Science and Religion: Antiscience and plagiarism defined and exemplified

K. Lalchhandama

Department of Zoology, Pachhunga University College, Aizawl 796001, India

Received 8 March 2016 | Accepted 19 March 2016


Marvelling at the way we come to understand the workings of the cosmos, the origin of the immense diversity of life forms, and the question of our place in the universe, history of science has intrigued me almost to the point of an obsession. As such, I am immensely fascinated by the title of Lalrinawma’s book Science and Religion, and not less intrigued when the Mizoram University decided to introduce history of science as an undergraduate course in 2012. My fascination is stirred by the fact that the author bears a Mizo name, a rarity in the field, on one hand, and the voluminous nature of the book, which I presumed would entail erudite scholarship that I would envy, on the other hand. I have had the opportunity to write a book and articles on the history of science as a ‘practising’ teacher, and I have developed an acute perception on the subject. The thesis I draw from my understanding of the subject is that the very origin of science is rooted in religion, or at least in religious conceptions, but science had departed in an astonishing fashion from the realm of religious ideals. In fact, the emergence of various scientific disciplines saw unprecedented resistance from organised religions. This is because science turned out to be an extremely successful enterprise in explicating nature as it is while on the same path demystifying generally held dogmas, which are at the heart of religious beliefs. I cannot stress boldly enough that religion has been a rowdy antagonist to scientific progress, because it needs to defend its sacred doctrines from the rescinding advancement of science. As I perceive, this is precisely what the book in hand is all about – an ideological struggle from the religion point of view.

When I actually flipped through the pages, my preconceived and revered fascination began to subside drastically. Generally, good writers can be easily recognised from the language constructions that make up their signature style, word plays, and unique syntax. What started to perturb me upon reading the text is that I found it unusually worrisome that some sentences are
exquisitely written, but many are what can only be described as abysmal. As to the latter comment, the languages are unarguably substandard, muddled with puny grammar and literary ineptitude. I started with spirited enthusiasm to end up only in a massive disappointment.

My theological reasoning – which is next to nothing, but I profess to be an avid reader – came into play. Specifically, the authorship of *genesis* sprung to mind, as theological consensus concur, *genesis* was written by multiple authors. Employing such knowledge, I became suspicious the book in hand could to have been multi-authored, in spite of solo authorship claimed by the author. And in Wikipedia, there is a technique of identifying plagiarism when there is a significant deviation in the prose style and vocabulary in a single article. Armed with these formidable contrivances, I discovered that I am right.

According to the ‘University-wide statement on plagiarism’ of the University of Cambridge, plagiarism is defined as ‘submitting as one’s own work, irrespective of intent to deceive, that
which derives in part or in its entirety from the work of others without due acknowledgement.

It involves:

- **quoting verbatim** another person’s work without due acknowledgement of the source;
- **paraphrasing** another person’s work by changing some of the words, or the order of the words, without due acknowledgement of the source;
- **using ideas** taken from someone else without reference to the originator;
- **cutting and pasting** from the Internet to make a pastiche of online sources;
- **submitting someone else’s work** as part of a candidate’s own without identifying clearly who did the work.

Plagiarism can occur in respect to all types of sources and media:

- text, illustrations, musical quotations, mathematical derivations, computer code, etc;
- material downloaded from websites or drawn from manuscripts or other media;
- published and unpublished material, including lecture handouts and other students’ work.

And according to Wikipedia policy, plagiarism can also arise even if the sourced content is closely paraphrased.

My initial scepticism flared while reading the section ‘Scientific Materialism’ (from p. 124 onwards). I was very curious as to how on earth did a theologian (confined in Mizoram, and lack scientific background whatsoever) know so much and write with such flair about Carl Sagan, Francis Crick, Jacques Monod, and Edward O. Wilson, scientists of my highest admiration? This really makes an impression that the author has either formed a lifelong passion in scientific literature, which I seriously doubt, or a slyness to reproduce a well-written source. My doubts are boosted by the undeniable fact that its citations in its references are highly technical and advanced, and are not easily comprehensible to lay people, nor are they available in this forlorn hills. Then I realised that similar information has been written in another book, in James E. Huchingson’s *Religion and the Natural Sciences: The Range of Engagement*. When I grabbed this book and turned to the chapter by Ian Barbour titled ‘Surveying the possibilities: ways of relating science and religion’, hey presto! the texts match word to word, punctuation to punctuation (minus few typographical omission). Textual comparison revealed that pages between 123 and 137 (e.g. Figs. 2-5), between 179-182, between 208 and 209, and between 245 and 259 are from Barbour’s article verbatim. Perhaps, the author likes so much of Barbour’s that he repeated the same text of pages 124-125 on 985-987, and in an abridged form on pages 206-207. The original source and the author is never mentioned. Further, it also directly uses Barbour’s references. In a nutshell, what we have here is a profusely plagiarised book.

By the way, Barbour (1923–2013) was a scientist, with PhD in physics from the University of Chicago, who later turned to theology, originated the discipline of science and religion, and won the Templeton Prize in 1999.

From this point onwards it is now relatively easy to google the texts from the book. And not to be taken by surprise anymore, almost every text can be found on the internet. For a few examples, the entire section ‘Science and Religion in the Modern World’ from page 251 to 259 is a text imported from Frederick Gregory’s article ‘Science and Religion in Western History’ without a passing mention of the original author. I dare say that the entire chapter 2 is a conglomerate of online information, most of which are from Wikipedia, Internet Encyclopedia of Philosophy, Routledge Encyclopedia of Philosophy, and New World Encyclopedia. Texts from www.reasonablefaith.org are dispersed throughout the book from beginning to the end. The colossal scientific discussions in volume 2 are mostly from the said websites and www.religion-online.org. Just random googling of several pages indicates that not a smidgen of the texts is original. I don’t know if it will be worth condemning
SURVEYING THE POSSIBILITIES
WAYS OF RELATING SCIENCE AND RELIGION
IAN BARBOUR

Ian Barbour has a degree in theology from Yale University and a Ph.D. in physics from the University of Chicago. He teaches in both fields at Carleton College in Minnesota. Barbour has written extensively in the area of science and religion. Issues in Science and Religion is his best-known book and a classic in its own right. This selection is taken from his most recent book, Religion in an Age of Science, volume one of the distinguished Gifford lectures that he delivered in 1989.

The first major challenge to religion in an age of science is the success of the methods of science. Science seems to provide the only reliable path to knowledge. Many people view science as objective, universal, rational, and based on solid observational evidence. Religion by contrast seems to be subjective, particulistic, emotional, and based on traditions or authorities that disagree with each other…. In order to give a systematic overview of the main options today, I have grouped them … under four headings: Conflict, Independence, Dialogue, and Integration. Particular authors may not fall neatly under any one heading; a person may agree with adherents of a given position on some issues but not on others. … After surveying these four broad patterns, I will suggest reasons for supporting Dialogue and, with some qualifications, certain versions of Integration.

Any view of the relationship of science and religion reflects philosophical assumptions. Our discussion must therefore draw from three disciplines, not just two: science (the empirical study of the order of nature), theology (critical reflection on the life and thought of the religious community), and philosophy, especially epistemology (analysis of the characteristics of knowledge) and metaphysics (analysis of the most general characteristics of reality). Theology deals primarily with religious beliefs, which must withstand scrutiny against the wider background of religious traditions that includes formal scriptures, communal rituals, individual experiences, and ethical norms. I will be primarily concerned with the epistemological assumptions of recent Western thought writing about the relationship between science and religious beliefs.

CONFLICT

Scientific materialism is at the opposite end of the theological spectrum from biblical literalism. But they share several characteristics that lead me to discuss them together. Both believe that there are serious conflicts between contemporary science and classical religious beliefs. Both seek knowledge with a sure foundation—that of logic and sense data, in the case of science, in the case of infallible scripture, in the other. They both claim that science and theology make rival literal statements about the same domain, the history of nature, so that one must choose between them. I will suggest that each represents a mode of science. Both positions fail to observe the proper boundaries of science. The scientific materialist starts from science but ends by making broad philosophical claims. The biblical literalist moves from theology to make claims about scientific matters. In both schools of thought, the differences between the two disciplines are not adequately respected.

In a fight between a boa constrictor and a wart hog, the victor, whichever it is, swallows the vanquished. In scientific materialism, science swallows religion. In biblical literalism, religion swallows science. The fight can be avoided if they occupy separate territories or if, as I will suggest, they each pursue more appropriate diets.3

Scientific Materialism

Scientific materialism makes two assertions: (1) the scientific method is the only reliable path to knowledge, (2) matter (or matter and energy) is the fundamental reality in the universe. The first is an epistemological assertion about the characteristics of inquiry and knowledge. The second is a metaphysical or ontological assertion about the characteristics of reality. The two assertions are linked by the assumption that only the entities and causes with which science deals are real; only science can progressively disclose the nature of the real.

Science and Religion

Scientific materialism is at the opposite end of the theological spectrum from biblical literalism. But they share several characteristics that lead us to discuss them together. Both believe that there are serious conflicts between contemporary science and classical religious beliefs. Both seek knowledge with a sure foundation—that of logic and sense data, on the one hand, that of infallible scripture, on the other. They both claim that science and theology make rival literal statements about the same domain, the history of nature, so that one must choose between them. Both positions fail to observe the proper boundaries of science. The scientific materialist starts from science but ends by making broad philosophical claims. The biblical literalist moves from theology to make claims about scientific matters. In both schools of thought, the differences between the two disciplines are not adequately respected.

In scientific materialism, science swallows religion. In biblical literalism, religion swallows science. The fight can be avoided if they occupy separate territories or if, can be suggested, they each pursue more appropriate diets.262

(a) Scientific Materialism

Scientific materialism makes two assertions: (1) The scientific method is the only reliable path to knowledge, (2) the matter is the fundamental reality in the universe.

The first is an epistemological assertion about the characteristics of inquiry and knowledge. The second is a metaphysical or ontological assertion about the characteristics of reality. The two assertions are linked by the assumption that only the entities and causes with which science deals are real; only science can progressively disclose the nature of the real.
In addition, many forms of materialism express reductionism. Epistemological reductionism claims that the laws and theories of all the sciences are in principle reducible to the laws of physics and chemistry. Metaphysical reductionism, however, is the claim that the component parts of any system constitute its most fundamental reality. The materialist believes that all phenomena will eventually be explained in terms of the actions of material components, which are the only causes that exist. Analysis of the parts of any system has, of course, been immensely useful in science, but I will suggest that the study of higher organizational levels in larger wholes is also valuable. Evolutionary naturalism sometimes avoids reductionism and holds that distinctive phenomena have emerged at higher levels of organization, but it shares the conviction that the scientific method is the only acceptable mode of inquiry.

Let us consider the assertion that the scientific method is the only reliable form of understanding. Science starts from reproducible public data. Theories are formulated and their implications are tested against experimental observations. Additional criteria of coherence, comprehensiveness, and fruitfulness influence choice among theories. Religious beliefs are not acceptable, in this view, because religion lacks such public data, such experimental testing, and such criteria of evaluation. Science alone is objective, open-minded, universal, cumulative, and progressive. Religious traditions, by contrast, are said to be subjective, closed-minded, parochial, uncritical, and resistant to change. We will see that historians and philosophers of science have questioned this idealized portrayal of science, but many scientists accept it and think it underlines the credibility of religious beliefs.

Among philosophers, logical positivism from the 1920s to the 1940s asserted that scientific discourse provides the norm for all meaningful language. It was said that the only meaningful statements (apart from abstract logical relations) are empirical propositions verifiable by sense data. Statements in ethics, metaphysics, and religion were said to be neither true nor false, but meaningless pseudo-statements, expressions of emotion or preference devoid of cognitive significance. Whole areas of human language and experience were thus eliminated from serious discussion because they were not subject to the verification that science was said to provide. But critics replied that sense data do not provide an indubitable starting point in science, for they are already conceptually organized and theory-laden. The interaction of observation and theory is more complex than the positivists had assumed. Moreover, the positivists had dismissed metaphysical questions but had often assumed a materialist metaphysics. Since Wittgenstein’s later writings, the linguistic analysts argued that science cannot be the norm for all meaningful discourse because language has many differing uses and functions.

Cosmos, is devoted to a fascinating presentation of the discoveries of modern astronomy, but at intervals he interjects his own philosophical commentary, for example, “The Cosmos is all that is or ever was or ever will be.” He says that the universe is eternal or else its source is simply unknowable. Sagan attacks Christian ideas of God at a number of points, arguing that the mystical and authoritarian claims threaten the objectivity of the scientific method, which he says is “universally applicable.” Nature replaces God as the object of
the author of copyright infringement by the source websites, because the weight of guilt will be unbearable. I shall not bother to if there is a single paragraph-long text not already available online, but then I sincerely beg the author’s pardon for endowing him of an accusation of excessive plagiarism, for he deserves it.

Let’s go backward to Chapter 1. From the very beginning the texts are from different websites. Why the opening paragraph is even from dhanabalakrishnan.blogspot.in? The author is clearly highly proficient in copy-pasting that sometimes he did from his own pasted texts – shall we call it double or self plagiarism? For instance, page 1 (para 2) has the same sentences as page 2 (para 5), as page 16 (para 5) and page 17 (para 2) do. Someone should have advised him to not use ‘vain repetitions, as the heathen do: for they think that they shall be heard for their much speaking’ (Mat 6:7), for it only shows that believers are not any better. Had I known him, I would have advised him to learn the use of ibid., op. cit., and loc. cit. for his numerous citations of the same references. For example, it will save him quite a lot of his time and energy for his citation on Wikipedia article ‘Bhopal disaster’ that he repeated over 25 times on pages 1397-1398, that too in a series.

As a whole, I suspect that this humongous tome is containing more than 98% plagiarised texts. But correct me if I am wrong, it could be only 98.5%. If all of the plagiarised texts are to be removed, the book would be reduced to a pamphlet. I nominate the author any benefit, awards or prizes if there be, for most professed plagiarised publication in a single instant, or for the wizard of copy-pasting. I don’t take it as my proudest moment to mention that this book is an excellent example of intellectual fraudulence.

The author’s sublime disclaimer in the acknowledgment (p. xiii), ‘I have of course fully referenced all ideas that I have knowingly quoted from others,’ is therefore an unabashed falsehood. As these evidences will disclose, the entire book is crammed and flushed with copied text from other sources in their original forms, and the author did not even hesitate to plagiarise the references which I am confident to assert that he never had cursory glance on them. It would be a good bet (and count me in if there is one) that he had never laid his eyes upon any of the books by Carl Sagan, Francis Collins, Simon Conway Morris, Paul Davis, Richard Dawkins, Edward O. Wilson, Francis Crick, Stephen Jay Gould, Stephen Hawking, Francisco J. Ayala, Ernst Mayr, Michael Ruse, Kenneth Miller, and Daniel C. Dennett listed in his references. The order will seem haphazard because it is exactly in the order he listed them, which in turn shows that he is ignorant of the system of organising references, or the meaning of alphabetical order, which every writer is bound to be familiar with.

I would love to make critical comments on some vital conclusions drawn in the book, such as:

- **Peace, justice, love and harmony are the core teachings of religion.** [No. *Au contraire*, modern terrorism is based on religious conflicts; the Catholic Church is infamous for its horrendous cases of child abuse; heretics were burnt at the stake – the scientist Giordano Bruno and the visionary Joan of Arc were my heroes; the Crusades; and Galileo’s imprisonment were hard to concede as harmonious and benevolence.]

- **Science has also failed to bring about permanent peace.** [Wow. This is not the goal of science, but evidences are clear that scientific advancements have increased morality and ethical awareness, while religion cannot be uncoupled from wars and ethnic conflicts.]

- **Physicists have often found it natural to infer the existence of an intelligent designer.** [Nay. When physicist like Albert Einstein said, “it is this knowledge and this emotion that constitute true religiosity. In this sense, and only this sense, I am a deeply religious man,” they loved to extend that ‘the idea of a personal God is a childlike one. You may call me an agnostic.’ Or Stephen Hawking’s quip on the creation of the Universe, saying, ‘This doesn’t
prove that there is no God, only that God is not necessary.' They love to play with the word 'God', as in Victor Stenger’s book *God: The Failed Hypothesis.*

It does not mean that fear and hope are the sources of religion... To argue that religion arose as a response to fear is fallacious. [Precisely the opposite. The fear of life’s tragedies and death, and the hope of better life in the afterlife are the basic driving forces of religion. Otherwise, who would worship any god and believe in heaven and hell? I wonder.]

Religion provides a point of reference for ethical decision. [The Judeo-Christian God advanced bloodshed, genocide, animal sacrifice, and even attempted a human sacrifice – but this case seemed to be a test of faith. (This Binding of Isaac makes me think that God has a dreadfully warped sense of humour.) The Bible commends slavery, and extreme fornication (Lot’s daughters remind us). And there is hell even for righteous people as long as they are heathens. Not at all glad tidings on ethical grounds.]

God created the universe because of his love... all matter is created by God. [We live in a tiny and insignificant corner the Milky Way galaxy, which is but one of one hundred billion galaxies, each consisting of thousands and thousands of stars and planets. God’s love must be quite extravagant. And then he created hell. From parasites to lions, we kill each other. Nature is intrinsically evil, as Alfred Lord Tennyson aptly observed, ‘nature, red in tooth and claw’. Theologians have not explained the rationale of evil and hell, if God created everything.]

But I would rather not because these are not the original ideas of the author, as they all stemmed from plagiarised texts, as such I would merely criticise the works of other people. And in a sense, I would feel so much like casting pearl before *Sus scrofa.* I am perfectly willing to put a generous wager that he does not understand most of what is in his book. In this respect, I have nothing respectable to comment on the author’s ability and capacity. As far as my judgement is concerned, he shows an inherent incompetence in the literature, lacks technical skill, no concern for publication ethics – and he talks about ethics – and no respect for author’s rights. To me, this book is the very fulfilment of the defining criteria of plagiarism, and thus marks an epitome of slothful scholarship as far as my conscience and impression are concerned. Compiling – I would not dare say writing – such a voluminous book with such a devious method will not serve education in the least sense. If it serves theology, then theology is a shallow and insolent discourse. In fact, it would not be a difficult task for any educated person to compile this kind of book provided one has a computer with an internet connection, and no concern for publication ethics. If I had a trifling influence on the author, the best I could have done is entreat him not to write the book in the first place.

While thinking of the balance and controversies between religion and science, it should be borne in mind that modern science as we know it is only a couple of centuries old, and religion (or more accurately religions) has been known as long as humankind had existed. Science has established beyond reasonable doubt that the structure of the universe, the composition of all organisms, and the geological events are all governed by testable scientific principles, and not by vague supernatural forces as previously believed by our ancestors. We can prove in more than one way that diseases are not inflicted as the curses of gods. To simply put, the Earth is no longer at the centre of the universe, or supported on the back of a giant turtle.

But there are still gullible people who are unmoved by scientific revelations, and would still grumble that ‘it’s turtle all the way down.’ If the measure of such gullibility is applied to Christianity, which the author implicitly defends, it will weigh down many of its miraculous claims. Scientifically, there can never be a virgin birth (though we have a phenomenon called parthenogenesis, but not for humans), walking on wa-
ter (I sincerely believe Dynamo did it on purpose on Thames by pure magic trick, yet I don’t know how he did it), exorcism (demon-possessed people in the Gospels indicate symptoms of infectious diseases), miracle healing, resurrection, and very frivolous superpower like the ability to curse dead a fig tree. If theologians cannot defend the authenticity of such accounts, the story will end up as myth – interesting myths, nonetheless. Personally, I cannot embrace a book as an indisputable truth with infallible words if its story starts with a talking snake and ends up with dragons and chimeric monsters. There is not a shred of evidence on the existence of these mythical animals, and I should know for I am a practising zoologist.

It is futile to argue against science, as this book explicitly struggles, if one has no fundamental knowledge of the working of scientific principles for the simple reason that science works. Religion by contrast has not produced an ounce of useful medication or device, failed to explain natural forces, and above all, it demands servile faith in supernaturalism, which no one had actually authenticated. Science is just the opposite. It is at the core of our livelihood, and the only means to our long-term survival as a species. That’s the beauty of it – science offers decent promises; while religion offers eternal damnation (taking the statistical estimate that most of us are hell-bent infidels destined for hell, based on Richard Dawkins’ maxim: ‘We are all atheists about most of the gods that humanity has ever believed in. Some of us just go one god further’). To my intellectual chagrin, the book has utterly failed to ignite in me any passion for further reading. On the contrary it merely consolidates my adherence to the philosophical aphorism: Theology is like being in a dark room and looking for a black cat that isn’t there, and shouting ‘I found it!’; whereas science is like being in a dark room looking for a black cat using a flashlight.

Chapter 8 seems to contain an unusually large chunks of the author’s ideas, not because of technical brilliancy, but because of grandiose statements and third-rate writings. No professional scientist will accede to the conclusion such as, ‘religion is believed to offer hope and significance in life here and after’ (p. 1399). There is not an iota of evidence on an afterlife to this day. As to the ‘hope and significance in life’ that religion claims to offer, I cannot think of but the immortal quote from Peter Medawar (a literary genius, a zoologist par excellence, a Nobel laureate, and who scientists of his own ilk dare called him the wittiest or cleverest man): ‘Religion has not sustained me on any of the occasions when the comfort it professes would have been most welcome.” It might be startling to note that he was never hostile to religion. As far as the relationship between science and religion is concerned, it is always an inimical one, creating a lasting and mutual conflict, and the chasm between them is ever widening; and it is always a grand story that science has the last laugh.

I would not even whinge on the chapter 8 title ‘Science Should Respect God/Religion for Better Future of the World’ but for the remark that it is one of the most outrageous proclamations. My impression is that with only a fraction of original ideas, the author is trying to belittle science as a whole. I shall not jibe too much, but that ignorance and plagiarised information of an epic proportion will hardly budge the fortress of science, the subject of which the author is utterly illiterate of. Science is genuinely a profane wisdom, an autocratic knowledge, and apathetic to social judgment or political pressures. Most sane people will agree with me, I believe, if I say that humanity is doing pretty well with science. But I cannot say the same for religion. In similar vein, another Nobel laureate Steven Weinberg did not flinch from saying, ‘Religion is an insult to human dignity. With or without it you would have good people doing good things and evil people doing evil things. But for good people to do evil things, that takes religion.’

If one is eager to waste Rs 2,100, buying this book is an effective choice. It would be demeaning to judge the author in terms of Plato’s statement that ‘wise men speak because they have something to say; fools because they have to say
something,’ but I would invariably say he is goaded to say something, but not having anything to say.

REFERENCES