

WAR & PEACE BETWEEN SCIENCE AND RELIGION : The Divine Arch After The Four Horsemen

Source Existentialist Society Lecture August 2010 Melbourne University

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Science and religion are two apparently quite independent pursuits or discourses people usually do not run together, or see much harmony between them. The reasons are many: some historical, some methodological, and some pure hubris and stand-off on both sides. In today's modern-secular times, as the more and more scientific heights are reached, the less people are inclined to turn and adhere to religion. That was indeed one of the hopes of the European Enlightenment, when truth-claims of religion based on faith and revelation were being subjected to close scrutiny and overlaid with truths of science, based on observations, mathematics and rational deliberations. At the same time, as the more people hold close to traditional, orthodox religious beliefs, the less likely they are to accept "questionable" scientific theories and ideas: often as missing the mark or prone to future rejection by the wiser intellectuals and more-informed authorities. Since Galen and Galileo's times, people have had trouble reconciling science and religion. Namely, religious institutions, mostly from the orthodox monotheistic-trinitarian traditions, the churches, such as the Vatican, have had difficulty accepting scientific conclusions into their doctrine. Consider, for example, the heliocentric theory that sought to replace the belief in the earth as the centre of the universe. Some would argue, therefore, that science correctly undermines fundamental religious beliefs on methodological grounds and notable cosmological advances in the natural sciences; thus, many religious people turn their back on science and accept the inevitability of a secular, faithless, God-less worldview. While this can cause religious people to disregard scientific

hypotheses, and want to return our world to the Golden Age of religious order, those who believe in the preeminence of science are also more likely to ignore religion, or debunk its claims, since it lacks grounding in empirical evidence and rational justification. Scientists and philosophers incline more towards the methods of science believe that vested parties in religion, church and theology in particular, refuse or resist subjecting their truths – from the little to the greatest – to systematic evidential scrutiny under the critical gaze of reason. But often the two sides talk past each other; there are those who hold the middle ground and argue that religious truths, such as belief in the existence of deity, supremely divine presence, and even a modicum of faith, can be rationally justified by using both the data from the sciences and philosophical arguments; or at least there can be reasonable grounds for holding such beliefs (I will consider two such positions, scientific theism and fideism). There are those who argue that one cannot be both scientifically and religiously minded at the same time. Rather, a person must either choose one or the other, or compromise their beliefs on one subject to better fit their beliefs in the other subject.

I will begin by exploring how modern science is said by its protagonists (most but not all) to undermine basic religious beliefs on methodological and cosmological grounds and the problems within each criticism. I will then consider five ways in which the distance between science and religion – particularly when considering Eastern religions about which most scientists and philosophers in the West remain ignorant or overlook, - can be bridged on rational considerations. In other words, I will attempt to answer the questions I have posed by evaluating the five ways in which science and religion can or sometimes do interact, and show how they all lead to one resolution that will decide whether a smart theologian may be able to use to rebut arguments posed by science. This may involve dialogue, which refers to interactions in which each discipline is able to

add-on and clarify points in the other disciplines beliefs leading to somewhat overlapping interests and ideas. Examples include scientific discoveries being attributed a divine hand by religious scientists such as Sir Isaac Newton and the Indian mathematician Ramanujan. Mutual criticism or critical toleration and quest for a common moral ground – as Immanuel Kant saw between religion and his prolegomenon for all future sciences. Finally, integration refers to a combination of the two disciplines such as process theology. These five interactions all have their own implications to both science and religion and in my opinion lead to a resolution between the two. First, then on the supposed conflict between science and religion. What's at issue?

The general perception is that science and religion pose a conflicting problem. Each comes with a radically different methodology for explaining the phenomena of the universe; science focusing on the observable, verifiable, falsifiable, and repeatable evidence; while religion bases all its ideologies on faith and scriptural evidence, people in both fields are in constant disagreement and believe that beliefs from the other discipline are at odds with their own. Is this necessarily true? Also, what are the implications of the new cosmological theories such as big bang theory and string theory and the resurgence of Atheism or the New Atheism they advocate? Has modern science eliminated the relevance and necessity for religion?

War or conflict refers to interactions where one discipline threatens to take over the legitimate concerns of the other or delegitimize and shun the others claims. This is the case with extreme theologians that completely disregard all science and extreme atheists such as the Four Horsemen. Separation refers to treating the two disciplines as completely different and unrelated spheres of study such as Stephen Jay Gould's Non-Overlapping Magisteria (NOMA).

To begin, war or conflict is the result of extremists of either religion or science shunning the ideas of the other and using their own beliefs to explain the

universe, or offer the best explanatory model. A prime example of conflict between religion and science is the Vatican attack on Galileo and Copernicus; we may also mention Bruno and Darwin. This conflict was between extreme theologians and their literal interpretation from biblical scriptures where they drew the conclusion that the Earth was the center of the universe and Galileo who supported Copernicus' claims that all the planets revolved around the sun. The religious extremists began to denounce Galileo and Copernicus and banned the writings of Copernicus from the church and denied what Galileo and Copernicus had proven. This is a situation where there was a conflict and almost war between the two disciplines because science was using its data to prove something that disagreed with literal interpretations of scriptural passages from the Bible. The religious extremists did not condone change and science disagreeing with what was accepted in their discipline and in a way science was trying to delegitimize what religion had already accepted. This disagreement is partially due to a literal interpretation of scriptural texts and the catholic church's failure to accept anything but their own doctrines. Though there is conflict, neither necessarily discredits the other. If one does interpret the bible as saying that the Earth is the center of the universe, then, yes, Galileo disproved that and maybe all religion is a lie, but that is just one interpretation of the bible. One can also say that the bible does not explicitly state what the center of the universe is and that both Galileo and the bible can agree. The Indian religions used the astronomical chartings of the heavens in which the sun was held to be the center of the universe for all intents and purposes because it helped them navigate their way around the seas and determine mathematically sound astrological predictions, some of which turned out to be rather true.

Further conflict arises when scientific methods are used to evaluate religion. In other words, when one tries to verify and falsify phenomena recorded in religion through the usual scientific scope they will find that religious beliefs do

not pass the usual tests.: testability proceeding with conjecture and refutation or falsifiability in Karl Popper's terms, and predictability being central criteria in science. For example, if one tries to use the same methods when trying to prove the existence of God or a divine force as they would for proving that planets rotate around the sun they will find no way to conclude that God does indeed exist. We may work up philosophical arguments of more abstract and *a priori* nature, such as the Ontological Arguments, but these have been show to be untenable on logical grounds. Other arguments may draw on the cosmological and teleological –r design with a purpose – proofs; but these fall within the ambit of sciences and their scrutiny have not been able to withstand criticism Through this specialized means of thinking scientists seem to forcefully make religion false, since there is no way to test scriptural and speculative theological claims to boot. As Richard Dawkins claims “A universe with a God would look quite different from a universe without one”¹ so we can not necessarily conclude that this universe is one with a God. The problem with this is that we have experienced only one universe² and this universe seems to be designed because of the phenomena we observe, even through science. Science seems to be uncovering the human limited understanding of some kind of intelligent blueprints for the universe, - even though scientists such as Paul Davis are loath to name that fine-attuned mathematical order as ‘God’ in popular religious understanding, for this would amount to forcing religion unto science. Now it seems that science and religion would be better off being separated since at this point it seems unfair to superimpose one method of thinking unto the other. There seems so little in common between the two domains of enquiry.

Separation of the two disciplines seems easier if we first define the core beliefs of each discipline. Since the bible does not explicitly speak of black holes existing or not existing and it does not speak of other such subjects, we must see

¹ Richard Dawkins, *The Nullifidian*, 1/8 (Dec. 1994)

²Ratzsche *The demise of religion* P.77

if the deeper core beliefs of religion constitute an actual disagreement with the tenets of science. We will take the Abrahamic religions as our test-case here.

The religious beliefs core³ includes:

1. A supernatural Person-God- who created the universe
2. God cares about humans
3. God ultimately controls cosmic and human history
4. God can intervene in earthly events
5. There is objective meaning/significance to human life, both now and possibly after death

Using this core, it is easy to see that religion and science do not conflict as much as initially thought, for science strictly speaking is not concerned with the questions that lead to these claims. There are three ways in which the separation can be sketched, which I will describe now.

The first view on two separate domains or “non-overlapping magisteria (NOMA for short)” (separate scientific and religious domains) claims that there are two realities, which is why science and religion can be considered to be two different animals. The two realities are made up of first, the spirit world, and second, the material world.⁴ This eliminates most conflicts between the two disciplines because in this scenario science does not undermine religion, but completely ignores it since they are concerned with separate domains. separate. Eugenie Scott emphasizes this point when he claims “Science has made a little deal with Science has made a little deal with itself; because you can’t put God in a test tube...science acts as if the supernatural did not exist”.⁵ If that claim is accepted, whether or not there actually exists a God is not connected to what scientists are concerned with when they answer the

³Ratzsche P.74

⁴ Warroll, John. "Science Discredits Religion." In *Contemporary Debates in Philosophy of Religion*, by Michale Peterson and Raymond Vanarragon, 59-72. Blackwell, 2004.

⁵ Eugenie Scott, "Darwin Prosecuted" *Creation/Evolution* 31/2 (Winter 1993), p. 43

how questions about the universe. Therefore science is designed not to conflict with religion on any level.

This separation leads to polarized views of the world though, some people cling only to science while other cling only to religion. According to John Warroll, there cannot be any reasonable talk of two realities. What is reality is what is true. For example, protons or electrons either do exist or do not exist. If they can be proved to exist, they are in reality. The other reality is basically a reality where there is not enough evidence to prove the existence of things that supposedly exist in that reality. It is not a question on where something fits, either in the spiritual or material world, but rather states that is empirically true in regards to what exists in reality, the one reality. The thing that cannot be proved is what theoretically exists in the alternate reality. But really, the true reality is filled with whatever can be empirically proven to exist. Otherwise, it exists in this fake “alternate” reality. If religion makes factual claims about the world, either these claims are material or spiritual, then science and religion are “two competing magesteria, not distinct ones.”⁶ In other words, according to this view of a spiritual and material reality, science and religion are a part of two competing realities (one being the real reality and the other the reality filled with the unproved or unprovable) instead of two distinct real realities, since there can only be one true reality.

The second view on the separate domains of NOMA holds that there is no conflict between science and religion because religion only steps in when science has gone to the farthest of its abilities of explanation. Basically, religion is used to answer what science cannot. For example, Newton’s theory may explain how the planets move, but his theory does not say who created the planets or they came about. Another example would be photosynthesis in plants. Though photosynthesis explains the cycles of plants, it does not say who created plants

⁶ Ibid.

in the first place. Worrall argues that religion should not interfere in “law-governed” reality (for it led many geniuses to make mistakes, like Newton).⁷ Instead, religion should only come into play when explaining who created what. Also, another problem with this second view on separate domains is that the line where science stops being able to explain things shifts. There is no set line of where religion is supposed to step in to explain the unexplainable by science. If ghee are unexplained mysteries we can be in awe of the same but it doesn’t become necessarily the sole business of religion to offer explanation where science might appear to fail or not forthcoming, for the present at least. The hesitancy in religion with his positions is that, the more science advances and the more things are explained through science, the more religious beliefs have to be compromised, set aside, or changed, to better accommodate new scientific findings. This may appear to not cause harm, but it makes science seem to trump religion. By fitting in religion only where science cannot step in, religion gives the impression of just being a mystical side-show and not a factual complement. Religion becomes a safety-net instead of a firm foundation. Furthermore, if religion is meant to carry off where science ends, then religion has to have some rational warrant.⁸ Assuming there is a standard which tells us if a claim is substantive or not, then religion would not be able to explain the inexplicable because then that would be nonsense. In Warroll’s words, “if all explanations involving substantive, scientific claims about the world must satisfy the same criteria, then it is simply nonsense to claim that religion can explain the scientifically inexplicable.”⁹ It is true that, as Brian Ellis puts it, “Normally, what is at issue in such a dispute is which metaphysical interpretation presents and best, most coherent and most comprehensive account of the empirically ascertainable

⁷ Warroll, John. "Science Discredits Religion." In *Contemporary Debates in Philosophy of Religion*, by Michale Peterson and Raymond Vanarragon, 59-72. Blackwell, 2004.

⁸ Warroll, John. "Science Discredits Religion." In *Contemporary Debates in Philosophy of Religion*, by Michale Peterson and Raymond Vanarragon, 59-72. Blackwell, 2004.

⁹ Ibid.

facts. But, in this case, there are additional considerations, for there are also our moral, aesthetic and epistemic values to be accounted for". But the absence of the latter traits in science do not make their claims any less rational or probable. While the previous two claims did propose two arguable points, the third view attracts the most defense.

The third view on NOMA says that religion does not describe much less explain anything (no descriptive-explanatory doctrine) about how the world is but rather what is and is not valuable in the world, what makes a life worthwhile¹⁰. The same traits that Ellis notes re: moral, aesthetic and epistemic as the history of the totality of our knowledge-systems. This view definitely separates science from religion since science does not deal with explaining what makes a life worth living or more aesthetically beautiful. Science and its technologically-riven worldview might remain bleak, spiritless and pitiless on these matters. However, religious people would not be able to refer to their beliefs for any sort of rectification. For example, a religious person would not be justified to say "love thy neighbor as yourself" because that is what God wants of human beings (let alone how we treat those we cast as our "other" and animals and plant-species too)¹¹. There has to be some means of justification. Besides making descriptive claims on well-known tenets, religious people would not be able to make claims about higher or supernatural beings. The problem with this is that some religious people cannot eliminate the "god" or the history of the universe/creation from their belief. They would not have the ability to express their rights of having a religion because they would have to suppress themselves of their beliefs. To some, religion is not just ideas and beliefs a person holds but a particular way of life. To some, religion is a lifestyle and is what makes life worth living. Now this seems contradictory to this third view of religion, since the third view is all about religion as a way to distinguish what is and is not important in the world. If a

¹⁰ Ibid.

¹¹ Ibid.

person's religious doctrine is what is important to them in the world and makes their life worth living, should they not be able to express and live in whichever way makes them happy? As theologian Ian Barbour said:

“[R]eligious language does indeed express and evoke distinctive attitudes. It does encourage self-commitment to a way of life; it acknowledges allegiance to ethical principles and affirms the intention to act in particular ways.¹²”

Immanuel Kant certainly looked benignly at religion for providing an impetus and exemplary promotion of moral values to the practical rationality and argued for holding onto religion within the limits of reason. Although religion does give people a way of living, it still should/needs to accept truths outside of that religion. For example, some religious people think of the creation story in the Bible as literal. However, scientific evidence has shown that the universe was not created 4000 years ago, as the Bible suggested, but rather it emerged from Big Bang billions and billions of years ago. Ian Barbour continued to say:

“Religious faith is not simply assent to the truth of propositions; but it does require the assumption that certain propositions are true. It would be unreasonable to adopt or recommend a way of life unless one believes that the universe is of such a character that this way of life is appropriate.¹³”

Once religion accepts scientific facts about the world, problems between science and religion are bound to come up for now they are in the same domain. When scientific truths are acknowledged and believed in religion, then a religious person's scientific attitude is definitely compromised. This is where religious belief and science quarrel.

¹² Warroll, John. "Science Discredits Religion." In *Contemporary Debates in Philosophy of Religion*, by Michale Peterson and Raymond Vanarragon, 59-72. Blackwell, 2004.

¹³ Warroll, John. "Science Discredits Religion." In *Contemporary Debates in Philosophy of Religion*, by Michale Peterson and Raymond Vanarragon, 59-72. Blackwell, 2004.

This separation leads to polarized views of the world though, some people cling only to science while other cling only to religion. According to Sigmund

It is generally known that Freud was hostile to the idea of religious experience...Freud concurs with Voltaire's assertion that if God did not exist, we would have to invent him. But what kind of God? Here Freud avers that our infantile experience of the personal parent is transferred onto the cosmos... Freud considers this transference illusory, in that what is characteristic of illusions is that they are derived from human wishes. In this sense they come close to psychiatric delusions." As a wish-fulfillment, then, the idea of God is emotionally compelling and does not require external verification. But where Freud is hoisted by his own petard is in thinking that his methodology itself is free of illusion. Part of his illusion is that "scientific work is the only road which leads us to a knowledge of reality outside ourselves." He ignores the reality of gnosis, the immediate, unmediated, phenomenological experience which we may find, for example, through art, intellectual structures, mystical experiences and the like.

Neo-Atheism of the Four Horsemen

And that seems true in the militancy and vociferousness with which the so-called New Atheism gang indiscriminately dismiss everything about religion, and every religion without understanding anything about the fundamentals of most of the world's religions. They target religions for their theistic claims and attributions – God, creation, sin, redemption, etc – forgetting that Buddhism is not particularly theistic, and along with Jainism – could be called atheistic or non-theistic; and Hinduism has toyed with every form of theism and a/- and non-theism alike (see my paper Hindu Doubts About God). The main advocates of the New Atheism

Church are Harris, Dennett, Dawkins, and Hitchens, otherwise known as the Four Horsemen of the Apocalypse – harbingers of God’s Last Judgment - (no woman or non-whites are part of the clique); they are self-proclaimed agents not of God but of the temple of science. Dawkins and Dennett argue about evolutionary biology while Hitchens claims religion has four main flaws – it misrepresents the origins of humankind and the cosmos, it demands unreasonable suppression of human nature it inclines people towards violence and blind submission to authority, and it is hostile to free inquiry. Harris attacks organized religions, the very idea of faith, and the problems of tolerance towards religious fundamentalism. The Horsemen joke that they have come to the end of the world of the nonsense that religion has contaminated it with and to prove their points and dominance of science at an intellectual level. (I acknowledge Jonathan Lai for summarizing). While they go themselves go to the other extreme, mirroring religious fundamentalists, non-the-less they do raise philosophical and intellectual challenges that anyone wishing to defend truths of religion would have to counter at some point. Let us look at two: origins of the universe and of life.

So the first issue between religious beliefs and science is on the specifics of the universe and its history.¹⁴ As mentioned before, one of the examples of a religion-science conflict is the story of the creation of the universe. According to Judeo-Christian beliefs, God created everything in the universe within six days, the seventh day as the day of rest. While some staunch conservative Judeo-Christians may believe in the literal translation of the text, science proves otherwise. In science, the universe did not occur within six days, but rather, billions of years. How can conservative Judeo-Christian believers compromise their religious beliefs on the creation of the universe with actual empirical

¹⁴ Ibid.

evidence science provides? But really, what difference does it make how long it took the universe to form or how it came to be? Not many Jews and Christians today take the time-line of creation literally; they consider it to be later interpolations. There probably wasn't even belief in one God, rather in many gods and of more pagan and feminine varieties. Be that as it may, religion was meant to answer who made what and why we should live our lives a certain way, not to explain how the world came to be. In religion, it should not matter how something came to be but who allowed that something to come into existence. Sometimes religious people get so caught up with defending biblical (or any other religious text) claims pertaining to the not-so-important things in religion. This is the reason why society has become either apathetic or scornful of any religion, because some people forget the point of religion and argue against empirical scientific evidence. Now let us take a look at science and its foundation in religious world views.

One important aspect of science is naturalism. Many Scientists argue that science requires only methodological naturalism.¹⁵ Methodological naturalism is the idea that neither the data for a scientific investigation nor a scientific theory can properly refer to supernatural beings.¹⁶ In methodological naturalism, science operates as if the supernatural realm does not exist, because it cannot control it. In methodological naturalism, there is an argument on whether or not there is more than the natural world (so a supernatural world-just as Warroll's two domains, material world and spirit world).

Recent cosmological discoveries that led to new theories such as big bang and string theory seem to eliminate religion, or at least the spiritual origins and teleology, and to most modern scientists, both these are more rational ways to describe the beginnings of the universe; and one need not be too hung about

¹⁵Ratzsch, Del. "The Demise of Religion: Greatly Exaggerated Reports from teh Sceince/Religion "Wars"." In *Contemporary Debates in Philosophy of Religion*, by Michael Peterson and Raymond Vanarragon, 72-87. Blackwell, 2004.

¹⁶ Ibid.

what 'the beginning means' exactly, for if time emerges with the first blast of the Big Bang at 10^{-42} seconds then there is literally nothing prior to that; or we may choose the other alternative of endless regress of one universe creating another seamlessly with no beginning and possibly no end either, *ad infinitum*. Though both these theories are yet to be completely proven – they have served well as models for explaining within probable limits a lot more than competing religion doctrines where the latter have also not been misleading or dead-ended - have and seem to be more verifiable and falsifiable than the idea that God created the universe. This is one of many cases in which science explains how the universe works, but fails to explain precisely why it works in such a way. In general this is true, science can explain the motion of objects, but cannot explicitly say why objects behave that way and not some other way. And indeed what prevents the natural laws from falling apart into chaos? Newton felt strongly that after he made his observations and deduced laws of thermodynamics, gravity, etc., that they would decay into chaos without outside intervention. He proposed that God periodically adjusted their orbit so that this chaos can be avoided.

Dawkins' response to this objection is that : 'we cannot of course disprove God, just as we can't disprove Thor, leprechauns and the Flying Spaghetti Monster... but we can say that God is very, very improbable. And as the necessity of creation': the universe appears to have emerged by way of 'natural selection, the blind, inconspicuous automatic process which Darwin discovered', with 'no purpose in mind' and without sufficient reason to impute a causal Agency outside of the process.' Improbable as the universe might suggest itself to be, consider that if the mass of proton were different by one part in a thousand, not atoms or elements would occur. If the resonance level of carbon were 4 percent lower, or if oxygen were 1 percent higher, there would be very little or no carbon, which is the building block of life. If the sun were 5 % closer or 1 percent farther, the earth would have no life... and so on. The universe is held together like a

well-woven tapestry fine-tuned for everything to have order and obey natural laws. But the anthropic cosmological principle rejects that any such admissions entails there is a fine-tuning intelligent agent out there, for, as John Leslie, puts it, 'any intelligent living beings that there are can find themselves only where intelligent life is possible'. Another theory postulates that there are multiple universes, even multiple infinities, so by sheer force of numbers, this universe happens to have all the characteristics necessary for life to occur. Explaining life is only one of the challenges, and biology is no closer to admitting to an intelligent designer any more than physics and chemistry and mathematics are for the amazing, mind-baffling law-abiding structure we find in the vast expanse we call the universe.

Quentin Smith has forcefully argued that there is both an anthropic coincidence and that fine-tuning is improbable. When one come across a highly improbable event, then one usually seeks to find an explanation for it.

For example, if I was to take a die, and throw it ten times, and get a 11 every time, then I would probably conclude that the die was loaded, or that every side had a 11 on it. If I went to a magic show, and was asked by the magician to draw a card out of a pack of cards, and then magician then correctly identified that card as, say, the Three of Clubs, then I would think that there was some trick involved. Yet sometimes, we do not seek any explanation for a highly improbable event, but rather, simply accept that improbability. (Stephen Coleman commenting on this surmises:) 'So we are left with the conclusion that the only way to avoid finding an explanation for the universe, is to suggest that life is no more special than a black hole. If life is special, then a life-permitting universe seems to require some sort of explanation, whether that universe is improbable or not.' I believe the Buddhist would agree with this argument.

Don't forget also the explanatory power of the Darwinian principle of natural selection which attributes the transformation that animal and human beings undergo not just to chance – which would be the case were fine-tuning by

an autonomous agency outside of the lived world to be denied – but by “adaptation”. Namely, all living species are a product of evolution by natural selection (which is the name given to Darwin’s explanation of how evolution works). In particular, much of human behaviour, including its intelligence, is a product of natural selection. When the force of selection becomes weak, it frees behaviour from the constraints of rationality. The human brain, and much of the sophistication of our behavioural repertoire, is a product of evolution. Our recent evolutionary past has seen an explosive growth in the size and, it is believed, also the capabilities, of the brain. As a consequence of this growth, we are in many respects freed from the detailed surveillance of natural selection. This freedom manifests itself in a variety of behaviours which, in an evolutionary context, can be called bizarre or non-adaptive.

Dawkins and Dennett claim that religions are a product of this margin-of-error and the terrifying freedom that evolution has permitted. And religions thus look to a being outside of their own world who is some how accountable for the evil human beings perpetrate – belief in sin and Satan, for example, and pray to the same being to forgive them for their trespasses. Dennett goes beyond Darwin and Dennett claims that evolution by natural selection is an algorithmic process. He holds that natural selection is alone sufficient to account for all design, without any need to appeal to intelligence, purpose or intentional contrivance for which theists invoke God or Mind. Nature operates with its own “skyhooks” and “cranes” - chance variations in genotypes that give special selectable advantage. But natural selection is only a theory of elimination of the weak and survival of the fittest; Darwin made no claims that one genotype necessarily without any purpose or “blindly” mutates into another: i.e. it only reproduces itself with some variation and is never the *source* of the advantage enjoyed by the surviving genotype. Dennett surreptitiously sneaks in memes (idea, borrowed from Dawkins) as some kind of built-in intentional function, which renders it not-blind at all.

The detractors of this neo-Darwinian theory object that the environment we are in is not much different to the world in the past because although we have observed adaptation in Darwinian finches, we have yet to truly observe the evolution of one species into another, and that would take some 600 million years. As not enough time has passed for scientists to truly observe other than conjecture from fossils and life around us, and despite the evidence manifest in homologous and analogous structures (different species with similar features like skeletal structures or wing shapes), we can conclude only some version of what Stephen Jay Gould called, local mutation mostly by gratuitous natural selection.

Ernst Mayr claimed that mutation simply means there is no correlation between specific genotypes and the needed adaptation for a set environment. Because mutations do not occur due to scientific reasons – as the on Dennett proposes -, it is entirely possible that there is some intelligent principle or force that propels the random genetic mutations to occur. The argument goes on. There is either a leap in the gaps toward faith or science has its own faith-commitments; in both respects science and religion are not too different. As the physicist Paul Davies claims, “science is an outgrowth of theology, and all scientists – think of Kepler, Galileo, Newton, Bruno, Maxwell, Boyle, Faraday, Eddington, even Einstein – whether theists or atheists accept an essentially theologian worldview.

However, John Warroll, in his article *Science Discredits Religion* in *Contemporary Debates in Philosophy of Religion*, argues that the reason some scientists also claim they are religious is because of three factors that mislead their judgments. The first factor that contributes to why some scientists believe they can be both scientific and religious is a failure to think things through fully. Second, Warroll says that these people also fail to be properly scientific (not just giving “due weight to well accredited scientific results and theories,” but also

having a scientific attitude towards these results and theories)¹⁷. By adopting the attitude in the previous two factors, the last factor states that scientific/religious believers may think that science and religion simply cannot conflict because they are in completely different areas of ideas. Because they are in different arenas of thought, Warroll argues that a scientific and religious believer cannot obtain the attitude necessary to rightfully weigh scientific evidence and claims without being swayed by the religious principles they simultaneously hold. As far as the third factor goes, Warroll discusses three views within this idea of science and religion being in two different domains.

Some may argue that science does not even need methodological naturalism because a religious view may be the only explanation of the logical characteristics of natural laws.¹⁸ It seems that just as science can be a benefit to religion, so can religion be a benefit to science.

The biggest problem people have with interweaving science and religion is that they have to compromise two things that are supposed to be considered factual. If both are supposed to contain truths, why ought either change their positions and have to compromise? Religious people feel that their religion is not as strong when they have to change "facts" that it supports. The same goes for the scientific community. Scientists feel that science is discredited when they cannot answer questions. Furthermore, people who try to combine science and religion are usually looked down upon from both sides because they are compromising beliefs to fit another belief system. However, this could be the smarter way of living. Why not take the best of both worlds if that is what works? Some may say religion is just a crutch, but still some world renowned scientists

¹⁷ Warroll, John. "Science Discredits Religion." In *Contemporary Debates in Philosophy of Religion*, by Michale Peterson and Raymond Vanarragon, 59-72. Blackwell, 2004.

¹⁸ Ratzsch, Del. "The Demise of Religion: Greatly Exaggerated Reports from teh Sceince/Religion "Wars"." In *Contemporary Debates in Philosophy of Religion*, by Michael Peterson and Raymond Vanarragon, 72-87. Blackwell, 2004.

hold onto their religious beliefs, regardless of their work in the scientific world. There is only a conflict between science and religion when one is not willing to take advantage of all their options. So what are the options?

There must be some way out here, said the joker to the thief.. all along the watchtower

Dialogue between the two disciplines seems to exist here because religion cannot ignore the implications of discoveries made in science, but science cannot ignore its own follies and shortcomings when religion might just be in better to provide some needed moral correctives.

Two considerations: first on the question that arises whether being religious and a scientist leads to having conflicting mind-sets. All of the above scientists answer this question because their scientific mindset was an extension of their religious one and they were trying to uncover a human understanding of how the universe works. Although, religious beliefs they may have – and Indian and Muslim scientists are even less of an exception - remains separate from their experimentation, they describe how the world works and then religion completes it by explaining why it works in such a way.

Second, is in the belief that both hold scientific and religious beliefs are complementary rather than in conflict on the major questions. Against Waroll's

position, Ratzsche upholds the view that both the scientific and the religious method are valid on the same principle, that they are simply different approaches to the same problem. Freeman Dyson adds that ‘Science and religion are two windows that people look through, trying to understand the big universe outside, trying to understand why we are here. The two windows give different views, but both look out at the same universe. Both views are one-sided, neither is complete. Both leave out essential features of the real world’. I would like to propose and draw on the heuristic framework that Kant, I mentioned earlier, adopted in his metaphysics of morals and the critique of practical reason for a sound-rationally based moral philosophy in which religion had a significant role to play, not for its metaphysical claims as such, but for the moral life. Kant’s more conciliatory approach in his philosophy of religion to “assimilate the semantic legacy of religious traditions without effacing the boundary between the universes of faith and knowledge”. (Jürgen Habermas, 2008, *Between Naturalism and Religion Philosophical Essays*, chapter 8: ‘The Boundary between Faith and Knowledge: On the Reception and Contemporary Importance of Kant’s Philosophy of Religion’, Polity Press, UK, p211). As Habermas, who takes a leave from Kant’s approach to religion, notes pointing to the rampant religious fundamentalism that exist in the world, including within Christianity, ‘the focus of attention in the West has in the meantime shifted. Here, in the European part of the West, the aggressive conflict between anthropocentric and theocentric understandings of self and world is yesterday’s battle. Hence the project of *incorporating* central contents of the Bible into a rational faith has become more interesting than combating priestcraft and obscurantism.’ (ibid) Here he finds some solace in Kant’s project of predicating the *principle* of moral law, laws of duty and right on practical reason and the kingdom of ends as the idealic realisation of the doctrine of the *highest good*, while pointing out that Kant never did abrogate the role of religious teachings on morality, especially in the exemplary lives of prophets, saints, monks, and so on, as distinct from the

authoritarianism of the ecclesiastical orders, in providing practical reason with its 'store of suggestive and inspiring images', in short, a needed epistemic stimulus the postulates with which it (practical reason) attempts to recuperate a *need* articulated in religious terms within the horizon of rational reflection'. We know that Kant tried to justify continuation of some modicum of religious faith as 'fides' – from which we get fideism – within the limits of reason. Indeed, he wanted to overcome metaphysics in order to make room for faith. And that, given the state of the woeful world today on which a morally-blind science has unleashed the forces of technology that has led to the Europeanization (read nowadays economic and political Globalisation) of the earth (recalling Heidegger/Husserl here, and Hans Jonas), compromised the harmony and balance in nature through environmental degradation, rape of its forests and waters, causing depletion of animal life, other species that have gone extinct, and indeed climate change (and rapid leadership changes at the unstable political helm), and militarized vast terrains of the globe leading to so-called wars of terror. The more scientifically advanced a country is – as Germany was in the half century of 20th century, presently, the United States – the more likely it is to be constantly at war with the rest of the world in conquest for material resources to keep the secular-scientifically fueled industrial complex running. The critics of this materialistically-driven environmental and manmade species-crisis – our continuing use of animals for our food and the supermarket commerce, e.g. - come from religious front: Buddhists, animal liberationists, Christian moral thinkers, theologians such as Thomas Berry among them, and NGOs that are religiously oriented to heal the earth of the ravages and injuries etc. . Here the pluses are on the religious side.

There are more trenchant criticisms of scientific hegemony in what some have called scientism with its strident foundational suppositions in naturalism and scientific materialism. Science cannot prove its own foundations, it merely

assumes that it is right because religion and theology are wrong. But scientism is also anti-humanistic in that it rejects the view that other domains like arts, literature, religion may reveal truths that are inaccessible through other means; and it also rejects the notions of autonomous human subject and free-will; its materialist perception of man denies any transcendent dimension to human existence. Francis Bacon and Laplace heralded in mechanistic view of human being: *homme machine*, which was strengthened by the theory of evolution, and closer to our times by biology, genetics and neuroscience (although the neuroscience admits that it leaves unanswered a whole cluster of questions about the nature and mystery of consciousness). How can human beings be morally responsible when they in fact only running their biological and genetic program?

The third approach.

This is a form of integration that has been in existence since the beginnings of scientific thinking. As for the other forms of integration such as process theism and pantheism, they seem to be unnecessary at this point. Also, they attempt to change the core beliefs of religion that had been previously accepted and say that God changes as the earth does. I would like to eschew this discussion because it is extreme and neither scientists nor theologians will easily accept this without bending many of their views. It is easy to find a way to integrate the two disciplines by means of their core beliefs.

The form of integration that I believe is the resolution to the conflicts between science and religion is what has already been done by many foundational scientists such as Newton. In our times Stephen J Gould, Stephen Toulmin, Todorov among others argue for transcendental humanism and a rationality but takes the Aristotelian notion of practical wisdom,

phronesis, towards good living, which is better captured in the concept of 'reasonableness' than in positivistic, analytical or instrumental rationality that both Anglo-American philosophy and science seem beholden to. The integration of reasonableness with the spiritual and moral dimensions of human and other species we share this planet with is the 'third enlightened way', a path between dogmatic religion and deterministic materialism that the New Atheist scientism promotes. (Jeroen Vanheste, 2007, *Guardians of the Humanist Legacy*, Series Editor, Michael Krausz E J Brill, Leiden, p 458). The key to this integration is realizing that science describes how the universe works through the scientific method and religion explains why the universe works as it does through wisdom-knowledge, some traditions do better than others, and the bible need not be the only religious authority that needs invoking, nor for that creationism or its fake scientific re-iteration in 'intelligent design'. If some of the greatest scientists of the past and present too could themselves take this approach, it seems easy enough to follow in their footsteps in modern times. Since classical science is an outgrowth of religion, what need is there to eliminate religion all together? It only helps to complete science and extend it past human limitations. The opposite is also true, theologians cannot deny the validity of scientific discoveries and since science sprouted out of religion they should be willing to accept it. Those who disagree with science because of biblical scriptures are using their own interpretation of it against facts. Surely, if an educated scientist were to evaluate scriptural wisdom in an unbiased fashion he or she should be able to reach an interpretation that could well overlap with most of scientific knowledge and actually be beneficial. Scientists before him have done it.

This is not to say that we should stop pressing forward for the truth and assume that the whole truth about the universe and the human subject, the theory of everything, have been uncovered; for we need to understand and

accept that all knowledge, whether scientific or theological are in the end conjectures and subject to falsification. There are no infallible truths, anywhere. One cannot simply say the science that has been discovered can stand alone. As Kant said there are more things between the earth and the stars that human endeavour is not able to explain, and perhaps never will be able to. The same goes for theologians, they should learn that science is beneficial to the world and it does not directly have to conflict with their beliefs. Without science many of the privileges we enjoy today would be non-existent and advances in medicine would not save as many lives as they do.

Concerning issues of modern theories such as big bang theory, string theory, and even quantum mechanics religion can still overlap with science. There is ample evidence behind big bang theory, but no explanation for why it happened and once again the picture can be completed if scientists looked to Eastern religions where they will find complementary views but with more interesting philosophical ramifications – e.g. Buddhist concept of dependent origination and Emptiness with compassion as the explanatory model, even supporting the view that the universe could be causeless. String theory can also be seen as uncovering the final pieces to a more spiritually nuanced and attuned universe. The theory is so complex that it could not just be accepted as brute fact without some suggestion of consciousness somewhere in the design of the universe in such a way. But this consciousness need not commit us to the necessity of a divine single being, but rather to a singularity that neither succumbs to naturalistic explanatory description nor to a monotheistic one. The same can be said of quantum mechanics because it seems too incomplete to say the universe works the way it does naturally and there is no reason for it to remain that way in that case.¹⁹ And here there are emergent models in the fields of process philosophy and process theology

¹⁹ Brian Ellis, 'A Review on God, Chance, and Necessity'(from *Sophia*, Vol. 38, no 1, 1999 March-April)P. 96

that demonstrate amply how the a unifying account of the universe can be a working hypothesis if both science and religion relax their commitment to the old truths and move with the times; the emergentist theory proposes that complex systems proceed and outweigh more simple ones in an independent relationship where the particular or local is totally integral to, in synch with, and operationally, i.e. structurally and functionally, stands within the whole ; much like the idea of holism of the psycho-somatic system, from which we get holistic medicine, that western medicine is beginning to learn from Indian Ayurveda and Chinese chi-acupuncture system. One such emergentist theory that is most promising is the panentheistic one: that a singularity of a divine principle exceeds the universe – 60% of the known universe is empty space threatened constantly by being swallowed by black holes – but that divine principle – which is not perceived as personal God by any means, is at the same time dependent inexorably on the universe processing itself, constantly changing and growing, through hoofs of entropy and decay and even chaos, to newer forms. In this way, if you like, God grows and evolves as well, for we are all one:, a whole, a totality and infinity, the divine and the finite human; the world is God's body and human beings are the intelligent keepers – though there may be other intelligent beings, animals for one and extra-terrestrial disembodied or ethereally-bodies mind perhaps. The Vedic (precursor to modern Hinduism) worldview was close to something like that and a number of modern Indian scientists find solace in their after-hours integral life of science and spirituality, in India and elsewhere.

Since modern science, and science in general, is an outgrowth of religion, as Davis cited earlier correctly observes, it cannot undermine religion or else it would undermines its own foundations. The most resolute way for science and religion to interact is through dialogue, critical tolerance and mutual critical respect as working towards an integral approach . The answer

to the drawn-out war between science and religion is to see the universe as a giant puzzle in which science and religion are both working at piecing together the jig-saw puzzle - religions have a longer history on this playing field. Neither one alone can complete the bigger picture because they depend on each other to explain the universe in a way that is neither limited to human understanding or completely dependent on faith without any proof. With this logic a smart theologian or religious philosopher, would not have to even rebut the scientist, and vice versa; but they could reach a resolution and work together to explain the universe and set about spiritually and ecologically healing the scars that are tearing our small planet and perhaps the sky above as well with the triumphalist march of science-hand-in-glove with reason and history on the one hand and the treason of blind techno-science culture with its naturalist and unaesthetic even morally bankrupt materialism on the other end.