large number of small groups that exist today to grow into a set of major religious denominations.

2.3. Scenario 3: the new age

Other respondents predict that the new age movement will grow stronger over the next century, saying that non-traditional spiritual exploration will be very important in the year 2100 (cf. [40]). Eastern religions will make further inroads into the West, and non-Christian religions will be practiced by a large number of

people in western societies. Many people around the world will adopt the Buddhist consciousness that all people and things are inextricably linked with one another.

In this scenario, there will be rapid growth in meditation, yoga training, and other pseudo-spiritual activities. If traditional religion revives, then alternative new age philosophies will grow rapidly as a counter to rigid fundamentalism. Faith in non-linear forms of understanding could be valued more than science. For example, many people will trust in astrological horoscopes.

Spiritualism will be a great source of comfort in an increasingly complex and confusing world. God will be a private, personal concept, and people will believe they have their own angels. Spirituality will be important, but formalized religion will be unimportant. The influence of organized religion will wane, but personal spirituality will be a more common practice.

2.4. *Scenario 4: fanaticism*

Some *Survey2000* respondents were worried about the growth of religious movements that they considered reactionary and dictatorial. They fear that fundamentalist religions will take over, everywhere in the world. This, they think, would threaten the very existence of democracy. The greatest threat to world stability could be religious fundamentalist thinking. Colonies of religious fanatics will spring up all around the world, creating havoc and potentially causing great destruction.

There may be a major spiritual movement as significant as the Great Awakenings of the past two centuries, although not necessarily Christian. Perhaps a new world religion will emerge, based on Pentecostal or Evangelical principles (cf. [47]). Other new religions will emerge through combination of aspects of existing religions. At least one will rise to prominence, fed by the masses looking for something to combat the modern world. Optimistically, a new religion will take hold from the existing chaos and brutality, and in later centuries it will lead humanity to a more happy world.

2.5. *Scenario 5: religious conflict*

In this scenario, the division between Christians and non-Christians could intensify. To end divisive arguments, religious leaders in some countries will seize political power and establish a theocratic government. Around the globe, there could be a movement away from Christianity toward Islamic culture, and Islam will become an extremely powerful political force. First, an Islamic renaissance will lead to political unification in the Middle East. Then, all the Islamic people of the world will unite. Expansion of Islamic society in Africa will be a great source of conflict.

Survey2000 respondents worried there will be world-wide religious conflict between Christians and Muslims. Christianity may lose members as Islam grows, until Islam will be the dominant religion of the world. A major nuclear world war could occur between the West and Islamic states, and conflict between Muslim and Christian societies could be the final downfall of mankind. If humanity survives, the world could be dominated by a unification of the nations of the Islamic faith,

and the Judeo-Christian minority will be driven underground. Judaism will be even more threatened than in the past, in this conflictual scenario.

2.6. *Scenario 6: the millennium*

For some believers, revival of religion will be accomplished by direct divine activity in the world. Some anticipate that Jesus Christ will return to Earth. Those who do not accept Jesus as their savior will perish in a time of terrible tribulation. After God destroys all the wicked during the battle of Armageddon, people will live in an Earth-wide paradise.

Then God will bring an end to war, famine, and disease. He will rule over the Earth, destroy wickedness, and bring perfection to mankind. He will wipe every tear from the eyes of believers, and they will see death no more. All good people who have died in the past 6000 years will be resurrected and live forever on God's clean and beautiful Earth. Government will be by divine intervention, since human government has not achieved good for all mankind, and only God can do that. God will be the most important force, and angels will influence people's lives.

2.7. *Reflection on the first six scenarios*

These scenarios were paraphrased from the actual words written by dozens of *Survey2000* respondents, but with the exception of the last one they are quite compatible with current thinking in the sociology of religion. The sixth scenario, predicting the literal Millennium, is based on supernatural rather than social-scientific assumptions. Yet of all the "futurologies" that one may find in bookstores or the visual mass media, none has a richer heritage or has greater influence over people's daily lives than the one rooted in the Book of Revelation.

Some religious denominations are growing, rather than contracting, and these tend to be doctrinally conservative [31,35]. Finke and Stark [22] estimated that the percentage of the American population who formally belonged to religious organizations doubled from 17% in 1776 to 34% in 1850 and nearly doubled again to 62% in 1980. Since then, the rate of church membership has held constant. Secularization does occur within the most liberal religious denominations, as highly educated clergy adopt the intellectual values of secular academics. In so doing, they tend to lose touch with the spiritual needs of the laity in their own churches, and membership declines [55].

As highly secularized denominations lose membership, more fervent sects grow. In time, the sects themselves become more worldly and stall in their growth, but at this point, schisms generate new sects. Thus, secularization and revival tend to balance off as individual denominations weaken but religion in general remains strong. This is a cycle of secularization and revival in which the wheel of faith turns but does not move either forward or back [51,52].

Table 1 supports this interpretation, as do several other datasets not reported here. The table shows the 1990–2000 trends of growth or decline in the US for six "mainline" or "liberal" Protestant denominations, the sect-like Southern Baptists, four major sectarian movements, and the conservative Roman Catholic Church.

Table 1
Adherents of selected denominations in the US

Selected major denominations	1990	2000	Change, 1990–2000 (%)	Projected	
				2010	2050
<i>“Mainline” Protestant</i>					
American Baptist churches	1,873,731	1,767,462	–5.7	1,667,220	1,319,971
Episcopal	2,445,286	2,314,756	–5.3	2,191,194	1,759,475
Evangelical Lutheran	5,226,798	5,113,418	–2.2	5,002,497	4,582,360
Presbyterian Church USA	3,553,335	3,141,566	–11.6	2,777,514	1,697,057
United Methodist	11,091,032	10,350,629	–6.7	9,659,653	7,327,244
United Church of Christ	1,993,459	1,698,918	–14.8	1,447,897	763,832
Southern Baptists	18,940,682	19,881,467	+5.0	20,868,981	25,334,509
<i>“Sectarian”</i>					
Assembly of God	2,161,610	2,561,998	+18.5	3,036,549	5,992,196
Church of the Nazarene	888,123	907,331	+2.2	926,954	1,009,785
Latter-day Saints (Mormon)	3,540,820	4,224,026	+19.3	5,039,058	10,205,640
Seventh-day Adventists	903,062	923,046	+2.2	943,472	1,029,798
Roman Catholic	53,385,998	62,035,042	+16.2	72,085,314	131,427,321
Total US population	248,718,301	281,421,906	+13.1		

Source of data: American Religion Data Archive (www.thearda.com).

The projections are purely heuristic, extrapolating the 1990–2000 rate of change.

Purely for heuristic purposes, the table projects the trends forward to the years 2010 and 2050, and we should note that these groups' trends for the earlier decade, 1980–1990, were quite similar. We see decline among the relatively secularized liberal denominations, and varying degrees of growth among the more supernaturally oriented sect-like, sectarian, and conservative churches.

At certain historical periods, such as the early Roman Empire and possibly the present day, a revolution in faith does take place [42,49]. An increased rate of secularization, accelerated by contact with alien cultures and by secular intellectual developments, so weakens the prevailing religious tradition that many religious innovations occur. A few of these establish fresh religious traditions.

3. Religion with science

More than a century ago, religious movements began to arise calling themselves sciences [51]. Both Christian Science and Divine Science were already well established by the dawn of the 20th century. Religious Science was established in the 1920s, and Scientology in the 1950s. Transcendental meditation claims to be based on “The Science of Creative Intelligence.” The Raelian Movement offers a high-tech human cloning service [38,44]. Many future religious groups could likewise employ scientific metaphors to communicate their novel spiritual visions.

Some new religions may be inspired by scientific ideas that challenge every-day notions of reality. For example, it has been many years since the development of relativistic physics, quantum theory, and fundamental discoveries about inconsistency and undecidability in mathematics. Yet the wider culture appears oblivious to them. More recently, scientists and mathematicians have explored alternatives to religious myths of the origin of life in the universe, based on chaos and complexity, self-organizing systems, and random models of biological evolution [8,13,24–27,56,60]. Together, these ideas describe an indeterminate and chaotic universe very different from the God-centered cosmos envisioned by the Judeo–Christian–Islamic tradition. Perhaps such radical concepts could have a powerful impact on the general public if they were repackaged in theologies that gave them readily understandable but transcendent meaning.

3.1. *Scenario 7: scientism*

Many *Survey2000* respondents thought that science and religion will support each other over the coming century. Perhaps religions will modernize and become more science oriented rather than biblical. At the extreme, science will become the official state religion, with scientists as high priests. Conversely, science may come to the conclusion that God must exist, or that mysticism is a physical, psychological, and spiritual reality. Perhaps people will seek God once again as science comes full circle and decides that Darwin was wrong about evolution. The mystical will come to hold an increasingly important place in daily life, while the scientific will become less obtrusive. The pendulum could swing back from a totally scientific society to a totally faith-based society once again.

New science-oriented religions are likely to emerge. Some will be oriented toward the social or cognitive sciences, as people seek mastery of their own minds, tapping into the greater consciousness. Awareness of the mind–body connection will develop greatly in science, medicine, and spirituality. People will be able to tune in to the emotional fields of others, sharing their feelings in perfect sympathy. Consciousness expansion through psychedelic drugs could be regarded as true science.

3.2. *An example of scientific religion*

Scientology is the most-studied example of a science-oriented faith [2]. It is a “technological religion” [15] that employs an electronic device called the *e-meter* in its confessional and was founded by L. Ron Hubbard, a science-fiction writer. Of all the 20th-century science-oriented religions, it appears to be the most successful in terms of sustained membership growth and impact on the surrounding culture. Examination of data about this particular group will illustrate scientific issues concerning the entire category of faiths.

One of the factors that determines whether a religious movement succeeds is the degree of continuity it has with the prevailing culture [50]. In a largely Christian society, for example, Christian sects have a greater chance of growing than

do religious movements rooted in an alien tradition. This would seem to be a disadvantage for Scientology, which is not a Christian group and has some affinities to Buddhism, but Scientology's connection to Western science and technology may provide the necessary cultural continuity [58].

A sense of the socio-cultural location of Scientology can be derived from a geographic analysis of where it is strong. In 1998, Scientology launched 15,693 personal websites in 11 languages for members in 45 nations. Of the total, 8762 or 55.8% were residents of the US. Other nations where at least a hundred Scientologists had personal websites were Italy (with 1154), the United Kingdom (1144), Australia (772), Germany (588), Russia (401), France (379), Mexico (369), Switzerland (314), Denmark (258), South Africa (241), Japan (153), Spain (131), Hungary (129), Taiwan (120), Netherlands (109), New Zealand (102), and Sweden (100). Another source of geographic data concerns Scientologists who have attained the high status in the church called *clear* [17]. A tabulation of how many Scientology *clears* lived in each three-digit postal zip code area of the US was provided by the Church of Scientology in 1985.

Table 2 shows that Scientology has spread throughout the entire US, but is strongest in the Pacific region (Alaska, Hawaii, Washington, Oregon, and California). Essentially, all new religious movements are extremely weak in the East South Central region (Alabama, Kentucky, Tennessee, and Mississippi), and Scientology is no exception. For comparison, the table also includes the 1990 church member rate. This measure was calculated on the basis of a comprehensive tabulation of denominational membership and is expressed as the percentage of the population who formally belong to a church or other religious group [16].

For the 50 US states (excluding Puerto Rico and Washington, DC), the dataset comprises 9021 clears and 8654 websites. The reason why Table 2 focuses just on the 50 American states is that this allows us to look at statistical correlations between different variables, with states as the unit of analysis. Much social-

Table 2
Geographic distribution of Scientology in the US

Geographic regions of the US	Scientology		1990 church membership ^a (%)
	1985 clears per million	1998 websites per million	
New England	22.9	21.2	59.7
Middle Atlantic	18.8	15.5	63.4
East North Central	10.5	11.9	54.2
West North Central	15.4	13.0	61.1
South Atlantic	19.4	40.1	50.9
East South Central	1.5	3.7	65.1
West South Central	15.6	8.8	65.2
Mountain	52.9	29.8	48.2
Pacific	154.4	96.0	40.1
Total	38.2	32.6	55.0

^a Source: American Religion Data Archive (www.thearda.com).

scientific research shows that new religious movements tend to be most successful in communities where people's religious needs are not satisfied, as measured by a low church member rate [4]. For the 50 states, there are strong negative correlations between the church member rate and the rates of clears and websites (Pearson's r coefficients of -0.51 and -0.42 , respectively). Thus, Scientology is more active where traditional churches are weak.

This illustrates the general finding that novel religions tend to thrive where conventional religious organizations are failing. Thus, there is some evidence that the decline of older faiths could stimulate the emergence of new, science-oriented churches like Scientology. However, new religions have not made up the membership deficit in the Pacific region of the US, and there is good reason to doubt whether spiritual innovation can overcome secularization in the modern world of science.

4. Science without religion

Although sociologist Parsons [45] argued that religion was a fundamental feature of society, required for the evolution of complex societal institutions, many intellectuals have long imagined that it was steadily losing strength, in a complex but inexorable process called *secularization* [23,34,57]. In this view, science, rationality and secular institutions are destined to overwhelm religious faith.

4.1. Scenario 8: secularization

A number of *Survey2000* respondents believe that churches will progressively feel threatened by science and technology. Discoveries achieved in space exploration could challenge religion, or scientific findings in other areas will erode dependence upon religious beliefs. By 2100, science might have discovered conclusively that the underlying order to the universe is not God.

Religion will start to die a slow death, as people become more informed and start thinking for themselves. The Christian Church will become increasingly irrelevant. Christian beliefs will no longer prevail in decisions that affect mankind, and Judeo-Christian influence will fade from the political agenda.

Younger people who have grown up in every major religion will question their beliefs and abandon their basic systems. Universities will have expunged religious ethics, which they consider antiquated. People will come to realize that morality does not need religious justification, and it will be established on a secular basis. Church attendance will be replaced by secular community activities and community events. The Roman Catholic Church will have liberalized into a weak corporation with a dwindling customer base, and it will gradually disintegrate.

In this scenario, only the devout will belong to religions, while most others will become secular, and atheism will gradually increase in popularity. Religious groups will become further separated from mainstream society, trying to live according to their particular doctrines. From a Christian perspective, society as a whole will be depraved and distant from God. Believers will feel they are submerged in an

increasingly immoral world, and there will be extreme polarization between practicing Christians and secular society.

Religion will be weaker in the technology rich nations than in the poorer nations. In time, religion will disappear, except from underdeveloped countries, and will be regarded as a mere curiosity. The world will be less dependent on God and more dependent on self, as technology has given humans a god-like image. People will be intolerant of those who profess a Judeo–Christian–Islamic religion. Eventually, religion will be viewed as a harmful nuisance and will be outlawed from society.

4.2. *The costs of secularization*

The costs of secularization could include higher rates of such social pathologies as suicide and crime [53], reduced physical health [29,30,32], and even gradual demographic collapse [36]. To illustrate these unintended consequences of secularization, we can look briefly at religion and population, across two dozen nations.

An international study called the World Values Surveys [33] has examined the strength of religion in 24 nations, listed here in Table 3, measured by the percent-

Table 3
Religion and fertility in 24 nations

Nation	Attend religious services monthly (%)	Population, July 2002, in millions	Annual population change (%)	Fertility rate
Russia	8	145	−0.33	1.30
Finland	11	5	+0.14	1.70
Japan	11	127	+0.15	1.42
Sweden	11	9	+0.02	1.54
Norway	13	5	+0.47	1.80
Belarus	14	10	−0.14	1.31
Bulgaria	15	8	−1.11	1.13
Latvia	16	2	−0.77	1.18
Germany	22	83	+0.26	1.39
Australia	25	20	+0.96	1.77
Switzerland	25	7	+0.24	1.47
South Korea	27	48	+0.85	1.72
Slovenia	33	2	+0.14	1.28
Spain	38	40	+0.09	1.16
Argentina	41	38	+1.13	2.41
Chile	44	15	+1.09	2.13
Turkey	44	67	+1.20	2.07
Brazil	54	176	+0.87	2.05
India	54	1046	+1.51	2.98
US	55	281	+0.89	2.07
Mexico	65	103	+1.47	2.57
South Africa	70	44	+0.02	2.38
Poland	74	39	−0.02	1.37
Nigeria	87	130	+2.54	5.49

age of the population that attends religious services at least monthly. The table also shows the most recent available demographic estimates of population growth or decline and birth rates [19]. One way to summarize the table is to divide these 24 nations into the dozen where less than 30% of people attend religious services at least monthly, and the dozen in which more than 30% do, calling them low-religion and high-religion nations. The average annual population change in low-religion nations is 0.06%, essentially no change, compared with an average annual growth rate of 0.91% in high-religion nations.

This comparison seems to show that low-religion nations have solved the problem of the population explosion, and have achieved demographic stability, while religious nations continue to grow. However, the growth rate reflects not only fertility but also immigration, the age structure of the society, and other demographic factors. A better predictor of trends is the total fertility rate, the average number of children a woman would have by the time she completed the child-bearing years of life, data given in the final column of the table.

In principle, to reproduce herself and her husband, a woman would have to have 2.0 children. However, because more boys than girls are born, and some girls die before reaching adulthood, the fertility rate that would achieve population stability in rich, industrialized nations tends to be slightly higher, about 2.1 births per woman. The average fertility rate is actually only 1.48 in the dozen low-religion nations, far too low to sustain the population in the long run, compared with 2.33 in the high-religion nations. A more sophisticated statistical analysis reveals there are strong positive correlations between religious attendance and both population growth ($r = 0.63$) and fertility ($r = 0.69$).

Long before collapsing fertility causes extinction, a society loses vitality because the average age increases, with a growing fraction of retired people, resultant growth in the cost of pensions and health care, and declining cultural dynamism. This is one of the explicit reasons why the US has begun to discount the influence of its European allies and Japan [18,21].

Religion strengthens fertility by supporting family values, preserving traditional female roles, and by discouraging specific birth control techniques. Greater fertility gives religious societies a reproductive advantage over secular societies [11,36,49]. But if secularism spreads rapidly around the globe, encouraged by the diffusion of science-based skepticism and technologies, then the entire human species faces the possibility of demographic collapse and ultimate extinction.

How could a scientific, secular society survive without religion? Decades ago, demographers theorized that modernizing societies would go through an historic process, called *demographic transition* [20,43]. In stable traditional societies, both birth and death rates were high. Then technological improvements reduced the death rate, leading to population explosion that would come under control only when birth rates also dropped. Eventually, the population would stabilize with low rates of both birth and death. However, this model never explained what was going to limit the decline in the birth rate, and at the present time, we simply do not know whether secular societies can survive for more than a few generations.

One science-based approach would be to keep the death rate dropping, through increasing the life span. The average white American male born in 1900 could expect to live 48 years, but in 2000, this life expectancy had increased to 74 years. For white females, the average life expectancy increased from 51 to 80. Projecting these figures forward at the same rate of increase suggests that life expectancy in the year 2100 might be 114 for males and 125 for females. However, using more elaborate assumptions, the US Census Bureau has projected that life expectancy for Americans born in 2100 might be only around 88 for males and 92 for females [28]. These Census Bureau estimates are based on the observation that most improvements in longevity came from reducing the risk of death for infants and young adults, and it will be increasingly difficult to gain additional years through extending the lifespan of the elderly.

Increased life span does not automatically compensate for insufficient fertility, unless the years during which a person might reproduce are also increased. So we can imagine a future in which women really do live until age 125, and remain fertile until they are 100. Even a small chance of reproducing in any given year can generate the necessary 2.1 children, over many years. Alternative technology-based means of reproducing might help, such as surrogate mothers and human reproductive cloning, if they enabled some individuals to have more children than they might otherwise produce. An extreme possibility suggested by several technological pioneers is to transform humans into dynamic patterns of information existing and reproducing inside computers or robots [7,12,14,37,46]. These are the lengths to which we might have to go, if science is to replace religion.

5. Conclusion

In considering the uncertain relationship between religion and science, we have encountered a series of perplexing questions: can religions established many centuries ago resist the corrosive effects of technological, economic, and intellectual progress? Can innovation of science-oriented religions actually make up for the decline of traditional religions? Is secularization really responsible for the collapse of fertility in most advanced industrial nations, or are other factors at work? Is human culture abandoning the demographically viable ancient constellation of sanctified family and community in favor of a new institutional order that will have to sustain itself in as yet undiscovered ways?

Perhaps the most intriguing question of all concerns whether the answers to the other questions will vary between and within the societies of the world. Religious revival and innovation counter the force of secularization that may be unleashed by science. Apparently, secularization is undercutting religion in western Europe, Japan, and many other post-industrial nations, but not in the US or perhaps in developing countries. Within complex societies like the US, there are substantial geographic variations in both the strength of churches and the opportunities for new, science-oriented religions. Globally, there is reason to fear that the scientifically prophesied population explosion may mutate into an equally disastrous

population collapse, unless prevented by religion. This suggests that the future relationship between religion and science will be both complex and crucially important for the world.

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