

Idea Exchange / Is Science a Religion? /

Science and Religion Are Complementary

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The question presented is as follows: *Is science a type of religion?* The short answer is this: No. Science, rather than being a type of religion, is a *complement* of religion. This answer, standing alone, is naked assertion, and needs to be fleshed out and clothed with reasons and supporting evidence in order to become a full-fledged argument. In fine, the argument is as follows:

No. Science, rather than being a type of religion, is a complement of religion (Claim), given that science and religion each has its own domain of authority (Limits), especially considering the empirical nature of the scientific method (Evidence), and assuming that science is strictly empirical, dealing primarily, although not exclusively, with observable phenomena (Assumptions). If the objection is raised that science can theoretically replace religion and effectively perform its functions even better, science would still not constitute a "type of religion" because the respective functions of religion and science remain distinct, yet science and religion, ideally, can and should be consilient (Rebuttal).

Enduring Question

Is science a type of religion?

Nature is Not Supernature and Science Is Not Religion

Scientism: The Religion of Science

Science and Religion Are Complementary

(Note: The above "parts" of this argument are structured using the present writer's "CLEAR Argument Paradigm"; see "Religions Share Enduring Values," *World Religions: Belief, Culture, and Controversy.*) The argument will now be presented more fully.

Claim

The question posed (*Is science a type of religion?*) may strike some as an odd question to ask. Who would even pose this question? One answer is humanists, for many of whom naturalism, i.e. "natural religion," is a type of religion. The *Oxford English Dictionary* defines "naturalism" as "a system of morality or religion derived only from human reason and having no basis in revelation." Similarly, "natural religion" is defined as "a religious system or belief based on natural reason and observation rather than on supernatural revelation," as opposed, of course, to "revealed religion." But that is not the call of the question. This question (*Is science a type of religion?*) can hardly be discussed without first defining the terms. Unless it is meaningful, it is meaningless. Then what is "science"? And what, pray tell, is "religion"? Let's start with lexical definitions. The *Oxford English Dictionary* defines "science" as, *inter alia*:

A branch of study which is concerned either with a connected body of demonstrated truths or with observed facts systematically classified and more or less colligated by being brought under general laws, and which includes trustworthy methods for the discovery of new truth within its own domain.(4.) In modern use, often treated as synonymous with "Natural and Physical Science," and thus restricted to those branches of study that relate to the phenomena of the material universe and their laws, sometimes with implied exclusion of pure mathematics. This is now the dominant sense in ordinary use.(5b.)

Note here the emphasis on "method," and hence the familiar term, the "scientific method." By contrast, religion is not typically characterized as having a method. The *Oxford English Dictionary* defines "religion" as, *inter alia*:

Belief in or acknowledgement of some superhuman power or powers

(esp. a god or gods) which is typically manifested in obedience, reverence, and worship; such a belief as part of a system defining a code of living, esp. as a means of achieving spiritual or material improvement. (5a.) A particular system of faith and worship. (4a.) *fig.* A pursuit, interest, or movement, followed with great devotion. (4b.)

Here, science, as "those branches of study that relate to the phenomena of the material universe and their laws," bears no relation to religion as "a system defining a code of living, esp. as a means of achieving spiritual or material improvement." What relationship is there between these two spheres of endeavor? Very little. However, one may concede that the figurative sense of "religion" as a "pursuit, interest, or movement, followed with great devotion" may fairly characterize the "passion" and zeal with which scientist may engage in their respective quests for discovery.

lan Barbour proposed a fourfold typology of the relationship between science and religion: (1) the conflict view; (2) the integration view; (3) the dialogue view; and (4) the independence view.[1] Mikael Stenmark maps out these four science-religion models in "Ways of relating science and religion,"[2] with their respective characterizations in the present writer's own words:

- (a) The Irreconcilability Model: Science opposes religion, and vice versa.
- (b) The Reconciliation Model: Science engages religion, and vice versa.
- (c) The Independence Model: Science avoids religion, and vice versa.
- (d) The Replacement Model: Science supplants religion, and not vice versa.

A leading proponent of the "Replacement Model" is sociobiologist and two-time winner of the Pulitzer Prize, Edward O. Wilson, who, from his perspective as a scientific materialist, justifies his position so:

We are obliged by the deepest drives of the human spirit to make ourselves more than animated dust, and we must have a story to tell about where we came from, and why we are here. Could Holy Writ be just the first literate attempt to explain the universe and make ourselves significant within it? Perhaps science is a continuation or new and better-tested ground to attain the same end. If so, then in that sense science is religion liberated and writ large.[3]

Here, Wilson sees science and religion as addressing the same questions, with science providing more satisfactory and enduring answers. Among proponents of the Reconciliation Model, which allows for some degree of integration between scientific and religious perspectives, some advocate the religion-priority reformative view (the "weak" view). For instance, where there is tension between science and religion as to evolutionary theory, if science were to modify significant parts of the theory, then the conflict could be resolved. Alternatively, proponents of the science-priority reformative perspective can harmonize the dissonance between science and religion as to the conception of God, if religion were to reformulate certain aspects of its theology to render it more compatible with a scientific view (the "strong" view).

There's a third positive as well: the supportive view of the Reconciliation Model, which is that science and religion can reciprocally support or confirm each other in one way or another. For this, a certain measure of "fine-tuning" is needed, if only to maintain consistency between science and religion. The Reconciliation Model, moreover, presupposes contact between scientific circles and faith-communities. Science modifies its claims only when evidence requires altering a formerly widely held theory, in what Thomas Kuhn (author of *The Structure of Scientific Revolutions* and the most influential historian/philosopher of science of the past 50 years) has famously described as "paradigm-shifts." Religion is more often the stubborn party to the debate, asserting revelatory authority for its claims. To the extent that religion makes such claims on behalf of "God," it's hard to argue with God!

Therefore, based on this paradigm, the presenting question (*Is science a type of religion?*) effectively asks whether the "Replacement Model" is an attractive option, and our answer is a resounding, "No." In further response to the question, the "Reconciliation Model" is preferred, based, in part, on some of the reasoning found in the "Independence Model." Thus our answer: *Science and religion are complementary*.

Evidence

Science and religion have a long history of conflict and concord, along with variable elements of alienation, alienation, dialogue, compromise and making of common cause. So the proposition (*Science and religion are complementary*) is more a prescriptive rather than descriptive statement. In addressing the complex historical and contemporary relationships between science and religion, it's important to distinguish views among and within particular religions.

Christianity, for instance, does not present a monolithic science-religion model, for there are a plurality of Christian positions. Even if, for the sake of argument, a definitive "Christian" perspective could be identified as the prevailing view, surely it would be distinct from a theoretically normative Buddhist perspective. While it is possible to speak of religion in the abstract, generic sense for theoretical purposes, in reality the world religions are diverse and may articulate various positions, whether or not those perspectives may be said to harmonize or conflict with one another.

According to Stenmark,[4] the Dalai Lama apparently advocates a reformative-supportive view in the relationship between Buddhism and science. Another notable example of the Reconciliation Model among world religions is Buddhist modernism or "scientific Buddhism" which, as David L. McMahan has argued, involves the transformation of an ancient tradition brought into direct contact with modernity, thereby creating "a new Buddhism" in the process of reconstructing Buddhism in scientific rationalist terms in response to the crisis posed by modernity:

To return to the overly simple question of whether Buddhism, in fact, is compatible with science or not--as I have suggested, a historian of religion must ask the question differently. Let us try it this way: Are there elements of Buddhism that, when taken up in the context of modern science and developed and adapted along the lines of scientific thinking, become compatible with science? Clearly, yes. This "taking up" of selected elements of a tradition in the context of another tradition is how religions develop, adapt, change, and come to occupy different ideological niches from the ones they evolved in. The taking up and development of Buddhism in the context of the aforementioned three discourses of modernity--scientific rationalism, Romanticism, and Christianity--has created a new Buddhism, a hybrid that is adapted to all three discourses and is able to both complement and criticize them.[5]

Arguably the fullest and finest religious example of the Reconciliation Model is that advocated by the Baha'i Faith, one of, if not the youngest the independent world religions. A fundamental Baha'i principle is the "harmony of science and religion." Abdu'l-Baha (1844-1921) states:

And among the teachings of Baha'u'llah [prophet-founder of the Baha'i Faith] is that religion must be in conformity with science and reason, so that it may influence the hearts of men. ("Tablet to the Hague")[6]

Scientific knowledge is the highest attainment upon the human plane, for science is the discoverer of realities. It is of two kinds: material and spiritual. Material science is the investigation of natural phenomena; divine science is the discovery and realization of spiritual verities. The world of humanity must acquire both. A bird has two wings; it cannot fly with one. Material and spiritual science are the two wings of human uplift and attainment. Both are necessary--one the natural, the other supernatural; one material, the other divine. By the divine we mean the discovery of the mysteries of God, the comprehension of spiritual realities, the wisdom of God, inner significances of the heavenly religions and foundation of the law.[7]

The texts have been quoted at length to give a fair impression of the way in which scientific inquiry is effectively regarded as a divine gift and sacred undertaking. Here, Abdu'l-Baha's definition of "science" derives from Aristotelian philosophy, not contemporary definitions of science. The term "divine science" is invoked by Islam and the Catholic Church in reference to demonstrable spiritual truths. By "demonstrated" is meant that truth is determined by experience, not, *stricto sensu*, by scientific method or by logic. The Universal House of Justice (democratically elected Baha'i international council in Haifa, Israel) has stated that religion should be in conversation with the results of scientific method:

The insights and skills generated by scientific advance will have always to look to the guidance of spiritual and moral commitment to ensure their appropriate application; religious convictions, no matter how cherished they may be, must submit, willingly and gratefully, to impartial testing by scientific methods.[8]

Baha'i texts unequivocally insist that empirical science be accepted by religion, just as science ought to respect the moral authority of religion. Theology cannot trump scientific truth. Examples from Baha'i history demonstrate just how seriously this principle has been taken. Baha'i metaphorical interpretation of scriptures not literally in accord with science has a long

and rich history. Miracle stories, while claimed in some Baha'i primary sources, are disapproved of at the highest levels, starting with Baha'u'llah himself, who insisted that Baha'i truth-claims categorically exclude the miraculous. Baha'u'llah's discourses on alchemy are generally regarded as metaphorical. His discourses on medicine are understood as traditional, not scientific unless so proven. In Baha'i discourse today, Abdu'l-Baha's statements about "ether" are widely understood as implicating traditional terminology in order to make a point. Some of Abdu'l-Baha's statements on evolution are interpreted by Baha'i intellectuals as metaphorical, articulated to make a broader point. The Baha'i faith-community universally embraces modern medical science, and accords science as possessing its own sphere of authority. Yet one of the practical applications of the Baha'i principle of the harmony of science and religion is moral constraint, where religion ought to exert an ethical influence over the uses (and misuses) of science.

In a prescient Baha'i perspective, the distant future looks bright, as science and religion will foreseeably reconcile and, at key points of contact, work in concert. Shoghi Effendi (who led the Baha'i community from 1921 to 1957), envisioned the golden age of world civilization as a time when complete reconciliation between science and religion will finally be achieved: "In such a world society, science and religion, the two most potent forces in human life, will be reconciled, will cooperate, and will harmoniously develop."[9]

Space does not permit an inventory of specific examples of how other particular religious claims have been positively changed as a result of serious engagement with science, or of what happens when a religious claim is proved false by a scientific discovery and how a given religion has responded. One example may suffice, which is "Creationism." It is an ongoing debate, involving legislation and litigation in America, in which the courts serve as arbiters of the debate for social policy reasons, with the most famous case being *Edwards v. Aguillard*, 482 U.S. 578 (1987). In this landmark ruling, the U.S. Supreme Court held that Louisiana's "Creationism Act" was unconstitutional. In 2012, Louisiana was back in the news with the Louisiana Science Education Act, which allows teaching Creationism on the grounds it promotes critical thinking, thus attempting to circumvent the federal ban on the teaching of Creationism in public schools enunciated by the Supreme Court in the *Edwards* case.

These two examples, the modernist Baha'i religion and Buddhist modernism, demonstrate that the fact of religious diversity takes the discussion of the relationship between science and religion out of the abstract realm of generic "religion" into the real world of religious pluralism, with its spectral array of worldviews, both within and among the religious traditions themselves. In other words, any realistic discussion of science and religions necessarily involves consideration of the relationship of science and religions in the plural, and in the *plural of the plural* when divisions within a "single" religion itself further complicate the question.

Assumptions

Underlying the rationale for the Reconciliation Model in which science and religion are seen as ideally complementary, with the capability of being harmonized at key points of contact, are the values of maximizing all that religion and science have to offer, without sacrifice of one for the other, in order to conserve those moral, ethical, and humanitarian values for which religion has traditionally provided an ideological bedrock and social foundation.

Rebuttal

If the objection is raised that science can theoretically replace religion and effectively perform its functions even better, science would still not constitute a "type of religion" because the respective functions of religion and science remain distinct, yet science and religion, ideally, can and should be consilient. Edward O. Wilson, the sociobiologist cited previously as a proponent of the "Replacement Model," asserted that science could perform the same function as religion, i.e. "explain the universe and make ourselves significant within it" and thus serve as "science is religion liberated and writ large." Yet science and religion arguably have separate domains and methods as the basis of their respective knowledge claims.

Science and religion, generally speaking, serve complementary purposes. Obviously the primary function of positive science is to adopt empirical methods to establish facts and laws for an understanding of nature. To oversimplify, science deals with the physical, religion with the metaphysical. Science treats the material, religion the spiritual. Yet religion is equally concerned with the here-and-now; hence its emphasis on morals and ethics, both individually and collectively.

That said, science and religion have established much common ground in what may be optimistically characterized as inchoate consilience. "Scientific ethics" deals with such matters as social responsibility, whistle-blowing, stem cells, human subjects, animal subjects, bias, conflicts of interest, research misconduct, data management, collaboration, mentoring, as well as publication and peer review. Environmental science recognizes the fact that human survival depends on achieving sustainable systems, that environmental problems have social and cultural contexts, and that

understanding the role of economic as well as social and cultural factors is vital to the development of solutions. Evolutionary biology, as another example, has explored the evolution and psychology of altruism (unselfish behavior), of "biologicizing" ethics, of race as primarily a social construct (although a biological component does exist, which is how ancestry and forensic tests identify geographic origins), of applied science and moral philosophy, etc. Ethology, cognitive psychology, and neuroscience are also strongly invested in discerning the origins and applications of morality.

Often science-religion debates/dialogues have focused on epistemological and empirical issues. Beyond these inquiries lies the question of values. Religion, ideally, ought to foster the universal adoption of a universal ethic and common morality, which science is simply not equipped to do. That said, there is also the thorny issue of value-conflicts between science and religion, as John H. Evans has stated: "At least in the contemporary world, science should be viewed not only as a knowledge producer, but as an institution with values, interests and resources that competes with many others, including religion."[10]

In conclusion, the effort to resolve the tension between science and religion (*while bearing in mind that the so-called "conflict thesis" has often been overstated*, by asserting their distinctive purposes and methods) may oversimplify both the problem and the solution. To suggest that the fundamental conflict is between scientific realism and religious fundamentalism is simplistic in the extreme. There are a range of nuanced views, as Ian Barbour's fourfold typology of the relationship between science and religion eloquently suggests. Most religious statements that may appear to be "scientific" (but erroneously so by contemporary standards) should be understood within a historical context, since such postulations are consistent with the natural theology of their time in earlier centuries. Such statements should not be taken seriously as science, since they have nothing to do with science today. Notwithstanding, these distinctions have some utility purely as a general rule. As Albert Einstein famously said:

Now, even though the realms of religion and science in themselves are clearly marked off from each other, nevertheless there exist between the two strong reciprocal relationships and dependencies. Though religion may be that which determines the goal, it has, nevertheless, learned from science, in the broadest sense, what means will contribute to the attainment of the goals it has set up. But science can only be created by those who are thoroughly imbued with the aspiration toward truth and understanding. This source of feeling, however, springs from the sphere of religion. To this there also belongs the faith in the possibility that the regulations valid for the world of existence are rational, that is, comprehensible to reason. I cannot conceive of a genuine scientist without that profound faith. The situation may be expressed by an image: science without religion is lame, religion without science is blind.(emphasis added)[11]

John Polkinghorne has pointed to the plurality of perspectives among the world religions, by "the problems presented by the diversity of the world faiths."[12] Thus the interaction of science (by identifying which discipline) and religion (by identifying which religion) can more productively be analyzed by taking the domain-method distinction as a point of departure, and then focusing on specific issues and their concomitant dialogues, one at a time, moving from the abstract to the practical. Thus, if the proposition (*Science and religion are complementary*) is to serve its heuristic and generative purpose, then it's important to ask: *Which science? Which religion? Which issue? Which position? What values?*

The question presented (Is science a type of religion?) presupposes a humanist perspective. The answer given (Science and religion are complementary) is qualified, given that there is no such phenomenon as "religion" in the generic sense, except in the most abstract way. Two religious perspectives, those of the Dalai Lama/Buddhist modernism and the Baha'i Faith, were briefly adduced to illustrate the further complexity of the question. These two examples could, and should, be multiplied in order to provide a fuller picture. Science and Islam, science and Judaism, science and Hinduism are three further areas in inquiry that immediately come to mind. In speaking of Judaism, what further distinctions will emerge when Orthodox, Conservative, Reform, and Reconstructionist traditions are considered? All this requires further nuancing.

Beyond abstract reifications of "religion," the interactions of actual religious traditions ought to be examined on a case-by-case basis. The ideal of the complementarity of science and religion will become "real" if there is contact, interaction, and reciprocity between these empirical and ethical enterprises, given their respective spheres of influence, their domains, their purposes, and their methods. In the welter of religious pluralism, and given the fourfold responses that Barbour has identified in his typology, a range of possible responses, reconciliations, and reformulations will emerge, as though this were, in and of itself, a grand social experiment which is ongoing, and on the outcome of which our collective future may well depend.

Notes:

- [1] Ian G. Barbour, Religion and Science: Historical and Contemporary Issues (New York: HarperCollins), 1997.
- [2] Mikael Stenmark, "Ways of relating science and religion," in *The Cambridge Companion to Science and Religion*, ed. Peter Harrison (Cambridge: Cambridge University Press, 2010), 278-280.
- [3] Ibid., 280.
- [4] Ibid., 286.
- [5] David McMahan, "Modernity and the Discourse of Scientific Buddhism." *Journal of the American Academy of Religion* 72.4 (2004): 933.
- [6] Abdu'l-Baha, Selections From the Writings of 'Abdu'l-Bahfdeg; ("SWAB"), (Haifa: Baha'i World Centre, 1982), 299.
- [7] Abdu'l-Baha, The Promulgation of Universal Peace ("PUP"), (Wilmette, IL: Baha'i Publishing Trust, 1982), 138.
- [8] "To The World's Religious Leaders" (April 2002), http://www.bahai.org/selected-writings/message-worlds-religious-leaders.
- [9] Shoghi Effendi, The World Order of Baha'u'llah ("WOB"), (Wilmette, IL: Baha'i Publishing Trust, 1991), 203-204.
- [10] John H. Evans, "Science, Bioethics and Religion," in *The Cambridge Companion to Science and Religion*, ed. Peter Harrison (New York: Cambridge University Press, 2010), 222.
- [11] Albert Einstein, "Science and Religion." *Out of My Later Years: The Scientist, Philosopher, and Man Portrayed Through His Own Words* (New York: Philosophical Library, 1950), 26.
- [12] John Polkinghorne, Science and Religion in Quest of Truth (New Haven, CT: Yale University Press, 2011), 132-133.

About the Author

Dr. Christopher Buck (PhD, University of Toronto, 1996; JD, Thomas M. Cooley Law School, 2006), is a Pennsylvania attorney/independent scholar and a part-time instructor at Pennsylvania State University (Greater Allegheny). He has taught at Michigan State University (2000–2004), Quincy University (1999–2000), Millikin University (1997–1999), and Carleton University (1994–1996). Widely published, Buck also has authored book chapters as well as journal and encyclopedia articles on topics ranging from the comparative phenomenology of religions to African American studies. For use as classroom teaching tools, Buck is known for his "DREAMS" world religions paradigm—Doctrinal, Ritual, Ethical, Artistic, Mystical and Social dimensions of religion (with sub-dimensions)—for describing and comparing world religions, and for his "CLEAR" argument paradigm—Claim, Limits, Evidence, Assumptions and Rebuttal—a model to assist students in writing their own arguments. Buck's biography of Alain Locke—the first African American Rhodes Scholar (1907) and who Dr. Martin Luther King, Jr., in a 1968 speech, compared to Plato and Aristotle—presents Locke's philosophy of democracy in nine dimensions. Buck later edited and introduced previously unpublished essays and speeches by Alain Locke. In June 2011, Buck presented "Locke: Pioneer in Multiculturalism & Race Amity" at the National Race Amity Conference in Boston.

See more about Christopher Buck

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