

Reflecting on Kevin Sharpe, Taede Smedes, and the Dialogue

with Nathan J. Hallanger, "Science and Serious Theology"; Varadaraja V. Raman, "Changing Landscape in Science-Religion Dialogues"

CHANGING LANDSCAPE IN SCIENCE-RELIGION DIALOGUES

by Varadaraja V. Raman

Abstract. One peculiarity of the broad theme of science-religion dialogues is that while it has been growing significantly, it seems to be moving farther and farther away from its goal of establishing bridges and understandings between the two enterprises. This essay explores this unhappy situation, with particular reference to the works of two scholars who have been critical of some of the pioneer theologians and have suggested some radically new approaches to the issues.

Keywords: exopotent and endopotent truths; key-theology; NÖMA; ratio-alatry; science-religion dialogues; scientism; secularization of theology; Templeton Foundation

Science and religion, two lofty expressions of the human spirit, were for long centuries meaningfully engaged in the human quest for understanding and evaluating the universe in the context of the human presence in it. They did this in many different cultures, most often in happy harmony. Both brought to human experience insightful understanding of the world as well as joyful elements. They gave pictures of the world and its origins along with visions of how humans may have come to be in a cold and colorless cosmos. They uncovered planetary periodicities and formulated principles of right and wrong in thought, word, and deed. They introduced ways of reckoning day and week and month and also brought meaning and purpose to human life. Science made us aware of aspects of the

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[*Zygon*, vol. 45, no. 1 (March 2010)]

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www.zygonjournal.org

physical world we had never before imagined, while religions made us sensitive to visions beyond material existence, beyond eating and drinking, enjoying and propagating.

With the advent of modern science in the sixteenth and seventeenth centuries in Europe, science and religion began to drift apart. Science came up with interpretations of the physical world that varied from what traditional religions had been saying. Disagreements and arguments inevitably ensued. Science and religion soon became mutually incompatible endeavors at the explanatory level, certainly within the matrix of Western Christianity where modern science first germinated.

First it was heliocentric astronomy, then it was fossil geology, and finally evolutionary biology; in each instance there were serious and significant disagreements between scriptural affirmations and empirical revelations, between doctrinal assertions and scientific findings. This led to unhappy confrontations. But even the detailed chronicler of the gory confrontations between science and religion wrote, by the close of the nineteenth century,

My conviction is that Science, though it has evidently conquered Dogmatic Theology based on biblical texts and ancient modes of thought, will go hand in hand with Religion, and that, although theological control will continue to diminish, Religion, as seen in the recognition of a Power in the universe, and not in ourselves which makes for righteousness, and in the Love of God and of our neighbor, will steadily grow stronger and stronger, not only in the American institutions of learning, but in the world at large. (White [1894] 1965, 27)

This was said because most thinkers understood at the time that there is much more to religion than cosmology, the age of the earth, and anthropogenesis. Although seldom articulated by combatants in our own times, generations of thinkers and creative scientists did not lose sight of this crucial truth. Even while practicing technical science they continued to be affiliated to their faith traditions in pious, respectful, and profoundly fulfilling modes. As one author summarized it, "Behind the orderly pattern in nature, behind the direction of cosmic evolution, many scientists see God. Their understanding of nature may be partial, insufficient, unclear, but the feeling that God is closer because of their research, brings a wonderful excitement and has deep religious meaning" (Vukanovic 1995, 7).

When the religious establishment persisted in insisting on prescientific worldviews about certain aspects of the phenomenal world, scientists generally ignored it because that did not interfere with their practice of science in any important way. Commentators on science and religion, much more than working scientists, were drawn to the divergent claims of science and religion on issues that had little to do with meaning, purpose, or divinity. Some of them announced and amplified the irreconcilable differences between scientific results and religious doctrines on matters pertaining to astronomy and zoology, propagating the impression that science and religion are essentially two irreconcilable institutions to both of which an in-

telligent person simply cannot owe allegiance in good conscience. Contrary to that view, a good many thinkers after Darwin's work was published, "leading representatives of Evangelicalism in the areas of science and theology . . . have on the whole offered more considered and articulate expressions of the tradition, and have in particular offered more thoughtful evaluations of the Darwinian episode" (Livingstone 1984, ix-x).

Matters became more serious in the first decades of the twentieth century with the rise of the fundamentalist movement in the United States. They came to a head in the (in)famous Scopes Trial in 1920. There, William Jennings Bryan, antievolutionist and lawyer for the fundamentalist school of thought, stated succinctly what it was all about: "I accept the Bible absolutely. I believe it was inspired by the Almighty, and he may have used language that could be understood at that time instead of using language that could not be understood until [defense attorney Clarence] Darrow was born" (Larson 2006, ed. 4). It is difficult to say if the outcome of the trial was a victory for science or for religion. John Scopes, a Tennessee high school teacher, was found guilty of violating a law that forbade the teaching of evolution. This victory in a courtroom may find an echo in the hearts of millions for whom religion is a powerful fount of meaning and shared joy, sacrament, and solace. Few believers give up their religion because courts declare that Darwinism is science, contrary to the objections of fervent fundamentalists. According to a news report in 2007, "Two-thirds in the poll said creationism, the idea that God created humans in their present form within the past 10,000 years, is definitely or probably true" (Lawrence 2007). In more recent versions of the Scopes trial, attempts to remove evolution from high school biology texts have not fared too well, contrary to sensationalist headlines such as "Anti-evolution teachings gain foothold in U.S. schools" (Badkhen 2004).

Darwinian evolution as the only genuine scientific view of anthropogenesis continues to be taught with impunity in colleges and universities in the country. Other views could have their place in the religious context, but they are in no way regarded as scientific either in universities or by biologists in the United States or in any scientifically literate country.

SCIENCE-RELIGION DIALOGUES IN THE TWENTIETH CENTURY

Thoughtful scientists and scientifically inclined thinkers often have felt that a serious schism between science and religion would not be in the best interest of society and civilization. Albert Einstein (1941) famously said that "a legitimate conflict between science and religion cannot exist. . . . Science without religion is lame, religion without science is blind." This is perhaps the most quoted formula (aside from $E = mc^2$) of that physicist. It has been praised and criticized a thousand times. But the essence of this statement is that as human beings we are incomplete without some science

and some religion. At one time this feeling was shared by many. That is why in the twentieth century serious efforts were initiated to build bridges of understanding and mutual respect between science and religion. Thus emerged the journals *Zygon* and *Science and Theology* and institutions such as the Institute on Religion in an Age of Science, the Metanexus Institute for Science and Religion, and International Society for Science and Religion. Scores of books exploring the relationship between science and religion began to be published. Countless interesting exchanges and clarifications have ensued from these and from the many conferences and Internet discussion groups dedicated to science-religion issues. All of these have become commonplace in today's scholarly landscape in the Western world. Similar movements have begun in other countries and religious traditions.

One might think that all these activities would have led to greater understanding and harmony between science and religion in the modern world. However, this is not the case. After more than half a century of such efforts, the subject of the role and relevance of science-and-religion is still a matter of considerable debate and controversy. If anything, the chasm between science and religion seems to be growing. As Jerry Coyne, an ardent admirer of Richard Dawkins, put it, "the real war is between rationalism and superstition. Science is but one form of rationalism, while religion is the most common form of superstition" (Coyne 2006, 15). Dawkins has compared the current scene to the Nazi threat of the 1930s. In his view, those who are cozy with religionists are like naive Neville Chamberlain (Dawkins 2006, 66). Sadly, a very similar view is held by uncompromising Islamic fundamentalists with regard to Muslims who hold dialogues with the West. Dawkins's virulence against religion, whether justified or not, reminds me of a statement in 1923 by T. T. Martin, a famous antievolution evangelist, to the effect that "the German soldiers who killed Belgian and French children with poisoned candy were angels compared to the teachers and textbook writers who corrupted the souls of children and thereby sentenced them to eternal death" (Lindberg and Numbers 1986, 398).

I want to point out that although one talks about science and religion, most of the conflicts are between (some) scientists and (some) theologians. The vast majority of the practitioners of religions go about their religious activities and commitments independently of, perhaps even indifferent to, what science and scientists say about these matters. Likewise, practicing scientists by and large are immersed in their various fields and subfields, indifferent to what religious people are saying about science and its limitations. But theologians who are eager to provide props for religion from the latest scientific theories and results often write apologetically on the doctrines of their affiliation to attune them to the most recent scientific refrain. Likewise, a few scientists, and many philosophers and commentators on religion, publish profusely on the congruence or divergence between

science and religion, either justifying religion on the basis of scientific worldviews or provocatively propagating their arguments against it. In other words, it appears that science can and does flourish in its own right in its own place, as religion does in its context. Most often, belligerent noise comes from those who have little understanding of science or little sensitivity for religion.

QUESTIONING THE VALUE AND MODE OF SCIENCE-RELIGION DIALOGUES

A growing number of scholars, both scientists and theologians, have begun to wonder whether the enterprise of building bridges between science and religion is worthwhile at all. Some of them have questioned the need or the rationale for such a field, others have challenged the presuppositions in these dialogues, and yet others have suggested alternative approaches to confronting the issues.

Already in the classical period, some thinkers felt that science and religion embody two quite different subject matters and therefore should not be mixed up in debates and truth claims. It is true that theology is an important theoretical and discursive dimension of religion, not unlike the philosophy of science. In the latter half of the twentieth century the idea of keeping the two enterprises apart was articulated with great clarity through the now well-known acronym NOMA (non-overlapping magisteria). Stephen Jay Gould suggested in what seemed to some a healthy compromise that “the magisterium of science covers the empirical realm: what the Universe is made of (fact) and why does it work in this way (theory). The magisterium of religion extends over questions of ultimate meaning and moral value. These two magisteria do not overlap, nor do they encompass all inquiry” (Gould 1999, 88).

Except for the acronym, the idea itself is not all that original. In the Hindu world human understanding is separated into *para* (lower) and *apara* (higher), as is made clear in several Upanishads. “The lower knowledge consists of all the empirical sciences and arts as also of such sacred knowledge as relates to things and enjoyments that perish. . . . The higher knowledge is described as that whereby what has not been heard of becomes heard of, what has not been thought of becomes thought of, what has not been understood becomes understood” (Mahadevan 1980, 30–31). In the Western tradition, since ancient times, there has been a distinction between *gnosis* and secular knowledge. “Gnosticism designates a broad variety of religious teachings . . . that were purported to offer knowledge of the otherwise hidden truth of total reality as the indispensable key to man’s salvation” (Jonas 1967, 336). Although this was a respectful way of drawing demarcation lines between science and religion, a growing number of atheist scientists and their followers in recent decades have been challenging religion

as a valid framework for any type of knowledge. Some have even called for its eradication from culture and civilization. This crusade against religion (if one may be permitted this inappropriate metaphor) is not new, either. It was there in ancient times also, but it gained steam in the eighteenth century. Religion bashers expose all that has been and still is harsh and horrible in extremist expressions of religions.

Some scientists and scholars have expressed serious concern about organizations that are heavily funding constructive engagements between science and religion. They feel that such generosity is motivated by schemes to perpetuate religion by bribing scholars and groups who propagate favorable versions of it. As if to counteract this, the Chinese Department of Propaganda prepared a paper to promote atheism and ban religions and superstitions. A news report stated that “the government must ‘be patient and meticulous in imperceptibly influencing the people,’ especially the young and leading party cadres.” The goal was to stop the “growth of religions, cultic organizations and superstitions and strengthen Marxist atheism” (Asia News 2002).

Every year, when the Templeton Foundation announces its annual award, articles and commentaries from scientifically committed scholars rebuke the organization for patting God-believing scientists on the back with monetary gifts. When the award was given to Charles Townes, physicist Lawrence Krauss wrote,

... the Templeton Foundation continued with its program to sponsor the notion that science can somehow ultimately reveal the existence of God by once again awarding its annual Templeton Prize for Progress in Religion not to a theologian, but to a physicist. Dr. Charles Townes, the winner, is a Nobel laureate whose scientific work has been of impeccable distinction; his prime contribution to religion appears to be his proudly proclaiming his belief in God as revealed through the beauty of nature. (Krauss 2005)

Although government’s financial support of science does exactly that for science, the two are not the same, the critics strongly feel, because in their view, science leads to light and religion to darkness.

TWO PERSPECTIVES

The increasing disillusionment with science-religion dialogues may be seen from two points of view. On the one hand, we may say that it is a reflection of the maturing of the new discipline of science-religion interface. As in any scholarly or scientific field, newer generations challenge the paradigm of the older ones, thus contributing to the further sharpening and development of the field. The other perspective sees this as an ominous development in that it could very well lead to the dismantling of the whole field, which, with all its shortcomings, does provide valuable elements for a meaningful framework in which both science and religion can coexist and perhaps even enrich, if not always resonate with, each other.

For better or for worse, science is bound to continue in human civilization, although the spirit of the quest may be in the minds of only a few. Also, from all indications, religions are here to stay—if anything, with even greater ardor among adherents than may be desirable for peace and understanding, at least in the foreseeable future. This invariably happens when religious feelings are turned into religious frenzy, a transformation that leaders can easily bring about or quench. A clearer understanding of scientific worldviews would foster the recognition of the commonality of humanity and the need for cooperative actions to protect the environment, endangered species, and the planet. Furthermore, a basic knowledge of astronomy and biology is likely to make one immune to the superstitions of ages appropriately called dark, to which society can easily revert if it gives the blind eye to science. Therefore, even while recognizing and respecting religious frameworks for our collective sanity and psychological well-being, developing that framework in the context of science can only be helpful. Nations with high potential for causing catastrophe need a refined religious outlook to restrain their urge to act irresponsibly. That refinement can be provided by the enlightened values implicit in science.

In view of all this, it would be unfortunate if we were to abandon science-religion dialogues. As one of a dozen members of the International Society for Science and Religion stated, “Does ‘science and religion’ matter? Of course it does, because it is an indispensable element in the great human quest for truth” (Ellis 2006, 31).

But how can religion and theology confront the subtle hegemony of science in the modern world?

THE SECULARIZATION OF THEOLOGY

In former times, theology largely meant appropriate, often rational, interpretation of scriptural passages and doctrines. Most early Christian theologians were devout and committed Christians. Some even attained sainthood. Often the practice of theory needed the sanction of an established institutional authority of a religion. In our own times, however, even secular scholars associated with universities rather than seminaries influence theology in the Christian and Hindu worlds. Thus, in the context of scholarship, it is fair to say that theology has been secularized.

Then again, whereas in the scientific world new ideas gain acceptance on the basis of their concordance with observed facts and verification by other scientists, in the world of theology new perspectives gain acceptance on the basis of how well its originators present their views. The persuasiveness of a scholar rather than empirical evidence for a thesis carries the weight. These ideas can then be challenged by other thinkers who present their differing visions with competing persuasiveness. This reinforces the secularization of theology because everyone, committed practitioner of the

faith or not, can present ideas and challenge them, irrespective of whether he or she is anchored to the religious tradition.

This is especially the case with spiritually inclined scientists who speak of God in nondenominational terms. In the first half of the twentieth century when physicists spoke of religions, usually they did not have any particular religion in mind. When Einstein said “God is subtle, but he is not malicious (*raffiniert ist der Herrgott aber beschofft ist er nicht*)” (Pais 1982, vi) he was not talking about the God of any particular religion. Likewise, astrophysicist Arthur Stanley Eddington was a “practical mystic” who saw in the laws of physics the presence of a transcendent divinity. He “was explicitly targeted (by Bertrand Russell) as a danger to the very existence of science” (Stanley 2007, 217). His contemporary James Jeans felt “the Great Architect of the Universe now begins to appear as a pure mathematician” (1930, 134).

EMPIRICAL RATHER THAN METAPHYSICAL PROOFS OF GOD

In traditional theology, various thinkers have metaphysical and rational proofs for the existence of God. In the age of science, empiricism is what determines the truth content of propositions. This has inspired some writers to formulate the idea and establish the existence of God through the *methodology* of science rather than through the traditional rational framework. A good example of this approach may be seen in Kevin Sharpe’s *The Science of God: Truth in the Age of Science* (2006). Sharpe has a rich background in mathematics as well as religion, holding doctorates in both. He founded and edited the *Science & Spirit* magazine, which served the cause of science-religion dialogues for many years. Enlightened religious person that he was, with more than a nodding acquaintance with science, Sharpe is among the modern thinkers who strive not only to bridge the gap between science and religion but also to weave one into the other, as it were. This is one motivation for *The Science of God*, in which he argues that theology should be in pursuit of new insights rather than wedded to tradition. Its concern should be with humanity at large rather than affiliated with denominational churches. Spirituality should be a major concern of theology. This book will likely create a stir in the theological community as it enriches the landscape of science-religion dialogues.

Sharpe contends that theology, the theoretical framework that provides a rationale for religious doctrines, should be set in a framework very similar to that of science. Just as biology, the science of life, is the systematic methodological study of life, geology is that of the earth, and dendrology is that of trees, so theology, the science of God, should be a systematic methodological study of God. Although Sharpe does not put it in these terms, this in effect is the goal of his book—that theology is just another branch of science, being the science of God.

He begins with interesting observations on the inadequacy of the perspectives of some of today's eminent (mostly Protestant Christian) theologians. His list includes Homes Rolston, John Polkinghorne, Arthur Peacocke, and Stuart Kaufmann. In later chapters he challenges Philip Clayton, Nancey Murphy, and Wentzel van Huyssteen, among others. All of these authors, Sharpe contends, suffer from one common serious drawback: They are anchored to their traditional religious schools and do not in their inquiries adopt scientific methodology, which calls for empirical confirmation of any thesis. At the outset he says "I challenge theology and the science-religion field to take science and its method seriously, and to do theology without a division between it and science" (2006, 2). So he introduces his notion of *key-theology*, the goal of which is to explore an external objective God exactly as science explores an external objective phenomenal world.

Sharpe insists that the time has come for theology to be as involved as science with what is observed in the physical world. A theology that is blind or deaf to geology, biology, and cosmology can go nowhere in the modern world, he rightly contends. Quoting from several recent thinkers, Sharpe maintains that "theology ought to concern itself with a God of objective events" (p. 19) to the point of adopting the Popperian falsification principle. Objective reality is what should be the ultimate authority for theology, he declares.

One important difference between this type of science (if key-theology can be so called) and regular science is that normally in science one does not set out to look for something the existence of which one is already certain. Sharpe's recommendations are for people who already believe in the existence of God. But theists usually have many other no less reliable reasons for accepting the existence of God, so this exercise may verify what one already knows—and it is very unlikely to falsify it. Sharpe's idea is that we can regard God as a hypothetical entity and set out to establish the correctness of the hypothesis empirically. Unfortunately, this hypothesis has been repudiated by the scientific establishment again and again in many ways. A recent book by an eminent physicist (Strenger 2007) presents arguments for rejecting it as a failed hypothesis.

Sharpe argues that although physics sees the world in mechanistic terms through mass, force, and momentum, key-theology sees it in terms of spirit, creator, and divine action with properties of values, love, and hope (Sharpe 2007, 157). This is a valid mode for distinguishing between science and theology and is precisely why the two cannot be made to conform to the same methodology. That is why it is unlikely that unbelievers in general and unbelieving scientists in particular will be persuaded about the existence of a vague and ill-defined God from such considerations as the roots of or the quest for happiness, as suggested by Sharpe.

Sharpe's book is one more in a long series of works written by thoughtful people since Thomas Aquinas to establish the existence of God in a rational framework. As Aquinas was versed in and inspired by Aristotelian science, many theologians today are versed in and inspired by modern science. Such efforts can have three effects. First, they may be satisfying to rationally minded theologians. Second, they will generate more reflections, discussions, and debates on the nature and existence of God, thus contributing to academic theology. Third, they are not likely to persuade unbelievers to theistic modes or believers into deeper faith,

Sharpe points out that science is concerned with "quantifiable physical reality." This is largely, but not universally, true. Many aspects of scientific fields such as archaeology, psychology, and anthropology involve nonquantifiable physical reality. But Sharpe is more to the mark in stating that key-theology is concerned with "spiritual or divine reality (God)" (2006, 157). However, in saying this, he is already assuming the reality of God, which he initially took as no more than a hypothesis.

More questionably, he says that in the conventional line of thinking the goal of theology is, like that of science, to *explain*—albeit a different dimension of reality. This is the root cause of many controversies between science and religion. Science tries to explain physical reality, but religion explores and provides a vehicle for *experiencing* other dimensions of reality that are essential for being fully human. To explain the world is intellectually satisfying, but to apprehend the world in terms of meaning, purpose, and values is spiritually fulfilling. When this latter is accomplished in a spiritual or divine framework, we have theology and religion. From this perspective, to look for a science of God would be like looking for a theology of science, which may not be a very productive enterprise.

In sum, Sharpe pleads for the primacy of scientific findings rather than revelation in the theological context. His bold demands, if adopted, would alter the color of theology in important ways and eventually also the doctrinal bases of religions. Sharpe reflects cogently and persuasively the trends of the time. When the history of the transformation of theology comes to be written in the future, Sharpe will surely be cited among the pioneers of the new-age theology that is in formation.

CRITICISM OF THEOLOGY AS SUCCUMBING TO THE HEGEMONY OF SCIENCE

Many influential theologians who have published in English during the past few decades began with rigorous scientific training. These scientifically trained and theologically informed scholars have written extensively in general terms about the parallels and dissimilarities between science and religion. They also have presented insightful perspectives on theology to make it more compatible with science or at least relevant in this scientific

age. Thanks to their work, the goals and tenets of Christian theology are being gradually, perhaps significantly, reshaped.

A strong criticism has been launched recently against such scholars to the effect that they analyze issues, explicitly or implicitly, in the naturalistic framework of science. An eloquent and erudite elaboration of this perspective is Taede A. Smedes's *Chaos, Complexity, and God: Divine Action and Scientism* (2004). Much of what Smedes says about the authors he criticizes is true, but I wonder about its fairness as criticism. For one thing, Smedes seems oblivious to the fact that the scientific slant of the targets of his criticism was unavoidable. Anyone who has had rigorous training in science is bound to be influenced by scientific worldviews when he or she writes on a related matter. This is as true a human limitation or strength as that one who has had rigorous theological training will analyze issues colored or enriched by the theological background. Such unconscious factors are inevitable and must be recognized, even expected, in any exchange. We may legitimately question the reasonableness of an argument, and not whether it is scientifically or theologically informed or influenced.

Second, and more important, one cannot ignore the scientific worldview and methodology when one is engaged in a science-religion dialogue, which is the main context in the writings of Ian Barbour, Peacocke, Polkinghorne, and others. Whether we like it or not, in our time it is not science that seeks compatibility with theology but the other way around. If theology chooses to affirm its standing in the age of science as a competing explanatory structure—which it is not required to do—it has to take into account science and science's criteria for truth, and this implicitly grants science first place.

CHARGE OF SCIENTISM

In rebuking the hegemony of science in science-religion dialogues Smedes declares scientism to be the serious flaw in the mindset of the theologians he disagrees with. This term has been variously defined, usually pejoratively as a narrow-minded tenet the mirror image of which in the religious world is bigotry. The word *scientism* is also often used by critics of science when they are unable to confront the intransigence of atheists, materialists, and naturalists. But it has never before been used to characterize the writings of the illustrious theologians whose works Smedes unsympathetically analyzes. Smedes succinctly characterizes scientism as stating that “science is the arbiter deciding between what is possible and what is not possible in our universe; between what is knowable for us and what is unknowable; and between what exists and what does not” (2004, 11). He also describes epistemic scientism as the view that “the only reality we can know is the reality that science has access to” and that “the only reality that exists is the one that science has access to” (p. 19). But it may not be that everyone who

relies on scientific methodology for acquiring reliable knowledge about the physical world and respects scientific theories in the interpretation of even theological matters is necessarily a victim of scientism. Even a deeply religious searcher of Truth may seek a spiritual basis within the scientific framework, if only with modest success. Those who are committed to scientific methodology and epistemology are no more victims of scientism than those who are deeply committed to religious perspectives are necessarily victims of bigotry. Peacocke himself condemned the imperiousness in our intellectual and cultural life (1993, 8) and lamented “scientific dominated culture” (p. 333).

No matter how one reproaches scientism and narrow scientists, it is difficult, indeed impossible, to ignore the fact that in the context of explaining natural phenomena, scientific research has been far more successful, effective, and fruitful than any other mode. Our knowledge and understanding of the physical world has increased a thousandfold since the rise of modern science in the sixteenth and seventeenth centuries. Unfortunately, many features of the world as revealed by the methodology of science are at considerable variance from traditional religious views on some matters. Therefore, if theology is to claim a place in our explanatory efforts vis-à-vis natural phenomena, it has to pay due regard to what science has uncovered about the physical world.

The scientific world functions on guidelines, or basic assumptions. Their justification lies largely in their consistency, universality, and fruitfulness. These assumptions are:

(1) Every aspect of perceived reality can be most effectively accounted for by following the scientific methodology, which involves careful observations with the aid of instruments when possible, the development of appropriate concepts and symbols to describe what has been observed, and the construction of theoretical models to explain the observed data in all their details.

(2) Entities and principles that cannot, even in principle, be brought within collective human observational capacities are beyond the purview of scientific analysis and approbation. Science does not accept the hypothetical existence of entities that cannot be detected through cogently defined and universally verifiable/falsifiable procedures.

(3) Every detail pertaining to every natural phenomenon can be explained by adopting scientific methodology, which is culture-independent.

If adherence to these principles is described as scientism, most scientists would plead guilty as charged. Conflicts between religion and science arise when truth-claims are made about natural phenomena that defy one or more of the above criteria.

Many thinkers consider it appropriate to retune theological perspectives in ways that are in consonance with, or at least do not blatantly contradict, the findings of modern science. If one is to engage in science-religion

dialogues, one has to give due weight to current scientific knowledge. Scientism arises when one insists on this in the context of matters that have nothing to do with the physical world. Writers such as Barbour, Polkinghorne, and Peacocke have tried to do this. Therefore, to accuse them of giving in to scientism does not seem to be a fair assessment of their work.

SMEDES'S ALTERNATIVE PROPOSAL

All through the history of the science-religion interface, some perceptive thinkers have argued that science and religion pertain to two quite different domains of knowledge and experience. Problems inevitably arise when one attempts to mix up these two meaningful expressions of the human spirit. Smedes's book is an eloquent defense of this thesis. After analyzing various instances in which he feels that, in the hands of some influential thinkers, current theology has fallen prey to the scientific paradigm, Smedes states the classical view that "religion constitutes a distinctive mode of discourse" (1997, 207). We cannot talk about God in the linguistic mode that we use to talk about geology or biology. Grace is different from a gift wrapped in a colorful package. Getting into heaven with an accumulation of good deeds is different from getting dividends from a stock investment or getting into a country with a valid visa.

As I see it, Smedes's position is as follows: Just as, starting from a set of axioms different from Euclid's, one can construct an altogether new geometry, so, too, starting from basic assumptions that differ from those of naturalistic science, one can arrive at a different worldview. Such a worldview can be no less rich, and far more fulfilling to the human spirit, than the scientific worldview, at least for those who embrace it wholeheartedly.

Although this may not be a very original thesis, it is a radical departure from most science-instigated theologies that have been dominant in the past few decades. It is very likely that this position will be adopted by an increasing number of theologians in the years to come, if only because it gives theology an independent status, unbound to the coattails of current science. The strength of this approach lies in its declaration of independence from the scientific paradigm, which, with all its merits and achievements in the context of the physical world, is ineffective in providing the meaning and fulfillment that religions do. It is fair to say that the probing scientific microscope often misses the point of what religion is all about (Raman 2009).

CONCLUDING THOUGHTS

Much confusion has arisen in Western culture—and is likely to occur eventually in other cultures—as a result of the enormous material successes of science. Newtonian mechanics and the eighteenth-century Enlightenment

have drastically transformed our mental picture of what constitutes physical reality and how it can be coherently and fruitfully accessed. We have been so intoxicated by the sheer manipulative power of the scientific-thinking paradigm that even the most precious dimensions of life and culture have been relegated to logical proofs, theories of origin, empirical sustainability, and so forth. Never mind that such matter-energy-based epistemology, which relegates morality to evolution and love to hormonal secretions, can lead society to amoral behavior with potential for considerable damage. Smedes argues, I think rightly, that as long as we function within this straitjacket we cannot understand, much less prove, spiritual and theological visions such as divine action, because this is something that can be grasped only by those who have faith that transcends, not to say defies, analytical proofs and laboratory confirmations.

Enunciations about God's being a delusion or God's not being great may be satisfying to those who have been disillusioned by the religion of their childhood years or outraged by the atrocities committed in the name of religion, but they answer little to the profound needs of millions of decent human beings all over the world. Some, like Terry Eagleton (2009), do not like either extreme—religionists for having misinterpreted and misapplied the true genius of religion, and bashers for not understanding the essence of religion. He decries the tragic humanism of Ditchkins (Dawkins plus Hitchens) and pleads for a liberal humanism that, while rejecting the untenable in religious beliefs, condemns the ugly accretions of pristine Christianity over the centuries, especially in modern times.

The ignoring of science altogether while doing theology is a perfectly valid approach if one adopts the view that theology, and matters pertaining to God, the hereafter, and the primacy of human consciousness in the universe can be meaningfully discussed and explored in a framework that is independent of the matter-energy transformations occurring in the physical universe, details of which may be left for science to explore. The value and relevance of life and laughter, love and caring, joy and sorrow, and a hundred other matters of immediate and meaningful significance carry enormous weight and interest, quite independently of when and how the universe came to be or whether human beings can trace their genealogy to primates of the animal kingdom. These matters have no relation to how science explains prayer and piety, hymns and holiness.

More important, the complete severance of theology from science suggests a new approach to discourses on God and divine action that often are blurred by ignoring the demarcation criteria between science and religion (Raman 2001). Such an independent approach can be enriching, valuable, and meaningful in the many transrational dimensions of religious experience that will never lose their relevance in culture and civilization. It also moves discussions away from *ratio-alatry*: the context-indifferent worship of reason, which is different from, though kin to, scientism.

This approach is used in many other contexts that enrich life, as in the enjoyment of art and poetry, music and literature—domains where truths are not of the scientific type but truths no less. A distinction between exopotent and endopotent truths becomes relevant in such contexts (Raman 1999). Such an approach to theology could spur interest in religion as a profound spiritual experience, distinct from the logical exercises that are of importance largely in the analytical domains of life.

Perhaps those who comment on religion—whether scientists, theologians, or philosophers—need to distinguish between the results of scientific methodology and what religious modes have yielded. Insofar as religions answer to fundamental yearnings of the human spirit, they are and will always be relevant in humans. There are dimensions of religion that transcend explanations and logical consistencies. We are extraordinarily complex beings, physically, mentally, psychologically, emotionally, and spiritually.

Rather than say, as some bridge builders tend to assert, that both science and religion approach the same truths along different paths, it is well to recognize the two as efforts to embrace different kinds of truths, where by *truth* we mean that which is deeply meaningful. Science is primarily concerned with external, observational, and collective truths, empirically verifiable and falsifiable truths, conditioned by two-valued logic. Religious truths are concerned with our humanness as biological beings, the primacy of human consciousness in a cold cosmos, the search for meaning, purpose, and community, and the formulation of values and ethics that are conducive to our sanity and well-being. Religious truths are anchored to tradition and carry the wisdom of centuries, and like scientific theories they too evolve. They are individually experiential and vouched for by profound inner certitudes that no amount of scientific degrading can diminish or destroy.

I conclude by drawing attention to a recent book by Willem Drees (2009) that is very relevant to the issues relating to science-religion dialogues in our time. This work is based on clear understanding of current debates and on knowledge of the relevant literature. Although written largely from a Judaeo-Christian perspective, it should prove to be of immense interest to those who are not philosophically antireligious or atheistic.

Why, then, should the average person who is deeply touched by religious affiliation in meaningful ways still trust scientifically derived results more than doctrinally proclaimed truths? There are at least three reasons. One is that scientific knowledge is exopotent—that is to say, it can be used to manipulate natural phenomena to human advantage. Science is practical, and it is fruitful. Another is that as an institution it has developed a methodology that leads to universally appealing truths that transcend culture and creed and seem to assure greater truth content, although scientific truths are essentially tentative interpretations of perceptually acquired

knowledge. And third, the scientific worldview has led to the ethical framework of the Enlightenment, which has shaped the face of the modern world.

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