

Paper Title: Science And Religion Through A Cloudy Crystal Ball

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Paper Abstract:

Since about 1960, primarily through the funding programs of the John M. Templeton Foundation, growing numbers of formerly-autonomous, diverse calls and efforts to (re)integrate scientific and religious thought have been “quietly coalescing” into a modern, global science/religion movement. To date, that early, still-evolving movement has been centered on two “understood”, and thus usually-unstated, fundamental sub-goals. Those two sub-goals are to; 1.) advance science/religion knowledge and understanding, largely through scholarly research and dialogue, and 2.) disseminate that knowledge and understanding as widely as possible.

The author has long lauded, and actively supported, the aforementioned two, contemporary, scholarly sub-goals of “the movement”. However, in the paper, he contends that the time has come to significantly temper them with some visionary pragmatism. In support of that contention, he begins by pointing to the “obvious” fact that, while the global science/religion movement has been “quietly” unfolding in history, many complex, foreseeable and unforeseeable, unprecedented, cross-cultural, global, pragmatic questions, problems, dilemmas, and crises have been explosively emerging as well! The author contends that “pragmatic explosion is so overwhelming that, ironically, it has all-too-often not only generated a disorientated, “head-in-the-sand” response in society-at-large, but until recently, in the science/religion movement as well!

In an effort to extrapolate the possible future, global impact of the “pragmatic explosion”, the author peers into “a cloudy crystal ball” containing such recent, major projections and scenarios as those of the United Nations, the World 3-03 Limits To Growth Study, Sir Martin Rees, and others. Succinctly focusing and summarizing such global prognoses, he then contends that; 1.) we now live in the most abnormal, unpredictable, and dangerous age in history, and 2.) the 21<sup>st</sup> century carries the perilous potential of societal and even global terminality, possibly before 2050!

Drawing on the thoughts of Carl Sagan and others, the author then argues that a cross-cultural, global, pragmatic, “physical revolution” is now needed in the way humankind operates in nature in order to save the future! However, he further argues that, since our actions are ultimately driven by our paradigms, humankind will also need a pre-requisite, motivational, complementary, “mental revolution” in the way we think! And, since science and religion remain the two most powerful influences in human history, he argues the science/religion movement not only has an opportunity, but an historical

responsibility and mandate as well, to play a key role in forging and promoting both complementary, paradigmatic “revolutions”!

The author next outlines his own educational proposal, and the roadblocks in its way, for producing the overarching, scholarly/pragmatic, science/religion paradigm he argues is now needed to save the future. His own proposed paradigm begins in “cosmic holism” and humility, and ends in increased terrestrial responsibility. He then concludes the paper by calling for a future Metanexus Conference centered on the “crucial” questions of what the “stated” goals of the science/religion movement should now be, and what should happen if those goals are met?

**Author Bio:**

Dr. Allen R. Utke is Emeritus Professor of Chemistry at the University of Wisconsin Oshkosh. However, over the last 40 years or so, beyond his accomplishments in chemistry, he has extensively centered his professional activities, whenever and wherever possible, on using an interdisciplinary (re)unification of scientific, religious, philosophical, and futuristic thought to help mold and even save the future. Overall, Dr. Utke’s accomplishments as an interdisciplinary scholar have included authoring three international books; 23 articles; 42 papers; 14 new interdisciplinary courses; receiving two distinguished teaching awards; being the 1999-2000 President of the International Society for the Study of Human Ideas on Ultimate Reality and Meaning; receiving three Templeton Foundation Awards for course development and a speakers series at his university, and authoring a best, recently-published science/religion article on Michael Faraday; making 80 radio and television appearances; and giving more than 600 professional and public presentations.

**Paper Text:**

*“In any affair, consider what precedes, ask what follows, and then undertake it. . . First say to yourself what you would be, and then do what you have to do.”*

- Epictetus (50-120 C.E.)

**“IN ANY AFFAIR, CONSIDER WHAT PRECEDES. . .”**

Since about 1600 C.E. the rapid rise and accelerating success of science and technology, and also other complex factors, have produced a widening chasm between science and religion, the two most powerful influences in human history. That chasm has now grown so wide that science and religion are operating almost completely independently today. However, since about 1960, growing numbers of formerly-isolated, autonomous, diverse, and largely-ignored calls and efforts to (re)integrate scientific and religious thought have been “quietly coalescing” into a modern, cross-cultural, global science/religion movement. Much of the credit for that momentous historical development belongs to the John M. Templeton Foundation and the many, diverse, visionary, promotional programs it has funded in that regard.

To date, the efforts of the early, still-evolving science/religion movement to (re)integrate scientific and religious thought have been centered on two “obvious”, “understood”, taken-for-granted, and thus usually unstated, fundamental, scholarly sub-goals. Those two tacit sub-goals are 1.) to advance science/religion knowledge and understanding, largely through scholarly research and dialogue, and 2.) to disseminate that knowledge and understanding as widely as possible.

The author has long lauded, and actively supported, the aforementioned two sub-goals. However, he contends that the time has now come to infuse and expand them with some needed visionary pragmatism. In support of that contention, he would begin by pointing to the glaring fact that, while the global science/religion movement has been “quietly” unfolding in history, many complex, diverse, foreseeable and unforeseeable, unprecedented, cross-cultural, global, pragmatic questions, problems, dilemmas, and crises (challenges) have been emerging as well! For example, world population has more than doubled since 1960, creating many associated global “challenges”.

The author contends the aforementioned “pragmatic explosion” is so overwhelming, threatening, and disorientating that, ironically, it has all-too-often generated only a pre-occupied, disinterested, head-in-the-sand response, not only in society-at-large but, until just recently, in the science/religion movement as well! However, in the last several years, an understated but increasing shift in emphasis toward visionary pragmatism is seemingly underway in the science/religion movement. That shift is apparently being prompted by a subtle, sobering, growing awareness of the scope and seriousness of the global “pragmatic explosion”. However, the author believes that a subtle, unstated realization may also be growing in the scholarly community that all intellectual, theoretical research and dialogue must now lead to pragmatic goals and action.

**“IN ANY AFFAIR, CONSIDER WHT PRECEDES, ASK WHAT FOLLOWS. . .”**

Where is the aforementioned “pragmatic explosion” headed in the future? There are those who say that such questions cannot be answered because the future is unknowable. However, the author maintains that this claim is actually misleading. For, some aspects of the future actually are extensively foreseeable, because they will be extensively determined by both past and present global trends. And thus, many individuals and agencies (including the United Nations) periodically generate global extrapolations, projections, predictions, and alternative futures. Such prognoses may differ, and they all fall on a spectrum ranging from pessimism to optimism. They thus form what might be called “a cloudy crystal ball” in which the nature of the future can be sought. The author has a long-standing, scholarly/pragmatic interest and background in peering into that cloudy crystal ball. After succinctly focusing and summarizing many of the global prognoses found there over the last 40 years or so, he has come to six, sweeping, “blanket” conclusions in that regard.

In the first three of his six conclusions, the author contends that we all now face a common, growing danger in which our societal and even global survival could be at stake in the 21<sup>st</sup> century. That is because 1.) We now live in the most abnormal, complex,

unpredictable, and thus dangerous age in history! 2.) At a current, growing world population of 6.4 billion human beings, we are now near, at, or beyond the carrying capacity (sustainability) of the earth!, and 3.) The exploding global challenges we already face, and will face in the 21<sup>st</sup> century, must be resolved as soon as possible, for they increasingly carry the potential of societal decline, and even global terminality, possibly even before 2050!

An extensive, detailed documentation and defense of the three, previous, sweeping, “blanket” contentions is beyond the scope, intent, and length of this paper. However, the author would center a limited justification of his contentions on the following, then largely-ignored, largely-forgotten today, 1992 “World Scientists’ Warning To Humankind.”

“Human beings and the natural world are on a collision course. Human activities inflict harsh and often irreversible damage on the environment and on critical resources. If not checked, many of our current practices put at serious risk the future that we wish for human society and the plant and animal kingdoms, and may so alter the living world that it will be unable to sustain life in the manner that we know. *Fundamental changes are urgent if we are to avoid the collision our present courses will bring about.*”

- Signed by more than 1600 scientists, including 102 Nobel Laureates from 70 countries.

The author would additionally point out that many other, increasing, similar warnings could also be cited, which have appeared both before and since 1992. Those warnings have been issued by many knowledgeable and distinguished scientists and scholars, and also by many prestigious agencies, such as the United Nations, the World Bank, the World Watch Institute, the National Geographic Association, etc.

One of the most recent warnings, issued by such an agency is perhaps also the most detailed, sophisticated, and accessible warning to have appeared. It is found in a 2004 book titled “Limits To Growth: The 30 Year Update.” Actually, the book is the third book in a series since 1972, summarizing an on-going, computerized study of global sustainability and human welfare originally commissioned by the Club of Rome. That on-going study has consistently claimed for over 30 years that our increasing global danger could peak before 2050 unless appropriate counter measures are taken as soon as possible.

One of the most recent warnings by an individual to appear is also perhaps the most sobering. For, in his 2004 book titled “Our Final Hour”, Sir Martin Rees, the current Astronomer Royal of England, in “a clarion call on behalf of the future of life”, outlines the many complex reasons why he believes there is less than a 50-50 chance that humankind will survive the 21<sup>st</sup> century.

The author would argue that the 1992 “World Scientists’ Warning To Humanity”, the other warnings cited, and the many more that could be cited, represent an emerging consensus today. That consensus is admittedly open to debate. However, at the heart of the consensus is a critical fact that can’t be ignored in any such debate. Our current world population of 6.5 billion people will inevitably reach 9 billion people, more or less, by 2050! It doesn’t take a demographic expert to begin to envision the possible future consequences of adding another 50%, or more, people to the earth! And, it also doesn’t take a demographic expert to begin to thus debate the question of how many people the earth can ultimately support? At the center of any such debate looms the question of what is the carrying capacity (sustainability) of the earth?

**“IN ANY AFFAIR, CONSIDER WHAT PRECEDES, ASK WHAT FOLLOWS, AND THEN UNDERTAKE IT”**

In the latter three of his six sweeping, “blanket” contentions about our global future, the author outlines the action roles that he maintains that science and religion, and the science/religion movement, can and must play in an effort to meaningfully mold and even save the future. In that regard, his three contentions are that 1.) Since science and religion remain the two most powerful influences in human history, they not only have an opportunity, but an historical responsibility, and even mandate as well, to address the future. *The key to meaningfully molding and even saving the future lies in the relationship of science and religion and the cooperative bridges that can be built between them!*, 2.) *The future is now!* There are many bridges that can be built between science and religion, but one (Global Sustainability) that it is imperative to build, complete, and extensively use as soon as possible, and, 3.) Fortunately, construction of that “imperative bridge” has already begun.

Once again, an extensive, detailed documentation and defense of the three, previous, sweeping, “blanket” contentions is beyond the scope, intent, and length of this paper. However, the author believes he can significantly justify his contentions by briefly telling a little-known but extremely-important historical story.

The story begins in the 1980’s when more and more scientists (and others) began to fully comprehend the full extent and potential future seriousness of “the environmental crisis”, and they began to look in earnest for solutions. One scientist in particular fully realized that science and religion (particularly “Western religions”) shared a common responsibility for the crisis, because they both “have been eager to master, possess, and subdue nature from their beginnings”. He thus concluded that both had a common responsibility to try to resolve the crisis. And, he maintained that both would be needed in such a joint effort, for each had necessary, complementary, hallmark characteristics generally not found in the other. For example, science seeks immediate knowledge and understanding about how reality works (its mechanism) and religion seeks an ultimate awareness, understanding, and faith about why reality exists (its meaning).

In 1988 that scientist, on behalf of the scientific community, authorized a solicitous entreaty which he titled, “Preserving And Cherishing The Earth: An Appeal For Joint

Commitment In Science And Religion.” The Appeal called on the world religious community in “a *spirit* of common cause and joint effort to preserve the earth”. However, beyond “Cherishing The Earth”, a seeming odd choice of words for a scientist, in two insightful, enlightened sentences in the Appeal he proposed some further “girders” for jointly building a Global Sustainability, “imperative bridge”. Those two sentences were “. . .As scientists many of us have had *profound experiences of awe and reverence before the universe*. We understand that what is regarded as *sacred* is more likely to be treated with *care* and *respect*. . .”<sup>1</sup>

The scientist who wrote The Appeal was Carl Sagan, a rather unlikely and even amazing author in view of the fact that he remained an avowed atheist until his recent death! Sagan and many other scientists signed the Appeal and submitted it to the Global Forum of Spiritual and Parliamentary Leaders held in Moscow in 1988 and 1990. Hundreds of spiritual leaders, from 83 countries, including 37 heads of national and international religious bodies, signed the Appeal. In their common response they affirmed the “urgency” and “spirit” of the Appeal and that “the invitation to collaborate marks a unique moment and opportunity in the relationship of science and religion.” They also acknowledged that “the environmental crisis is intrinsically religious” and that “all faith traditions and teachings firmly instruct us to *revere* and *care* for the natural world” and “*sacred creation*”. The signers therefore endorsed the idea that all religions must be about the task of saving the earth, as well as saving souls! And thus, with a common blueprint and “girders” in hand, construction of the Global Sustainability “imperative bridge” began in the early 1990s.

In 1991, Carl Sagan became co-chairperson of a subsequent, global, promotional effort and appeal titled The Joint Appeal Of Science And Religion For The Environment. That global promotional effort, in combination with the efforts of many others, helped produce the 1992 Earth Summit in Brazil, which addressed the global ozone depletion problem, by globally limiting the production of freon gases, and the 1997 Kyoto, Japan meeting and subsequent Protocol, which addressed the global warming problem, by limiting carbon dioxide emissions.

Unfortunately, however, despite a visionary blueprint, some common “girders”, an early fervor and determination, and some subsequent global progress to date, the “imperative bridge” has turned out to be an unfinished, under-used footbridge, rather than a super-span, in terms of addressing and helping resolve “the environmental crisis”.

There are many possible reasons that might be offered in that regard. For example, one could question the degree to which the vision, fervor, and determination of the early engineers and builders has “filtered down” in the last 17 years, especially to the general populace, and have thus waned. One could also point out that there have been a large number of scientists, scholars, and laypersons who did not support building the bridge in the first place, and have subsequently opposed it, because they have maintained that “the environmental crisis” is overstated and/or can be resolved by science and technology alone. For example, to date, the United States, the largest carbon dioxide emitter in the world, still has not signed the Kyoto Protocol! There are also those, of course, who

believe building the “imperative bridge” is simply a case of too little, too late. And, there are those on the religious side of society who have withheld their support and efforts, because they have withdrawn behind a scriptural interpretation that we now live in the apocalyptic “end times: and “last days” in human history.

It should also be pointed out that while the “imperative bridge” has been under construction, the “pragmatic explosion” has continued! For example, since Carl Sagan authored the scientists’ appeal to religious leaders in 1988, the population of the world has swelled from 5.4 to 6.5 billion human beings in just 17 years!

Overall, the author would argue that all of the reasons that might be offered for our on-going inability to resolve “the environmental crisis” ultimately come down to two rock-bottom facts. First of all, all-too-often, all-too-many people in the world have simply been *unaware* of our growing global danger. Many reasons could be given for that situation, but an alarming, ironic deficiency, and even illiteracy, in scientific (and technological) knowledge and understanding in our modern scientific age may top the list!

Secondly, in an even more sobering vein, the author would argue that all-too-often, all-too-many people in the world simply haven’t *cared* about the carrying capacity of the earth, and thus about our growing common danger! Once again, there are many reasons that could be given for that unfortunate fact, but religious illiteracy and a growing spiritual crisis, may top the list! The cartoon character Puck perhaps summarized our lack of awareness, and inability to care, as succinctly as it might be done, when he said, “What fools these mortals be. . . We have met the enemy, and he is us!”

In the 1992 “World Scientists’ Warning To Humankind”, more than 1600 scientists, including 102 Nobel Laureates from 70 countries, proclaimed that “*Fundamental changes are urgent if we are to avoid the collision (with nature) our present course will bring about*”. But, even if one is aware enough, and cares enough, to agree, exactly what could, or should, one do in that regard? Exactly where does one begin?

**“IN ANY AFFAIR. . .FIRST SAY TO YOURSELF WHAT YOU WOULD BE, AND THEN DO WHAT YOU HAVE TO DO.”**

There have been many, diverse, “band-aid” answers offered to date to the question of how to resolve “the environmental crisis”. However, the author believes that the best, most comprehensive, ultimate answer is to reinforce, buttress, and expand the “girders” of “the imperative bridge” already historically in place between science and religion. For, if the aforementioned Appeals and the “visionary blueprint” for that bridge are still valid, and if we could find a way to reinforce, buttress, and expand a sense of “cherishment”, “reverence”, and “respect” for nature in some people, and a further sense of a “sacred creation” in others, perhaps we could then generate the level of “care”, love, and “responsibility”, and remedial action that will be needed to not only save nature, but possibly even the future as well!

But, is there a straightforward, universal way to do all that, on an individual, societal, and global level? The author's answer is to ardently promote, as widely as possible, the "spirit" (spirituality) to be found at the heart of both the aforementioned Appeals, and the visionary blueprint. However, while that "spirit" is prominently mentioned in the Appeals, it is not defined, probably because those who wrote and signed them thought the definition was obvious.

The author would define that "spirit" (spirituality) as being the greatly expanded knowledge, understanding, feeling, and humility that comes with a realization that we humans are within rather than outside of reality, and that we are thus an integral, inclusive part of the holistic, finely-tuned, interconnected, unity, oneness, and at-onement of all things.

That sweeping realization comes to some in an unexpected, quantum leap of insight, enlightenment, epiphany, or even mysticism, in which, in an instant, one suddenly "sees" that "*I* am a part of everyone, and *we* are a part of *everything!*" However, more often than not, in most people, such a realization requires three, step-wise, progressive, evolving, spiritualistic paradigmatic sub-shifts. The first step is a sub-shift from individual me to collective we (transpersonal spirituality). The second step is a sub-shift from collective we to nature, the earth, and our global future (global spirituality). The third stop is the biggest sub-shift, a giant leap from nature, the earth, and our global future to the Cosmos, all of reality, and everything (cosmic spirituality).

[Note: It can be argued that spirituality and religion are not necessarily the same thing. For, whereas spirituality might be defined as being an awareness of the interconnected oneness of all reality, religion might be defined as being a further, inferential, collective leap of faith to a creative *one* (Ground-of-all-Being, God, gods, etc.) beyond that *oneness*. In other words, religion might be defined as being a collective expression or extension of spirituality. Therefore, non-theists like Carl Sagan can obviously be spiritual without being religious, because they have had "profound experiences of awe and reverence before the universe, and they "cherish" a holistic, interconnected, even if accidental, universe!]

Unfortunately, there are many, diverse, formidable roadblocks standing in the way today of even taking the first transpersonal step, from individual me to collective we, toward Cosmic spirituality. Those roadblocks include the overwhelming, threatening, and disorientating nature of the "pragmatic explosion" and "the environmental crisis" we now face; the accelerating complexity, hectic pace, and resultant tension and stress that characterizes life today; a current, self-centered, societal over-emphasis on materialism, technology, luxury, entertainment, sex, violence, sports, drugs, medicines, plastic surgery, rudeness, lewdness, profanity, etc.; increasing scientific and religious illiteracy; scientific/religious ignorance; decreasing societal values, morality, ethics, etc.

In view of so many diverse, formidable roadblocks, even a transpersonal, spirituality sub-shift often has to be continuously "triggered" in many or even most people today. Such age-old, universal, commonplace "triggers" in that regard include religion; families;



threats to individual and/or collective security, or survival; prayer; a need for individual and/or collective cooperation or compromise; empathy and sympathy (as in the recent Asian Tsunami Disaster); meditation; love; the death of others; grief; funerals; etc.

However, it is obviously much more difficult today to trigger a further sub-shift from transpersonal to global spirituality or we wouldn't have a "pragmatic explosion" and "environmental crisis!" And, there is very little evidence that any more than a relatively small number of people today have taken the third step and sub-shift to cosmic spirituality! And thus, overall, it can be effectively argued that all-too-many people today are members of a "me generation" mired in a "spiritual crisis!"

Aristotle (384-322 B.C.E.) once said that "He who would move the earth must first move himself." And, Epictetus (50-120 C.E.) later said that "In any affair. . . First say to yourself what you would be, and then do what you have to do." But, suppose one has already come to the realization, and reached the conclusion, that the answer today to saving nature, society, and perhaps even the future, is to first seek an enhanced sense of spirituality in oneself, and then to ardently promote it as widely as possible in others. The question then looms, of course, as to exactly how that might be accomplished, and, in fact, where to begin? How can needed transpersonal and global, paradigmatic, spirituality sub-shifts be effectively "triggered" in a "me generation" in the throes of a "spiritual crisis?"

**"IN ANY AFFAIR. . .FIRST SAY TO YOURSELF WHAT YOU WOULD BE, AND THEN DO WHAT YOU HAVE TO DO."**

There is a bold, revolutionary, new approach now on the historical table for attempting to produce the enhanced global spirituality that will be needed to save nature, society, and perhaps even the earth in the 21<sup>st</sup> century. The new approach is based on a belief that in attempting to produce that enhanced spirituality, in many or even most people today, it may be more productive to emphasize beginning with cosmic spirituality and proceed in a "top down" way to global spirituality, than to emphasize beginning with transpersonal spirituality and proceed in a bottom-up way!

Carl Sagan was a major early advocate of "the new approach" in the 1980's and the 1990's, as evidenced by his science fiction novel "Contact"; the movie version of that novel, also titled Contact; and his television series, Cosmos; all directed toward the general public. An example of Sagan's use of "the new approach" can be found in the movie version of "Contact" where as a scientific atheist he seemingly speaks through the main character, Ellie Arroway, also an avowed scientific atheist, to say,

"I had an experience I can't prove, I can't even explain it, but everything that I know as a human being, everything that I am, tells me that it was real. I was part of something wonderful, something that changed me forever; a vision of the universe that tells us undeniably how tiny, and insignificant, and how rare and precious we all are, a vision that tells us we belong to something that is greater than ourselves. That we are not, that none of us are alone. . ."<sup>2</sup>

More recently, the leading, best known, and most popular advocate of “the new approach” is arguably Brian Swimme, a mathematical cosmologist and scientific educator. In general, Swimme astutely reminds us of the “obvious” today, by pointing out that “. . . We are the *first generation* to live with an empirical view of the origin of the universe. We are the *first humans* to look into the night sky and *see* the birth of stars, the birth of galaxies, the birth of the Cosmos as a whole. *Our future as a species will be forged within this new story of the world.*”<sup>3</sup>

However, in a more pragmatic vein, he furthermore maintains that “this new story of the world” can be used to produce “a new human being” who “can learn to peacefully coexist with others and with nature.” And, more pointedly, Swimme claims that “. . . Our new challenge is to reinvent our civilization. . . The major institutions of the modern world. . . need to be re-imagined within an intelligent, self-organizing, living universe, so that instead of degrading the Earth’s life systems, humanity might learn to join the enveloping community of living things in a mutually-enhancing manner.”

Both Sagan and Swimme obviously agree with Plato (428-348 B.C.E.), who once said that “All philosophy begins in wonder.” For, in their educational efforts, both Sagan and Swimme have used cosmic wonder, mystery, and awe to “trigger” their attempts to promote a top-down spirituality shift from cosmic spirituality to global and transpersonal spirituality. Some of Sagan’s major efforts in that regard have just been outlined. Swimme has also uniquely used a variety of innovative concepts, terms, phrases, and examples “as triggers” in his own educational efforts, including “the-all-nourishing abyss”, “the power of the universe flowing through us”, “omnicentricity”, “The Universe Is A Green Dragon”, etc.

Like Carl Sagan (an astronomer), Brian Swimme (a mathematical cosmologist), and some other scientists, the author (a chemist) has also had “profound experiences of awe and reverence before the universe.” [Note: Unlike Sagan, the author maintains that such experiences have greatly expanded and strengthened his own theism!] The author has also peered into the aforementioned “cloudy crystal ball” where he has diligently tried to see our global future as clearly as possible. And thus, because he has independently come to the same conclusions and contentions as Sagan, Swimme, and others, he also endorses using “the new approach” to try to produce the enhanced global spirituality he believes is now needed in our age.

And, also like Sagan, Swimme, and others, the author has also extensively directed the new approach toward the general public, in as non-technical and non-mathematical ways as possible. In his own efforts in that regard, the author has uniquely used a chemical emphasis in his own “triggers”, using such innovative concepts, terms, phrases, and examples as the Ionians, natural theology, the argument from design, the fine-tuning of the Cosmos, “cosmic holism”, the periodic table, carbon, water, snowflakes, Michael Faraday, humor, quotations, etc.

There, of course, have been, are, and will be many skeptics, critics, and dissenters who do not support the conclusions and contentions that have now been outlined in this paper. Some of those people will maintain that there is no “pragmatic explosion” and “environmental crisis”, and that the “overstated” global problems which do exist can eventually be resolved simply with the application of more science and technology.

On the other hand, there are those who find the “pragmatic explosion” and “the environmental crisis” so overwhelming, threatening, and disorientating that, in a head-in-the-sand response, they declare themselves powerless to help, and thus do little or nothing to try to resolve them. And, in the same vein, there are those who, for religious or other reasons, accept or even endorse our growing global problems as being inevitable, and in a too-little-too-late response also do little or nothing to resolve them. Still others, citing all of the reasons outlined earlier in the paper, contend that any approach to our global problems that begins with, and/or is based on, enhanced spirituality, is unrealistic and doomed to failure. And, still others may endorse enhanced spirituality as a response to our global problems, but, for whatever the reasons do not endorse the new top-down approach advocated by Carl Sagan, Brian Swimme, the author, and others.

The author would briefly reply to all such skepticism, criticism, and opposition with a series of counter-questions. First of all, to those who believe that the “pragmatic explosion” and “the environmental crisis” are overstated, when was the last time you peered into “the cloudy crystal ball” filled with reputable prognoses of the future, and comprehensively tried to foresee that future? More to the point, when was the last time you thought about the carrying capacity of the earth? And, when you are faced with a potentially serious situation, do you believe it is better to error on the side of caution or optimism? To those who believe that “more” science and technology alone can solve all of our problems, were Carl Sagan and those many other scientists who have claimed that science and technology bear a major responsibility for creating those problems right or wrong? Why? To those who claim that the “pragmatic explosion” and “the environmental crisis” cannot or should not be resolved, when was the last time you checked your care level and caring capacity for the earth and the future?

To those who question the value of trying to enhance global spirituality, and/or more specifically, using the new top-down approach to generate that enhanced global spirituality, the author would ask what is *your* answer and/or approach to resolving our global problems? Whatever the answer and/or approach is that your advocate, the author would not only exhort you to ardently promote it, but also offer his encouragement and support in that regard as well!

However, to those who, for whatever the reasons, maintain that an enhanced global spirituality approach to solving our global problems is unrealistic and doomed to failure, the author would like to make several additional, provocative, probably unexpected comments. First of all, he would point to the fact that the human brain is now generally considered to be the most complex material object we know of in the Cosmos! Secondly, there is a growing consensus in science today that, while all of our physical characteristics are encoded in our DNA, many of our mental characteristics must be

somehow encoded there as well, and then “hard-wired” into our brain before and after birth! And thirdly, there is enough growing, research-based evidence now available to at least argue that our brains are hard-wired for spirituality!

Such recent research-based evidence includes identification of where and how in the brain spiritual thought sub-shifts from me to cosmic unity are “triggered” and occur,<sup>4</sup> how recently-identified “spindle cells” in the human brain may enable and/or participate in such thought,<sup>5</sup> the possible role of the subconscious “secret” mind in spirituality, and how “the God gene(s)” may universally compel spiritualistic thought.<sup>7</sup> Based on these early recent developments in “neuro-theology”, it seems reasonable to predict that there may be dramatic, and perhaps even staggering, new knowledge and understanding on the way which regard to why, when, and how we think in a spiritual way!

Such new knowledge and information could conceivably provide valuable new, specific, more-focused insights into how to “trigger” the three, paradigmatic, spiritualistic sub-shifts, or even the “quantum leap” in spirituality, outlined earlier in the paper. And, it could thus also provide valuable new, specific, more-focused insights into how to more effectively “trigger” such spirituality shifts than in the early experimental efforts of Carl Sagan, Brian Swimme, the author, and others to date!

## **IN CONCLUSION**

In closing, the author would again state his contentions that science and religion, the two most powerful influences in human history, not only have an opportunity today, but an historical responsibility and even mandate as well, to address the global problems of our age and thus our global future. He also maintains that the key to meaningfully molding and even saving the future lies in the relationship of science and religion and thus in the bridges that can be built between them.

The author would further maintain that the early, still-evolving, global science/religion movement therefore stands at a crossroads today. On the one hand it can continue into the future on a path that emphasizes scholarly endeavor. Or, on the other hand, it can turn onto a path that emphasizes scholarly/pragmatic endeavor based on continuing, comprehensive analyses of the reputable prognoses found in “the cloudy crystal ball” in which our global future can be sought and discerned.

The author strongly urges the science/religion movement to take the scholarly/ pragmatic path! For, at a minimum, even if the movement can’t help prevent us from further damaging or even destroying society, the planet, and the future, the author maintains the movement also has an historical opportunity, responsibility, and even mandate to at least inform people about what our global problems are, how they could be addressed, and the alternative futures that are available. And, in terms of its own future, shouldn’t the science/religion movement try to assess our global problems, and the possible future state of the planet, in an effort to at least evaluate and envision the “ground” in which it hopes to plant its “visionary seeds?”

In view of advocating that the science/religion movement now take a new scholarly/pragmatic path, the author would like to suggest a possible first major step in that regard. And thus, he calls for a future Metanexus Institute Conference to be centered on the crucial questions of what the “stated” goals of the science/religion movement should now be, and what should happen in the future if those goals are met? Such a conference might well be patterned on the goals, themes, and topics of a pioneering conference held in that regard, titled “Religion And Science: The Questions That Shape The Future”, sponsored by the Zygon Center For Science And Religion, held May 1-2, 2003, in Chicago. The goal of that conference was to bring scientists, theologians, philosophers, and other interested persons together to specifically examine “the future of the science and religion dialogue.”

Overall, the author maintains that dramatic times call for dramatic measures, and that such measures are now long overdue! For, as H.G. Wells said earlier in the 20<sup>th</sup> century, “There is now a race on between education and catastrophe!” And, as environmental activist, Petra Kelly said late in the 20<sup>th</sup> century, “If we don’t now do the impossible, we will be faced with the unthinkable!”

#### REFERENCES

1. The quotations, details, and references cited in the author’s “little-known but extremely-important historical story” can be found in an article titled “To Avert A Common Danger”, by Carl Sagan, in the March 1, 1992 issue of Parade Magazine, pages 10-14.
2. Quoted in “The Hand of God”, edited by Michael Reagon, Andrews McMeel Publishing, Kansas City, Missouri, 1999, p. 56.
3. For Brian Swimme’s quotations see “The Hidden Heart of the Cosmos”, Brian Swimme, Orbis Books, Maryknoll, New York, 1996.
4. For a summary of such research see the feature article, “God and the Brain: How We’re Hardwired For Spirituality,” Newsweek magazine, May 7, 2001.
5. For a summary of such research see the article, “Humanity? Maybe It’s In The Wiring,” The New York Times, December 9, 2003.
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7. See “The God Gene: How Faith Is Hardwired Into Our Genes,” by Dean Hamer, Doubleday, New York, 2004. Also see the feature article, “The God Gene,” Time magazine, October 24, 2004.