

# Two Heads are Better than One:

How the Collaboration of Science and Religion in Inquiry  
Leads to More Meaningful Results than Either Alone



A Directed Reading Seminar by  
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*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

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## Introduction

The debate for legitimacy between science and religion has been going on for centuries, but now more than ever the age-old questions of validity are in the forefront of the public eye. In the last decade, many battles of science versus religion have been waged in varying ways. Buzzwords and issues such as Intelligent Design, Creationism, Evolution, Stem Cell Research, and prayer in schools have called both science and religion into question. However, the two modes of thought are not really as opposed as they may seem initially.

Both science and religion serve the same purpose: to allow people to better understand the world in which they live. Scientific method draws from empirical knowledge and rigorous testing when attempting to draw meaningful conclusions about reality. Religion, on the other hand, incorporates faith into its modes of inquiry, thereby reconciling that final jump between what we can see and what we cannot—God—in determining the true nature of things. Science and religion are both capable of drawing meaningful conclusions in their differing ways. However, many conclusions drawn by one discipline appear to be opposed by the other; therefore, the argument for legitimacy heats up.

Ultimately, science and religion are not opposed. They are actually most effective when cooperating, but strong adherents to each theory would find fatal flaws in the other method that prevent this collaboration from being more commonplace. The true differences between scientific method and religion are really in the preconceived notions that shape the disciplines. By showing how these underlying principles are really not that

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different, the following will establish that science and religion, while seemingly in conflict, are really doing the same thing. Rather than simply restating the popular positions on the contemporary, popular issues in the science versus religion debate, the following addresses the underlying methodological foundation for the debate itself rather than the specific issues called to the forefront of the public eye.

What is Science?

First and foremost, it is important to establish what is meant here by “science” and “religion”. It is generally difficult to pinpoint exactly what science is because it has evolved over centuries into a meaningful discipline, but we are told by Michael Ruse, “What we call ‘science’ today is a reasonably striking and distinctive set of claims, which have a number of characteristic features.”<sup>1</sup> Among those features are explanation, prediction, testability, falsifiability, and tentativeness.<sup>2</sup> In short, a good scientific theory explains something in the world in a way that can predict future outcomes under given conditions. Moreover, it should be possible to carry out experiments to test the explanation presented in a way that can provide both positive and negative results. A scientific theory that cannot be shown to be incorrect is essentially useless. Finally, if a theory is found lacking, it must be possible to reject the faulty theory in hopes of finding a better one. These criteria are meaningful in scientific inquiry for giving legitimacy to

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<sup>1</sup> Martin Curd and J. A. Cover, editors. “Philosophy of Science” New York: W. W. Norton & Company, 1998.

Michael Ruse, “Creation-Science Is Not Science” (from *Science, Technology, and Human Values* 7 no. 40 (Summer 1982): 72-78)

Ruse, 39

<sup>2</sup> Ruse, 39-41

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science. Stephen Hawking tells us, “The eventual goal of science is to provide a single theory that describes the whole universe.”<sup>3</sup> Science has lofty goals, and strives to achieve them in several ways. By subjecting the world to scientific inquiry and subjecting scientific inquiry to tests as well, it is possible to draw worthwhile conclusions about the world.

Really, science is a method of inquiry that attempts to account for reality as reality presents itself to humanity. It strives for completeness as well because “If science is selective, it cannot claim that its picture of reality is complete.”<sup>4</sup> However, completeness can be problematic for science if it incorporates flawed conclusions into the composite body of scientific knowledge. In science, theoretical models are examined for adequacy. They are analogical, they contribute to the extension of theories, and they are intelligible as units.<sup>5</sup> However, sometimes a model appears to be adequate when for some unforeseen reason it is not. In these cases, pseudoscience and nonscience are mistakenly added to the repertoire of scientific knowledge.

These mistakes are partially due to the vague distinction between bad science and good pseudoscience/nonscience. We are told, “And there is no sharp line of demarcation between science and nonscience. Nonetheless, there is a well-defined cluster of values whose pursuit marks off scientific from other activities in a relatively unambiguous way

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<sup>3</sup> Stephen W. Hawking, *A Brief History of Time* (Toronto and NY: Bantam, 1988) Hawking, 10

<sup>4</sup> Ian G. Barbour, “When Science Meets Religion” San Francisco: Harper, 2000. Barbour, 2000,14

<sup>5</sup> Ian G. Barbour, “Religion in an Age of Science: Gifford Lectures, Volume 1” San Francisco: Harper & Row, Publishers, 1990. Barbour, 1990, 41-42

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and that gives the term “science” the position it occupies in the ‘semantic field.’”<sup>6</sup> A main distinction between science and pseudoscience is that scientists are open to changing their beliefs in a way pseudoscientists are not. However, more on the actual processes of science will be said later on.

Returning our focus to science at the most basic level, once again consider the goals of science. In trying to find reliable explanations for the world, science has granted legitimacy to many hypotheses. Through processes of posing possible answers and testing them, science has found meaningful results in experimentation. However, “Science has been operating from a biased point of view, and finding what she expected to find. Science, like other areas of human knowledge, evolves, and there is no reason to think that all blinkers science may be wearing today will be there tomorrow.”<sup>7</sup> By presupposing a hypothesis, scientists are imposing a bias and a limit on their potential conclusions. While this is not necessarily problematic (mostly because it is virtually impossible to conclude anything meaningful without first having an idea), it is imperative that scientists are willing to re-address their experiments and conclusions from time to time to assure their worth remains. If they find a change in what was once thought to be

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<sup>6</sup> Martin Curd and J. A. Cover, editors. “Philosophy of Science” New York: W. W. Norton & Company, 1998.

Ernan McMullin, “Rationality and Paradigm Change in Science” (from Paul Horwich, ed., *World Changes: Thomas Kuhn and the Nature of Science* (Cambridge, Mass.: MIT Press, 1993), 55-78): 119-138  
McMullin, 127-128

<sup>7</sup> Kitty Ferguson, “The Fire in the Equations” Great Britain: Bantam Press, 1994  
and Grand Rapids, Michigan: William B. Eerdmans Publishing Company, 1995.  
Ferguson, 79

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truth, they must adapt their findings accordingly. One way in which scientists have done this is through the acceptance of paradigms and the subsequent paradigm shifts.

## Paradigms

Science has established several paradigms in the past, and these paradigms serve as a starting point for the most basic scientific knowledge we have. Oftentimes, paradigms serve as “givens” for further scientific experimentation and exploration. But what *is* a paradigm? “In its established usage, a paradigm is an accepted model or pattern.”<sup>8</sup> Paradigms are seen in two basic ways. “On the one hand, [a paradigm] stands for a constellation of beliefs, values, techniques, and so on shared by the members of a given community. On the other hand, it denotes one sort of element in that constellation, the concrete puzzle-solutions which, employed as models or examples, can replace explicit rules as a basis for the solution of the remaining puzzles of normal science.”<sup>9</sup>

Considering these two roles played by scientific paradigms, it is clear why paradigms are so important. We see in Kuhn’s discussion of paradigms that “all data are paradigm-dependent, but there are data on which adherents of rival paradigms can agree, paradigms are resistant to falsification by data, but data does cumulatively affect the acceptability of a paradigm, and there are no rules for a paradigm choice, but there are shared criteria for judgment in evaluating paradigms.”<sup>10</sup> Since paradigms are integral

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<sup>8</sup> Thomas S. Kuhn, “The Structure of Scientific Revolutions, Third Edition” Chicago: University of Chicago Press, 1962, 1970, 1996.

Kuhn 23

<sup>9</sup> Kuhn, 175

<sup>10</sup> Barbour, 1990, 53-54

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parts of science, it is clear that science must be willing to accommodate them in two ways. Science has to allow paradigms to evolve as new truths fall into focus, and it must accommodate the consequent upheaval to current methodology when such a shift occurs.

In allowing paradigms to be tested, science is expressing in an important way its desire to be adequate. When a paradigm starts to fall from favor, immediate actions are taken to rectify the situation. We are told, “When...the profession can no longer evade anomalies that subvert the existing tradition of scientific practice—then begin the extraordinary investigations that lead the profession at last to a new set of commitments, a new basis for the practice of science.”<sup>11</sup> In time, a new paradigm can be established and science can begin to adapt to a stronger paradigm’s implications. “Acquisition of a paradigm and of the more esoteric type of research it permits is a sign of maturity in the development of any given scientific field.”<sup>12</sup> Because “The new paradigm implies a new and more rigid definition of the field,”<sup>13</sup> science as a whole is improved by accepting it. The more worthwhile a paradigm is, the more useful theories based on that paradigm will be. However, it is not always the case that a new paradigm is immediately adopted and accepted by everyone in the field.

With the incorporation of each new paradigm into science, it was necessary to accept the consequences of such additions and modifications. “Each of them necessitated the community’s rejection of one time-honored scientific theory in favor of another

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<sup>11</sup> Kuhn, 6

<sup>12</sup> Kuhn, 11

<sup>13</sup> Kuhn, 19

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incompatible with it,”<sup>14</sup> namely the new paradigm. “Within the new paradigm, new kinds of data are relevant and the old data are reinterpreted and seen in a new way.”<sup>15</sup> Clearly, time-honored theories do not fall from favor easily. “Proponents of the new paradigm and defenders of the old one may each be able to lay claim to be acting ‘rationally’; the fact that neither side can persuade the other does not undermine the claim each can make to have good reasons for what they assert.”<sup>16</sup> For this reason, conflicts between the new and the old modes of thinking can ultimately hinder the usefulness of science. Obviously this is problematic. If an old paradigm was adequate for a significant period, a nascent paradigm that has yet to be rigorously tested in practice will present a potential point of contention between scientists.

New paradigms are met with opposition, but they do come into favor. “...[I]f a paradigm is ever to triumph, it must first gain some supporters, men who will develop it to the point where hardheaded arguments can be produced and multiplied.”<sup>17</sup> Once a paradigm has sufficient backing in the scientific community, its acceptance is pending. However, some people reject even “good” scientific theories. Great thinkers such as Einstein who had worked intimately with quantum theory did not like leaving the reality of the world to chance.<sup>18</sup> Ultimately, “A theory is a good theory if it satisfies two requirements: It must accurately describe a large class of observations on the basis of a model that contains only a few arbitrary elements, and it must make definite predictions

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<sup>14</sup> Kuhn, 6

<sup>15</sup> Barbour, 1990, 51

<sup>16</sup> McMullin, 120

<sup>17</sup> Kuhn, 158

<sup>18</sup> Hawking 56

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about the results of future observations.”<sup>19</sup> If a new paradigm can do so in a way that is superior to an extant paradigm, the new paradigm should prevail.

Adherents to specific paradigms have good reason to be attached to their paradigms. After all, these scientists are basing their life’s work on a certain assumption that is supposedly worthwhile and accurate. While additional discoveries are being made every day, even the most rational of scientists are willing to grant at least minimal levels of credibility to an empirically supported paradigm shift. Granted, personal preferences and skepticisms are not completely absent from the process of paradigm shifts and thus scientific biases are not easily forsaken. New paradigms are nonetheless generally accepted in the scientific community because of their rational grounding that is empirically supportable.

All in all, paradigm shifts require a level of concession from the scientific community at large, but only within reason. “Some have pointed out that new theories exhibit *continuity* as well as discontinuity in relation to the theories they replace. Usually some of the concepts in the old theory and much of the data accumulated under its guidance are carried into the new context. Sometimes the laws of the old theory are actually included in the new theory as limiting cases.”<sup>20</sup> Of course, this is not surprising. As new information comes about, it is necessary to update our current understandings of reality to incorporate what we have learned. In science, a paradigm is really nothing more than the best yet hypothesis. Periods of discovery have caused many paradigm

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<sup>19</sup> Hawking, 9

<sup>20</sup> Barbour, 1990, 43

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shifts already, and surely more will occur in the future. “The history of science is said to be littered with theories that were successful and fruitful in their day, but that were later totally rejected rather than being modified.”<sup>21</sup> By acknowledging this possibility, science is preserving its own validity.

In accepting a new paradigm, the scientific community is improving itself by keeping itself up to date and assuring that it is continuing to work within the realm of truth. Paradigms keep science moving smoothly, and science is consequently looking for ways to assure the adequacy of its paradigms. Adequate paradigms are highly useful for science. “A paradigm can...even insulate the community from those socially important problems that are not reducible to the puzzle form, because they cannot be stated in terms of the conceptual and instrumental tools the paradigm supplies.”<sup>22</sup> In this way, paradigms are able to keep science self-contained in a way. Paradigms are also applicable in other modes of thought, though.

Paradigm issues that come up in science also apply, and sometimes even more heavily, to religion. Paradigmatic issues in religion are more problematic than those in science. Religious experience is paradigm-dependent, religious paradigms are resistant to falsification, and there are no rules for paradigm choice in religion.<sup>23</sup> However, before religion can be adequately critiqued, it is important to clarify what religion actually is.

### What is Really Meant by “Religion”?

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<sup>21</sup> Barbour, 1990, 43

<sup>22</sup> Kuhn, 37

<sup>23</sup> Barbour, 1990, 54-55

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The word “religion” has been used in innumerable ways to describe belief systems of many types. For the purposes of this discourse, “Religion is an aspect of culture centered upon activities which are taken by those who participate in them to elucidate the ultimate meaning of life and to be related to the ultimate solution of its problems. Many religious systems contain the notion of deity and/or holiness in relation to such activities.”<sup>24</sup> Indeed, religion is a method of thought that incorporates non-empirical characteristics into its explanation of reality. Oftentimes, this is done by granting existence to a being that transcends humanity. In doing so, religion subjugates humanity to a superior being.

The Christian understanding of providence steers a course between a facile optimism and a fatalistic pessimism. God does not fussily intervene to deliver us from all discomfort but neither is he the impotent beholder of cosmic history. Patiently, subtly, with infinite respect for the creation with which he has to deal, he is at work within the flexibility of its process.<sup>25</sup>

This is only one of many types of divine intervention implied when discussing religion.

The importance of a higher power is prevalent across religious discourses in a way that is practically regardless of the specifics.

A central principle common to religion and theism is the existence of God.

However, the nature of God is a highly contested issue. Here, God is understood as an

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<sup>24</sup> Hideo Kishimoto “An Operational Definition of Religion” *Numen*, Vol. 8, Fasc. 3, (Dec., 1961): 236-240  
Kishimoto, 240

<sup>25</sup> John Polkinghorne, “The Continuing Interaction of Science and Religion” *Zygon*, Vol. 41, No. 1, (Mar., 2005): 43-50  
Polkinghorne, *Zygon*, 44

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omnipotent, omniscient, omnibenevolent being that is the starting point for creation of the universe. Consider the following articulation to the nature of God:

If a certain property  $p$  is part of the very meaning of the term ‘X’, then of course anything that we would call  $X$  would have to be  $p$ ...But the fact that  $X$ s must have  $p$  is only a fact about our use of the word ‘X’, and perhaps indirectly is an indication of the properties that go together in our experience—it is not a guarantee that any particular thing has to have  $p$ , nor is it an explanation for any particular thing’s having  $p$ ... The fact that  $p$  is an essential property of  $X$ s means only that, because of our experiences, purposes, and traditions, we shall not count anything as an  $X$  unless it has  $p$ : it does not give an account of the presence of  $p$  in any individual thing which we call an  $X$ .<sup>26</sup>

In this model,  $X$  is God and  $p$  is the aforementioned attributes of God. God does not necessarily exist in this model, but if God does exist, God would be omnipotent, omniscient, omnibenevolent. Now that it is clear what religion potentially entails, consider its opposition.

On the other side of the equation, we look at atheism. “[A]theism is not to be identified with sheer unbelief, or with disbelief in some particular creed of a religious group,”<sup>27</sup> but rather it is a form of skepticism. Nagel tells us:

I shall understand by “atheism” a critique and a denial of the major claims of all varieties of theism. And by theism I shall mean the view which holds, as one writer has expressed it, “that the heavens and the earth and all that they contain owe their existence and continuance in existence to the wisdom and will of a supreme, self-consistent, omnipotent,

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<sup>26</sup> John Morreall “God as Self-Explanatory” *The Philosophical Quarterly*, Vol. 30, No. 120, (Jul., 1980): 206-214

Morreall, 208

<sup>27</sup> Peter Angeles, editor, “Critiques of God” Buffalo, NY: Prometheus Books, 1976.

Ernest Nagel, *Philosophical Concepts of Atheism*, pp. 3-18

Nagel, 4

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omniscient, righteous, and benevolent being, who is distinct from, and independent of, what he has created.”<sup>28</sup>

In taking this stance, Nagel is asserting that atheism is an active form of skepticism and rejection of what is available to the inquisitive potential believer. By defining atheism as the literal opposite of theism, it is possible to see atheism as an opponent to, but not the direct opposite of, religion.

Similarly to religion, theism also allows for the existence of such a transcendental being. However, the formal structure of belief and traditions generally implied by “religion” is not necessarily present in theism. It has been asserted, “The denial of theism is logically compatible with a religious outlook upon life, and is in fact characteristic of some of the great historical religions.”<sup>29</sup> Nonetheless, religion and theism can also work in very similar ways and as far as this examination is concerned they will be paired. Both religion and theism oppose the rationalistic skepticism of atheism and allow for leaps of faith to occur. We are told, “The data for a religious community consist of the distinctive experiences of individuals and the stories and rituals of a religious tradition.”<sup>30</sup> Similarly, “In short, the religious consciousness, not metaphysical thought, is our main source of data for theistic belief.”<sup>31</sup> For this reason, religion and theism can clearly be paired for purposes of this analysis.

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<sup>28</sup> Nagel, 4

<sup>29</sup> Nagel, 4

<sup>30</sup> Barbour, 1990, 36

<sup>31</sup> David Platt, “Some Perplexities Concerning God’s Existence” *Journal of Bible and Religion*, Vol. 34, No. 3, (Jul., 1966): 244-252  
Platt, 246 (emphasis removed)

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A main conflict between atheism and religion arises from the question of what grants something legitimacy. When supporters of religion and theism attempt to explain their position, they tend to rely on a leap of faith to take the believer from the realm of the empirical to the realm of the spiritual. However, agreement with data, coherence, and scope are important themes in useful religious thought.<sup>32</sup> There is clearly a balance between what is/can be proven empirically and what is believed to be true as a matter of faith in religious discourse. In using religious discourse, one is not automatically discounting the empirical facets of reality. Rather, he or she is incorporating additional criteria to the explanation being offered in hopes of formulating an even more adequate position. As is illustrated above, both religion and theism strive to present a faith-based understanding of the world that cites God as an important force (but not necessarily the only force as will be shown later) in the creation of reality. Faith does play an important role in the religious explanation of the world, but it must be explained and understood in the context of what it really is.

## Faith

Faith is not merely blind acceptance of assertions that can not be empirically proven or supported. Moreover, faith is not attributing the realities of existence to God and thereby discounting the value of science. Rather, “faith goes beyond merely acknowledging that those facts of science and history point toward God. It’s responding to those facts by investing trust in God—a step that’s fully warranted due to the

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<sup>32</sup> Barbour 1990 38-39

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supporting evidence.”<sup>33</sup> Faith tends to look at what is empirically worthwhile and cites God as the impetus for such a reality. “Covering all of the connotations, faith may be looked upon as the implicit trust one places in a person, thing, or idea, often without asking for or requiring any proof of its validity.”<sup>34</sup> Faith is belief in what cannot be proven, but it is not blind acceptance of just any principle that is being presented as an explanation for something that cannot be known.

There is a distinct difference between belief and knowledge, and many critics of religion ignore it. “One cannot know and believe the same thing at the same time and in the same manner.”<sup>35</sup> The reason for this is simple—if something is proven to be a certain way, there is no way to take that assertion as a matter of faith. There is legitimate support for the actuality of the truth of the claim, and therefore a person can only choose to accept it or deny it as fact. If a person chooses not to accept that there are fifty states in the United States of America, then that is their prerogative. However, there are many reputable sources that show that it is in fact the case that there are fifty states in the United States. Part of what allows something to be defined as the United States is its containment of fifty states. Until the actual reality of the nature of the United States is altered, anyone who rejects the conclusion that it is comprised of fifty states will simply

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<sup>33</sup> Lee Strobel, “The Case for a Creator” Grand Rapids, Michigan: Zondervan, 2004. Strobel, 286

<sup>34</sup> Varadaraja V. Raman, “Faith and Doubt in Science and Religion” *Zygon*, Vol. 39, No. 4 (December 2004): 941-955  
Raman, 943

<sup>35</sup> Anthony Rizzi, “The Science Before Science” Baton Rouge, LA: IAP Press, 2004. Rizzi, 12

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be mistaken. They are refusing to accept an undeniable reality as truth. However, a matter of faith cannot be treated as simply as the aforementioned matter of fact.

Those who oppose faith as worthless are oftentimes mistaken as to what faith really is. If a skeptic understands faith to be blind acceptance of what cannot be proven empirically by a weak-minded, uninformed critic, the skeptic is clearly missing the point of faith. Faith is more than a question of blindly addressing reality and using God as an automatic explanation for things. Yes, a task of faith *can be* predicting the path of science in terms that one can believe, and *it may be possible* that at the end of our inquiry when we understand how everything is related, we will find God.<sup>36</sup> However, this is not the real position of faith in inquiry.

In short, “Faith is an essential ingredient of any religion, as doubt is of any scientific enterprise.”<sup>37</sup> The general understanding of science implies at least a certain level of doubt to be an underlying characteristic of the scientific method. While it has been asserted, “[d]oubt is a state of mind, some would say an affliction of the mind. It is a condition in which one is unable or unwilling to accept a given statement as true on the face of it,”<sup>38</sup> there is such a thing as meaningful doubt, just as there is such a thing as bad faith. Doubt and faith are both important characteristics in any meaningful inquiry, religious, scientific or otherwise. However, the limiting relationship between the two must be related to the evidence present, and one cannot limit the other unreasonably if meaningful conclusions are to be drawn from inquiry.

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<sup>36</sup> Noah Peseckis, 1/18/2006

<sup>37</sup> Raman, 941

<sup>38</sup> Raman, 943

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The reason faith is such an important part of religious discourse is because the nature of God God’s self is unknowable by nature. “Nothing can literally be said of God except that he is Being-itself.”<sup>39</sup> While this seems like a convenient act of defining God into existence by those who want to believe, this is not the case. For some people, the limits of science and empiricism are not adequate for explaining the world they feel they are part of. Those people who believe in miraculous events cite God as the impetus for those events, and giving God as a reason for them gives their accounts of otherwise baffling experiences legitimacy. In Biblical times and also in the world today, things happen that science cannot explain in terms of tangible fact. “For us today, the prime importance of the Biblical miracle accounts lies in the deep spiritual truths they illustrate—truths that are applicable and relevant to our own lives.”<sup>40</sup> Because there is no other way to account for such anomalies, faith gives legitimacy to God. However, this legitimacy will be considered more thoroughly later on.

Retuning to faith in itself once again, consider the importance of faith in science. While this seems somewhat counterintuitive—how does something entirely outside the realm of empirical support serve a purpose in a discipline that strives to make sense of the world as we experience it?—faith is actually important in science as well.

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<sup>39</sup> Frank B. Dilley, “Is There ‘Knowledge’ of God?” *The Journal of Religion*, Vol. 38, No. 2 (Apr., 1958): 116-126

Dilley, 118

<sup>40</sup> Russell Stannard “The God Experiment: Can Science Prove the Existence of God?”

(First published in Great Britain in 1999 by Faber and Faber Limited, London)

Mahweh, New Jersey: Hiddenspring, 2000

Stannard, 26

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

It is undeniable that there is a certain level of faith placed in paradigms. As paradigms are examined and eventually accepted, scientists are expressing faith in their own abilities to find the best explanation given the information they have. They are also expressing faith that the position they are considering is going to allow a worthwhile conclusion to be drawn. Later, as more information becomes available, they are willing to accept paradigm shifts, still on the basis of faith that their methodology is still worthwhile. The same types of procedures occur in religious communities all the time. Religious groups base their belief systems on what is currently known in religion. They believe that the amount of enlightenment they have leads sensibly to the conclusions they have drawn and act accordingly. As new questions arise, matters of faith are reconsidered and oftentimes altered to accommodate the new information. The series of modifications present in religious history is entirely comparable to the history of science.

At a basic level, even some scientific conclusions themselves are taken on matters of faith that are supported by probable evidence. Consider the acceptance of quarks in physics:

No one has ever seen a quark, and we believe that no one ever will. They are so tightly bound to each other inside the protons and neutrons that nothing can make them break out on their own. Why, then, do I believe in these invisible quarks?...In summary, it's because quarks make sense of a lot of direct physical evidence...I wish to engage a similar strategy with regard to the unseen reality of God.<sup>41</sup>

If scientists are willing to accept the existence of a scientific concept that is so difficult to pinpoint directly, it is shocking that more scientists are not willing to give more credit to

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<sup>41</sup> Strobel, 286-287 – John Polkinghorne, from *Quarks, Chaos, and Christianity*, 98-100

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proofs for the existence of God. Academically enlightened religious people are entirely capable of giving reasonable amounts of physical evidence (like in many of the creation/intelligent design arguments) that give legitimate scientific explanations to support the involvement of God in the world. They are capable of defining God by showing the limits of science to entirely explain what is real. By granting the possibility for God’s existence, these enlightened thinkers are willing to make that leap from fact to faith that is entirely necessary if the world is to be adequately understood.

The more likely a faith claim seems in terms of what can be known as fact, the more likely even a skeptical audience would be to grant the matter of faith legitimacy. Although faith is generally understood as a facet of religion because faith and religion are so closely intertwined, faith is also important in other disciplines—even science. At the most basic level, science is heavily dependent on faith because even scientific method is not entirely self-contained in the realm of the experientially real. One must never forget that a matter of faith *cannot* be proven; if it were, it would become a matter of fact. The most support possibly extant for faith is legitimate science with limits pointing to additional questions that are only answerable by something outside the realm of science. It is possible to consider a matter of faith with factual supports for its plausibility, but faith cannot be proven entirely. Science comes closer to that level of factual conclusion, but it still falls short in some areas when taken alone.

Doing Science: Issues of Procedure

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Scientific method is a process of questions and answers that strives for increasingly valuable conclusions. The better the questions asked, the more valuable the answers. The more sufficient the answers, the more informed the next round of questions can be. The past carefully shapes the future in science; there is a clear history of progression in science. “For it is characteristic of sound science that the new does not usually disown the old, but rather develops out of it, sometimes with gradual progress, comparable to the building-up of the egg, sometimes with a sudden metamorphosis, comparable to the transformation of the caterpillar into a butterfly.”<sup>42</sup> Considering such an explanation, it seems that paradigm shifts and increasingly specific research is a good means to finding adequate scientific theory in an increasingly improving way. If the real goals of science entail whatever inquiry is necessary to culminate in finding an explanation for the universe, science has a very specific task set out for it. But within what framework does science seek its conclusions?

Really, there are two main assumptions in place in science when considering science’s place in explaining reality. Scientific materialism holds scientific method is the only reliable path to knowledge, and that matter or matter and energy is the fundamental reality in the universe.<sup>43</sup> Such a physically-grounded method exposes itself to a myriad of empirical questions and tests, and can therefore draw increasingly specific conclusions as the method is carried out. This ordered process is aimed at understanding something

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<sup>42</sup> Edward H. Cotton, editor, “Has Science Discovered God?”  
New York: Thomas Y. Crowell Company, 1931  
Sir J. Arthur Thomson “How Science Changes our Vision of God” pp. 161- 180  
Thomson, 162  
<sup>43</sup> Barbour, 1990, 4

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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that can be deconstructed and eventually explained. The complex world we live in is not simply random; it can be explained methodologically. In fact, “The emerging scientific insight is that [the world] could emerge in the course of time but that this emergence involves far more than the chance interplay of random mutations in the genome and the elimination of unfit mutants by natural selection. It requires a finely tuned ensemble of natural laws and processes—physical, chemical, and biological conditions under which it could evolve.”<sup>44</sup> As science probes forward, it seems scientific conclusions are growing more and more accustomed to having a potentially non-empirical facet.

The questions being asked by science are more pointed than those of yesteryear. Rather than explaining what is currently experienced, scientists are becoming more concerned with the origins of reality as we know it; they want to explain the world from its beginning in hopes of creating an unbroken chain of scientific history. Doing so would show definitively and conclusively that science is a process, and that it is, in fact, possible to break the world down into a form we can comprehend entirely. In order to explain the universe completely, a continuous series of explanations must account for every change from its beginning to the present (provided that it has a beginning).

The implications entailed in saying that the universe has a beginning are striking. “If it’s true there’s a beginning to the universe, as modern cosmologists now agree, then this implies a cause that transcends the universe.”<sup>45</sup> Such a conclusion implies that science is not, in fact, the only force driving and guaranteeing reality. By potentiating

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<sup>44</sup> Ervin Laszlo “Thinkpiece- Why I Believe in Science and Believe in God: A Credo” *Zygon*, Vol. 39, No. 3 (September 2004): 535-540  
Laszlo, 2004, 537

<sup>45</sup> Strobel, 74, said by Stephen C. Meyer

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

another force beyond science as the main explanans for the universe, scientists are changing science forever and further forging a relationship between science and faith. While “one of the underlying assumptions of science is that knowledge about the universe is accessible to us...If there is a God, that almost certainly means everything is not accessible and understandable by human discovery and reason alone,”<sup>46</sup> more scientific exploration is pointing to a scientifically unknowable beginning for the universe. The crux of the matter is that “We have no scientific way of proving or falsifying [God or Mathematical and Logical Consistency], nor are we ever likely to determine the answer by means of the scientific method. To vote for either candidate is a matter of faith.”<sup>47</sup> It is clear here why and how faith plays a role in science as well as in religion. Current scientific investigation is coming up with fewer scientifically conclusive results.

In fact, studies of fossilized records of the past are actually starting to battle Darwinism. “According to these fossils, at the most fundamental level of animal life, the phylum of basic body plan, the dogma of classical Darwinian evolution that the simple had evolved into the more complex, that invertebrates had evolved into vertebrates over one hundred to two hundred million years, was fantasy, not fact.”<sup>48</sup> The argument that the changes that would be required to have occurred in time for evolution to have occurred are too precise to have happened by chance are gaining credibility. “The theory that everything evolved by blind chance out of common and simple origins is just that—

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<sup>46</sup> Ferguson, 74

<sup>47</sup> Ferguson, 137

<sup>48</sup> Gerald Schroeder, “The Science of God” New York: The Free Press, 1997  
Schroeder, 36-37

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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pure theory.”<sup>49</sup> While it is possible that evolution did occur, the frequency with which studies are coming up with evidence supporting other possibilities is striking.

A lot of the successes and failures of scientific method are due to preconceived methodological notions. In selecting a method of inquiry and the questions to be answered in inquiry, a methodological bias is being instated. “If our faith requires that the First Cause be ‘scientific’ rather than ‘religious’, it would seem that Mathematical and Logical Consistency is the First Cause candidate of choice.”<sup>50</sup> However, if the investigation is not prejudiced against the potential involvement of a religious facet in its conclusion, the methodological approach would be entirely different. There are many ways to carry out the modes of inquiry in the world. Each has its own strengths and weaknesses. It has been asserted, “religion, philosophy, art, music, poetry, literature—none of these instruments probes the world as confidently as systematically as science.”<sup>51</sup> While science is arguably the most systematic procedure of inquiry, the blending of more than one of these methods—such as religion and science, for example—may be (and arguably is) more effective than only one method at a time. The combination in methodology causes an increasingly strong method to emerge because the strengths of each of the two theories can address the potential weaknesses in the other.

One flaw commonly mentioned in critiques of science is the heavy reliance such a method places on experience. Certain critics of the scientific method discredit the reliability of sensation because of the possibility of deception in an argument reminiscent

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<sup>49</sup> Laszlo, 2004, 537

<sup>50</sup> Ferguson, 136

<sup>51</sup> Ferguson, 78

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of Descartes’ Meditations on First Philosophy. For example, critics of logical positivism find flaws in arguments citing sense impressions as a justification for the existence of an adequate guarantor for an accurate starting point in discourse. Rather, “sense data do not provide an indubitable starting point in science, for they are already conceptually organized and theory-laden.”<sup>52</sup> This criticism states that anything knowable through sensation is not at the most basic level, and therefore should not serve as a foundation for the beginnings of something else. If a scientist is carrying out inquiries to explain where something came from, there is no worth in a theory that starts in the middle, even if it is an even more prior point.

Allowing religion to be incorporated into such scientific inquiries would address this flaw and improve upon it. Faith in a guarantor for these sense experiences (such as God) would provide a further step back towards the beginning of the process of knowing. Religious discourse can address the failings in scientific discourse to truly find the beginning of the universe because religious discourse is able to step back to the force that served as the impetus for all the scientific explanations: God. Granting this premise legitimacy is not bad science per se. Rather, it is accepting the current limitations in the field in a way that is similar to the acceptance that microscopes can only work so precisely for the time being, or that certain speeds are not attainable by actual matter at this present time. As much as science can conceptualize about the extreme limits of existence, actually carrying out certain experiments or experiencing the results of certain tests is not currently an option because of the limitations of what we can do as humans

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<sup>52</sup> Barbour, 1990, 5

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(or with our mechanical creations). For now, religion can be the overarching principle that explains the limitations in science until science is able to extend itself further into the realm of the known empirically.

### Religion: More than Lofty Beliefs

In critiquing religious beliefs, two objections to their value are that religion is too easily discredited or that it begs the question. To address the first of these, consider the lasting characteristics of religion in general. Religions have served a purpose for over five millennia and clearly at least some theistic beliefs have been able to withstand the test of time. Conversely, new religions resurface every few decades and find a fair number of followers as well. Two things can be concluded: religion as a whole is timeless, but the species of religion are open to (and sometimes subjected to) change.

To consider the accusation that religion begs the question, reconsider the nature of faith alongside the nature of science. As Brown tells us he has seen, “There was a time when I supposed God could be demonstrated by reason. I found this was not true. The arguments used to establish his existence, like all arguments as to ultimates, assumed what they professed to prove and were rather evidences of an existing faith than its ground.”<sup>53</sup> Clearly, question begging can be a problem for justifying religious beliefs.

However, seemingly circular principles can be rectified if the appropriate criteria for analysis are in place. Religions must be scrutinized in a special way because of their

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<sup>53</sup> William Adams Brown “Why I Believe in God” *The Biblical World*, Vol. 54, No. 5 (Sep., 1920): 474-478  
Brown, 476-477

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

nature—they are not empirical, and therefore cannot be critiqued as such. “Absolute proof in religion is futile because religion is too deeply involved in a person’s life and experience for it to be based on argument alone. On the other hand, to rely exclusively on form of immediate experience is precarious, because experience speaks with a voice that is neither altogether clear nor consistent.”<sup>54</sup> If religion is to be scrutinized meaningfully, these discipline-specific limitations must be considered.

Part of the reason religion has different standards from science is because there is a certain degree of fear implied in religion that is not present in science. In Christian religions, followers are told not to test God.<sup>55</sup> Testing God is not the same as questioning God or religious doctrine/dogma, however. Questioning religion is an arguably necessary part of being faithful. Someone who questions his or her beliefs truly understands them, and only then will he or she be in a position to defend them. Religion and science cannot be scrutinized with the same processes but it is possible to carry out comparable methods of questioning.

Religious scrutiny presupposes at least one basic tenet: “You can’t absolutely prove—or disprove—the existence of God.”<sup>56</sup> Nonetheless, religious inquiry occurs time and time again both within the discipline and outside it. When considering God as a purely religious figure, God’s necessary power, glory, and might are sufficient criteria for giving God the status as the most ultimate being. However, when religion is being

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<sup>54</sup> John E. Smith, “The Reality of God and the Denial of God” *The Journal of Religion*, Vol. 51, No. 2, (Apr., 1971): 83-102  
Smith, 100

<sup>55</sup> Deuteronomy 6:16

<sup>56</sup> Strobel, 82 said by Stephen C. Meyer

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

considered externally by more skeptical outside value systems, God’s existence is not presupposed and therefore cannot be used as justification for anything. We see:

But the great difference between God as an object of religious belief, and the objects of scientific belief, is that assertions about the latter are controlled by familiar rules of discourse, understood by all other investigators, that they are related by logical steps to certain experimental consequences, and that these consequences can be described in such a way that we know roughly what counts as evidence for or against the truth of the assertions in question.<sup>57</sup>

The familiar rules of discourse in religious inquiry are no longer of use to the outside skeptics. For this reason, religion is oftentimes accused of falling short. The given statements in internal inquiry are changed in external inquiries. “In the biblical view, *faith* is personal trust, confidence, and loyalty. Like faith in a friend or faith in a doctor, it is not ‘blind faith,’ for it is closely tied to experience. But it does entail risk and vulnerability in the absence of logical proof.”<sup>58</sup> Clearly, if religion is being scrutinized in a biased manner, it will not come through unscathed. Questioning religion in a system that is shaped by it is also meaningless because nothing meaningful will come from such inquiry. The only reasonable way to question religion is both unbiased and informed. Such a method allows religion to pass through and be deemed worthwhile while also forcing it to prove itself in a meaningful way. Only when reasonable questions are asked will worthwhile answers be given.

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<sup>57</sup> Peter Angeles, editor, “Critiques of God” Buffalo, New York: Prometheus Books, 1976. Sidney Hook, *Modern Knowledge and the Concept of God*, pp. 21-40 Hook, 25

<sup>58</sup> Barbour, 1990, 63

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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Really, many religious skeptics are asking the wrong questions. “The question as to the existence of God is not a question about the presence or absence of some reality independent of the subject. It is rather a question about the spiritual foundation of the subject.”<sup>59</sup> A truly inquisitive mind sees the intricate relationship that is being forged between science and religion as more boundaries are being surpassed. The flaws of bad methodology are succumbing to better alternatives. Granted, there are certain limits in religion that no amount of inquiry or analysis will compromise or alter. Barbour asks. “Even if peripheral beliefs are tentative and revisable, are there no the core beliefs of a religious community held with absolute and unconditional commitment?”<sup>60</sup> He then refers to the biblical character Job as an example of unconditional commitment to religious principles. Clearly, both religion and science have certain core tenets that are unshakable, but many peripheral conclusions are changing. The limits of science are slowly being pushed, and religion is serving to pick up where science leaves off. Indeed, “One of the most important issues on the contemporary theological agenda, not just for the twenty-first century but probably for the whole third millennium, is how to reconcile the evident presence of authentic spiritual experience within each of the traditions with the equally evident clash of the cognitive claims that they make.”<sup>61</sup> In hopes of finding a balance between science and religion, more similarities between the two are being found as well.

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<sup>59</sup> Harold A. Durfee, “The Reformulation of the Question as to the Existence of God” *Philosophy and Phenomenological Research*, Vol. 28, No. 3, (Mar., 1968): 385-391  
Durfee, 390

<sup>60</sup> Barbour, 1990, 62

<sup>61</sup> Polkinghorne, *Zygon*, 49

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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Both science and religion offer explanations of what started the universe in its current form of existence. However, looking at the scientific explanation and Big Bang cosmology, we are still forced to ask where the components for such a process came from, and what force motivated such a process. As science can offer a causal chain of effects to explain the beginnings of our universe, we can ask what began the motion of the chain. Religion offers God as the impetus for it all. If not God, what else could have gotten the causal chain going? Pure chance can be cited, but such an answer does not address the question of from where the necessary components of such a beginning came. The academically and religiously enlightened mind that accepts the worth of both systems can attribute the beginnings of the universe to God. Laszlo would agree that God could take this position. He states, “This agency did not create the world as we find it; rather, it created the *preconditions* for the world to evolve into the way it now is.”<sup>62</sup> The significance of such a transcendental involvement would allow for a conclusive starting point for scientific discourse, and science has thus far been unable to find a meaningful starting point elsewhere.

Consider Neville’s model of how the argument would run if we are to accept God as the starting point for existence:

As a man makes himself a father when he creates his children, so God makes himself creator when he first creates. And with respect to understanding, as small children understand their father only in his role as father, so we understand God only as creator; but, whereas children come to understand their father more nearly in himself by multiplying the role contexts in which they see him, there is no other context in which we can

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<sup>62</sup> Laszlo, 2004, 538

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understand God, since understanding is limited to this created context of intelligibility.<sup>63</sup>

In creating the components of the universe, God has set in motion the process that has allowed the universe to progress into what science explores today. However, as subjugated to God, science is not able to fully comprehend the model of God’s creation. Science can, has, and will continue to question what it has been presented with in creation, but God remains superior and exterior.

The nature of God can be glimpsed in increasingly clear ways as inquiry improves. Through modern science, we are able to question what God did in creation and inquire as to the nature of God as a creator in a deeper way than we ever were before. By combining what we know about God from science and religion in, we can speculate the nature of God. A common attribute of God is goodness. We are told, “It would seem that a minimum requirement for an adequate object of devotion is the belief in a beneficent force or forces in the universe, independent of man, to which one may address prayers and supplications with some hope and expectation of satisfaction.”<sup>64</sup> If this is the case, it would seem that God’s creation would reflect God’s goodness. Because there is evil, pain, and suffering in the world, arguments against God are put forth. They use the existence of such malevolent characteristics of creation as support against God’s benevolence and ultimately challenge God’s existence. The existence of evil, though, does not disallow the existence of God, even if God is an ultimately benevolent being.

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<sup>63</sup> Robert C. Neville, “Some Historical Problems about the Transcendence of God” *The Journal of Religion*, Vol. 47, No. 1, (Jan., 1967): 1-9  
Neville, 6

<sup>64</sup> Platt, 252

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

Perkins offers a model of creation that shows two possible worlds that differ only in the amount of pain present in each. He states that if God created world A and could have instead created world P which is identical to A in all ways but containing less pain, God could (and should) have created P instead because it is better to have less pain when possible. However, it is not clear that P is necessarily better in the long run. Considering the heap paradox, any world created by God can be called world A (where A is a world with a set amount of pain). There will be a world P that in relation to world A, P has less pain. However, there will also be world M, a world that could potentially contain more pain than world A. In terms of degree, world M is to world A what world A is to world P. The only way God would create the best possible world would be to create a world with no pain at all. Because there can always be something incrementally more painful and something incrementally less painful than any given circumstance unless there is the absolute maximum amount of pain present or no pain at all, the heap paradox reduces Perkins’s point to being a complex version of the problem of evil and thus addressable by the standard rebuttal found in free will.

Because the heap paradox requires a closed definition of reality to be foiled, Perkins’s objection fails because it depends on a level of degrees.<sup>i</sup> It stands that if God created an inherently flawed universe and therefore one other than the best, then God is not omnibenevolent. However, it is not necessarily the case that evil or pain or any other experiential characteristic dooms this universe to not being the best. If a critic is willing to accept that our ability to have free will in a universe in which evil exists is superior to a universe without evil, the problem is rectified. The existence of free will does not give

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more power to creation, just more positive attributes with which they can work. We are told, “But to say that God creates creatures with free will is not to say that God creates creatures whose wishes are always fulfilled, or whose wills are unlimited in the sense of being able to will into existence anything they please.”<sup>65</sup> Objecting to the goodness of God on grounds of free will is insufficient grounds to automatically discount the possibility of God’s involvement in the creation of the universe because of predication. Arguably, God *must* have created the universe if God is to exist. After all, it is more powerful to create something than not to, and God is all-powerful. The attributes of God seem to warrant God’s involvement in the origins of the universe, but only when taken on receptive terms. A useful, valid model citing God as the origins of the universe can surely be constructed.

Consider God as a parent and creation as a child. No matter how much time a parent spends teaching a child how to behave and what is right and wrong, the decision of how to behave is still up to the child. If a parent provides every possible life lesson for a child and takes every teaching opportunity to instruct the child as carefully as possible, it would seem that the child would live a good life. However, a child with a preponderance of information of how to live the “good life” is not guaranteed to live by the principles he or she was taught. It is certainly not a parent’s fault if a child disobeys and suffers for it if the parent took every opportunity to try to prevent that from happening.<sup>66</sup> Similarly,

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<sup>65</sup> R. K. Perkins, Jr., “An Atheistic Argument from the Improbability of the Universe” *Noûs*, Vol. 17, No. 2, (May, 1983): 239-250  
Perkins, 245

<sup>66</sup> Michael Martin “Is Evil Evidence Against the Existence of God?” *Mind*, New Series, Vol. 87, No. 347, (Jul., 1978): 429-432

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

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God can endow creation with rules and regulations in a relatively closed system, but that does not guarantee that creation will remain a paradise. In a strictly biblical account, God did just that, and a choice was made to go against the will of God.<sup>67</sup> For this reason, God cannot be held accountable for what has happened in the universe since it was created necessarily. Again, free will is arguably a greater gift than mere rote obedience.

Considering the nature of God and the understood nature of creation, “It is not that *as a matter of fact* God will always exist, but that it *makes no sense* to say that God might not exist.”<sup>68</sup> There are more reasons to accept the existence of God potentially than there are to reject it definitively. It is not problematic that a juxtaposition of science and religion leads to this conclusion. Just setting certain religious traditions side by side can have more controversial consequences. “The possibility of the unreality of God does not occur *within* any religion, but it might well arise in disputes *between* religions.”<sup>69</sup> Because religious traditions as a body are potentially incompatible, the possibility of compatibility between science and religion should be deemed significant indeed. Granting significance here, however, is not at all synonymous with skepticism or surprise.

We are told, “As in science, traditions in religion are passed on by particular communities, partly through respected historical texts and key examples. Here, too, new members enter tradition by being initiated into the assumptions and practices of the

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<sup>67</sup> Genesis 3:6

<sup>68</sup> D. Z. Phillips, “Philosophy, Theology, and the Reality of God” *The Philosophical Quarterly*, Vol. 13, No. 53, (Oct., 1963): 344-350

Phillips, 344

<sup>69</sup> Phillips, 345

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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community, and they normally work within its accepted framework of thought, which we can call ‘normal religion,’ corresponding to ‘normal science’.”<sup>70</sup> Because the same general practices apply to both science and religion, it would be nonsensical to accept them as valid in science and not extend the same courtesy to religion. Yes, religion works within a more abstract realm than science, but it is still necessary in religion to provide a meaningful justification for beliefs that are being asserted. The main difference is what is considered adequate for doing so between the disciplines.

### Rationality and Legitimacy

It is important to determine what gives legitimacy to a method of inquiry if the method is to be worthwhile. However, it is primarily important to explain what rationality and legitimacy themselves are. For purposes of this examination, rationality is the logical completeness of a theory. The term refers to the ability of an argument to withstand logically rigorous skepticism. A truly rational position will be both valid and sound. A legitimate position is logically valid to the highest degree possible, but it also applies to intuition as being reasonable. Legitimate theories are worthwhile because they are supportable to a significant degree, but they also allow for a leap of faith to be made if necessary. A theory is legitimate if and only if it is logically worthwhile and also appealing to the parts of discourse that are not necessarily explainable in rational ways.

Consider the legitimacy of rationality or the rationality of legitimacy, for example. The relationship between legitimacy and rationality is clearly biconditional. If

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<sup>70</sup> Barbour, 1990, 54

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

one is present, so is the other; if one is absent, the other is also. However, it is possible that a certain discipline appeals more to one over the other. Science appeals more to rationality whereas religion appeals more to legitimacy. This conclusion is significant for analysis. Understanding this slight nuance is necessary before the aforementioned criteria can be used in any meaningful application.

A common error plaguing the establishment of a theory as rational or legitimate is an excessive reliance on probability to explain the world. When looking at the world and the state in which it currently exists, many scientifically-minded thinkers are tempted to attempt to calculate how unlikely it is that the world ended up exactly as it is because of chance. There is a fatal flaw in such an endeavor.

But if you dwell in a universe in which there is life—and obviously, since you dwell in it, it is such a universe!—then the probability that universal evolution would bring life immediately jumps to 100 per cent. Only if you considered a universe prior to knowing its fundamental constants, and prior to knowing whether life would arise in it, could you speak of life being unlikely.<sup>71</sup>

Once something occurs, the likelihood of that occurrence becomes 100 percent and therefore probability is no longer a worthwhile means of establishing legitimacy or rationality. Probability is a means of prediction, not of explanation. Showing that it is highly unlikely that the world would evolve just as it has by chance establishes nothing retroactively. The probability that *something* would happen is 100 percent, and that conclusion is as meaningful as can be drawn after the fact. Showing the unlikelihood of

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<sup>71</sup> Philip Clayton, “God and Contemporary Science” Grand Rapids, Michigan: Wm. B. Eerdmans Publishing Company, 1997.  
Clayton, 133

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something ending up the way it has culminated does not thereby support the proposition that an outside fact was governing the procedure of things towards where they stand from an arbitrary point in the past. However, meaningful discourse always moves forward. “If there were no forward-moving story, the retrospectively claimed pattern would just be a trick of perspective. Providence would lie in the eye of the beholder and not in any act of God. If things just happen, then talk of divine initiative is in fact misleading.”<sup>72</sup>

Probability can be a means for determining rationality and legitimacy, but only in a future-directed way. If a meaningful explanation is to be offered, a reasonable method must be used to formulate it.

A discrepancy between the fields of science and religion exists partially because each discipline has its own standards for what makes something rational and legitimate, and therefore the rules governing discourse between the two disciplines differ. Science generally uses empirical supports to establish the value of new propositions while religion tends to refer to matters of faith for validation. Barbour recounts Ernan McMullin’s position on the establishment of a scientific model. He states, “A good model...is not a dispensable temporary expedient but a grateful and open-ended source of continuing ideas for possible extensions and modifications.”<sup>73</sup> A religious model is similar. Indeed, “Religious models, we have said, lead to beliefs that correlate patterns in human experience. In particular, modes of the divine are crucial in the interpretation of religious experience. They represent in images the characteristics and relationships

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<sup>72</sup> Polkinghorne, *Zygon*, 44

<sup>73</sup> Barbour, 1990, 44

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portrayed in narrative form in stories.”<sup>74</sup> As differing modes of the divine are presented, the open-ended nature of religion is showcased. While the goals of scientific models are similar, it is also clear that the two sets of criteria for a meaningful model of each differ. It is therefore necessary to examine the differences between the two sets of criteria pertinent to each model if anything meaningful can come from the models in question.

Only after these models are understood can they be useful. Therefore, a basic criterion for establishing legitimacy is understanding the model or theory in question. Knowing what is being presented is imperative if anything meaningful is to be established. Consider the following:

If a person is presented with a question and knows what is being asked for, even though he does not know the correct answer to be given, what is involved is a question of truth-finding. In such cases, even if the individual cannot in fact carry out the steps necessary to ascertain the answer, he knows what sort of steps and what kind of data would give a plausible answer if he could in fact carry them out...In contrast, when questions of meaning are involved, one does not know or at least is not always sure what is being asked for.<sup>75</sup>

Clements sees the importance of understanding the model for what it is before examining it and critiquing it. Without understanding a theory, any conclusions drawn about it would not be accurate. Similarly, “it follows that unless I can be said to share your judgments at least to some degree I cannot be said to share your concepts.”<sup>76</sup> However,

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<sup>74</sup> Barbour, 1990, 45

<sup>75</sup> Tad S. Clements, “Science vs. Religion” Buffalo, New York: Prometheus Books, 1990. Clements, 145

<sup>76</sup> Bryan R. Wilson, editor, “Rationality” Oxford: Basil Blackwell, 1970.

Reprinted 1974, 1977, 1979, 1981, 1985, 1986

Chapter 4, pp. 62-77 “Is Understanding Religion Compatible with Believing?” by Alasdair MacIntyre

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

more is necessary for establishing real value in terms of the rationality and legitimacy of a theory.

The need for respect for differing value systems stems directly from having adequate knowledge of them. “Like rival anthropologists, rival commentators have to decide what standard of plausibility to set for the identification of their subject’s beliefs.”<sup>77</sup> Inasmuch as rival commentators have the right to set their own standards for plausibility in their own disciplines, they must acknowledge the potentially different standards in the disciplines closely tended by others. “Logic can tell us when we have an inconsistent set of beliefs, but it cannot tell us when the inconsistency should be tolerated or how to remove it. Logic can tell us what our beliefs logically imply, but not whether we should accept these implications while standing pat on premises.”<sup>78</sup> In working across differing systems of belief, logic in its purest form is generally not sufficient grounds for rectifying discrepancies between disciplines. Critics of a theory must respect that if the logic of an opposing position is valid, the position is at least legitimate and rational on a practical level. However, it may not be the case that it is also legitimate and rational on an applicable level.

It is a mistake to consider rationality and legitimacy as static conceptions. Over time, what counts as worthwhile in a given discipline will inevitably change as the

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Macintyre, 62

<sup>77</sup> Bryan R. Wilson, editor, “Rationality” Oxford: Basil Blackwell, 1970.

Reprinted 1974, 1977, 1979, 1981, 1985, 1986

Chapter 10, pp. 214-220 “The Limits of Irrationality” by Martin Hollis

Hollis, 219

<sup>78</sup> Jeffrey Stout, “The Flight from Authority” Notre Dame, IN: University of Notre Dame Press, 1981. Stout, 157

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

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framework for the discipline reflects the changing times. For this reason, another criterion that contributes to the establishment of something as legitimate and rational is flexibility. “We cannot understand the irrational and to suppose that we can is to run into vicious circles; but we can understand the rational in more than one way.”<sup>79</sup> Each of the multiplicity must be regarded as worthy of consideration. Even within one discipline, notions of worth change. If the standards for analysis are always in a state of flux, this perpetual reinvention of standards cannot count against the explicandum, especially if it too is flexible. We are told, “But at any given date in any given society the criteria in current use by religious believers or by scientists will differ from what they are at other times and places.”<sup>80</sup> Clearly, if modifications occur over time in a discipline, flexibility in the critiques of the disciplines must also prevail through the ages. As a discipline changes, so must the way it is examined. Now that the necessary criteria for the application of the standards of legitimacy and rationality are in place, we can consider some specific cases.

When examining the rationality and legitimacy of science, we are looking at the principles being asserted in a methodological discipline. Scientists throughout history have strived to establish theories that explain the universe, and each scientist has met with different levels of success. Consider the work of scientists of the past. “What a deep faith in the rationality of the structure of the world, and what a longing to understand even a small glimpse of the reason revealed in the world there must have been

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<sup>79</sup> Hollis, 220

<sup>80</sup> Macintyre, 67

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in Kepler and Newton to enable them to unravel the mechanism of the heavens in long years of lonely work!”<sup>81</sup> In order to compose legitimate, rational theories about the world, scientists of yesterday and today have to work indefatigably to assert worthwhile positions. Nonetheless, their work sometimes falls short. The grounding of science’s legitimacy and rationality may actually lie in a transcendental realm.

If science alone cannot provide a complete system of support for its own legitimacy and rationality, calling on an outside source in relation is not outlandish. In fact, it can be worthwhile in the right circumstances. “Acceptance of supernatural realities that differ radically from those available to normal and/or scientific cognition, should, from the logical point of view, be conditional on the capacity of the cognitive methods that generated belief in them to meet adequate cognitive tests.”<sup>82</sup> If this criterion is met, science and religion can collaborate to give legitimacy and rationality to each other. While this is not necessarily welcomed freely by proponents on either side, it is possible. “For a number of reasons, theologians do not yet know how to deal theologically with the findings of science. On the other hand, as we shall see, scientists have been having their own problems in recent years regarding collaboration with theologians.”<sup>83</sup> But the possibility of overlap between science and religion is clear when

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<sup>81</sup> Edward H. Cotton, editor, “Has Science Discovered God?” New York: Thomas Y. Crowell Company, 1931

The Meeting Place of Science and Religion reprinted from The Forum  
By Albert Einstein pp. 93-102  
Einstein, 102

<sup>82</sup> Clements, 135-136

<sup>83</sup> Christopher F. Mooney, S.J., “Theology and Scientific Knowledge: Changing Models of God’s Presence in the World” Notre Dame and London: University of Notre Dame Press, 1996.  
Mooney, 2

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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considering the characteristics of each that make the theories worthwhile. The two disciplines seem to lend themselves to cooperation.

In our examinations, we see that “Concepts are abstract, but metaphoric symbols are exponentially rich and are thus central in ritual and worship.”<sup>84</sup> The incorporation of a partnership between science and religion allows for the failings of one discipline to be addressed by the differing strengths of the other. Then, it is possible to construct a wholly encompassing model of legitimacy or a wholly rational explanation for reality that would otherwise be impossible. For example, “naturalistic processes have utterly failed to explain how non-living chemicals could somehow self-assemble into the first living cell.”<sup>85</sup> Precision and complexity in design that can be easily observed in creation seems to point more to religion than science. In fact, such characteristics have been cited as evidence of a creator.<sup>86</sup> Such views are gaining credence. Strobel explains, “Unlike Darwinism, where my faith would have to swim upstream against the strong current of evidence flowing the other way, putting my trust in the God of the Bible was nothing less than the most rational and natural decision I could make. I was merely permitting the torrent of facts to carry me along to their most logical conclusion.”<sup>87</sup> This is but one example of religion and faith addressing a scientific matter and accounting for reality adequately.

The example here is not aimed at showing the superiority of religion over science. Indeed, “The absolute transcendence of God must find its counterpart in the relative

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<sup>84</sup> Barbour, 1990, 46

<sup>85</sup> Strobel, 277

<sup>86</sup> Strobel, 279-283

<sup>87</sup> Strobel, 285

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transcendence of man.”<sup>88</sup> Scientifically empirical investigation is clearly important.

“Metaphysically we are unable to prove the freedom of man. The laws of Nature are universal, and the psycho-physical organism is no exception to this.”<sup>89</sup> It is therefore necessary to address religion from a scientific perspective as well. Scientific methodology offers a meaningful model for determining the legitimacy and rationality of an explanation.

In inference to the best explanation, “we consider a whole range of hypotheses and infer to the one which, if true, would provide the best explanation. In other words, we do an exhaustive analysis of the possible explanations and keep adding information until only one explanation is left that can explain the whole range of data.”<sup>90</sup> While this method is generally applied to scientific discourse alone, it has clear applicability in establishing rationality and legitimacy in religion as well. In trying to explain the universe, it is important to formulate the best position and most accurate and adequate explanation possible. It should not matter from which discipline the best argument comes. The best explanation can theoretically come from science or religion, but it should be becoming increasingly clear that the most adequate pictures of the universe incorporate the best features of both disciplines.

## Major Conflicts

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<sup>88</sup> A. Oosterheerdt, “The Transcendence of God in Its Relation to Freedom and Immortality” *The American Journal of Theology*, Vol. 14, No. 2, (Apr., 1910): 253-265

Oosterheerdt, 264

<sup>89</sup> Oosterheerdt, 261

<sup>90</sup> Strobel, 83 said by Stephen C. Meyer

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

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While many reasons have been presented thus far in support of viewing religion and science as partners with a common goal in inquiry rather than as in opposition to each other with the sole objective of discrediting the other, there are some irreconcilable differences between the two disciplines. “The trial and condemnation of Galileo in 1616 marked the beginning of a tragic estrangement between science and religion,”<sup>91</sup> and certain features in each discipline have not yet been reconciled. A main feature of science’s probative nature is its constant search for the “how” of the world. Religion, on the other hand, is more concerned with the “why” of things. This difference is one of several points on which science and religion are clearly opposed.

On a basic level, separating the body from the spirit was a crucial turning point in causing a seemingly irreparable rift between science and religion. “By separating the soul from the body, Descartes opened the door to materialism”<sup>92</sup> and therefore forged a more significant split between the two methods of thought. While the same questions about the universe persisted, the possible answers to them were dichotomous. Scientists were not the only ones fighting to sever any connections between religion and science, however. The Church played an important role in separating matters of fact from matters of faith as well. We read, “In the years of unhappy misunderstanding, which seemed to show her as opposed to science, the Church claims only to have defended essential religious truths when these have seemed to be under attack or threatened by scientists or

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<sup>91</sup> Dr. Paul Chauchard, “Science and Religion”, Translated by S. J. Tester, New York: Hawthorn Books, 1962.

Chauchard, 21

<sup>92</sup> Chauchard, 23

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

materialists making too much of temporary difficulties or unresolved contradictions.”<sup>93</sup>

However, condemnations, threats of excommunication, and persecution of the sinners who placed any value on the side of science were ostracized from the religious community of the time. “So for the Church, if science and religion keep each to its proper place, its own viewpoint, its own level of explanation, they cannot come into conflict.”<sup>94</sup> The definitive separation of religion and science has had profound effects in both fields.

An institutional blindness has really allowed the rift between science and religion to persist and worsen in time. Indeed, “Relatively few [theologians] have been willing to familiarize themselves with the anomalies of quantum reality, or to grapple with their revolutionary implications for understanding divine grace and human freedom, God’s creative action in the world, and indeed the doctrine of God itself.”<sup>95</sup> By allowing themselves to be blindly faithful, these theologians are really forcing their religious views to be both ignorant and incomplete. Of course, theologians are not the only thinkers in academia who fall victim to selective disciplinary ignorance.

Scientists also hold their own fair share of unreasonable prejudices that cause science to come into conflict with religion. Scientists who hold the closed-minded belief that “The only attitude which is truly rational and worthy of modern man is to accept only what can be seen; or rather, since our senses often deceive us and common sense is prone

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<sup>93</sup> Chauchard, 91

<sup>94</sup> Chauchard, 94

<sup>95</sup> Mooney, 71-72

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to make mistakes, to trust only scientific analysis of physical reality”<sup>96</sup> are disallowing the possibility of other means of finding truth and thereby elevating their own discipline to being on an unreasonable pedestal. Nonetheless, science can legitimately be skeptical about religion. “While we can use empirical knowledge to make metaphysical extrapolations and tentative inferences of what God may be like, such a procedure is very tenuous and speculative at best.”<sup>97</sup> By its nature, religion is rooted in speculation. However, the speculation in question is not necessarily unsupportable. Jumping to conclusions about the world based on unwarranted speculation is worthless, however. “To think in one’s enthusiasm that one has scientifically proved God’s existence, or to bring in God to fill the gaps in science, are but insignificant errors beside that which we now have to examine.”<sup>98</sup> Because of the nature of God, it is impossible to prove or disprove God’s existence with science. The best we can hope for is conclusive, meaningful results to an unbiased inquiry. Striving for anything else will lead to failure.

For a period of time, it was argued that religion and science had such different foundational preconceived notions that the two were impossible to compare. This was both good and bad for the relationship between the two disciplines. While the two could no longer serve as opposition for each other, they could not work together either. The argument was, “Since [science and religion] deal with radically different sorts of realities...their respective methods and knowledge claims cannot possibly conflict

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<sup>96</sup> Chauchard, 38

<sup>97</sup> Platt, 247

<sup>98</sup> Chauchard, 103

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(except through a misunderstanding of their respective claims).”<sup>99</sup> While this view has since been denied, the positing of non-overlapping magisteria—NOMA—was a significant part of the struggle to explain the universe adequately.

## NOMA

Stephen J. Gould’s theory of NOMA posits that “science and faith occupy distinctly different ‘magisteria’ or domains.”<sup>100</sup> For this reason, the two cannot be compared in any way. The implications of such an assertion are highly significant because two opposite conclusions are drawn necessarily: science and religion could no longer help nor hurt each other in academic discourse.

In accepting NOMA, “We can see that while science and faith have certain common characteristics in their psychological development, they still operate on two very different levels. Therefore there can never be any real rivalry, much less opposition, between them, because before two things can be opposed to each other they must be able to confront one another on the same ground.”<sup>101</sup> This seems promising in terms of reconciling the relationship between the two disciplines. If the two schools of thought cannot be compared, they cannot be opposed to each other. However, the ability to use NOMA as a justification for the separation of science and religion in the other sense—the

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<sup>99</sup> Clements, 12

<sup>100</sup> Strobel, 74

<sup>101</sup> Jean-Marie Aubert, “A God for Science?” Translated by Paul Barrett, O.F.M.Cap., Westminster, MD: Newman Press, 1967.

(First published 1964, copyright Librairie Arthème, Fayard, Paris)  
Aubert, 32

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

sense that there is no meaningful discourse possible across the disciplines—was controversial enough to get the theory discredited.

“You see, NOMA says science is the realm of facts, and religion is the realm of morality and faith. The essential problem is that biblical religion makes very specific claims about facts. It makes claims about the universe having a beginning, about God playing a role in creation, about humans having a certain kind of nature, and about historical events that are purported to have happened in time and space.”<sup>102</sup>

While this assertion is not inaccurate per se, it misses the point of the distinction that exists between religion and science in general. The two disciplines are not supposed to be the same thing or have the same goals or address the same issues all around. If that were the case, there would be no need for two identical processes. However, some points of overlap are acceptable between these otherwise different disciplines. “For, even if we do know that, in theory, science and faith cannot contradict each other, in actual fact the pervasive influence on science and the outlook it fosters oblige us to reassess the truths of faith in their proper dimensions so that we may achieve the mutually beneficial union between the two types of life that we are seeking.”<sup>103</sup> Careful consideration of NOMA shows that science and religion are not as incompatible as once thought, and that a relationship between the two disciplines may advance both accordingly.

A main problem with NOMA is that it did not adequately address science or religion. “To make NOMA work, its advocates have to water down science or faith, or

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<sup>102</sup> Strobel, 75, said by Stephen C. Meyer

<sup>103</sup> Aubert, 34

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*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

both.”<sup>104</sup> This alteration of the disciplines in question discredits the legitimacy and rationality of NOMA because it is not truly addressing either discipline on the level of reality. By making science and religion into something they are not and then concluding something about them, supporters of NOMA are drawing a meaningful conclusion about a meaningless construct.

Yes, there are some points of inevitable opposition between the two disciplines. “Theism, in short, is not inherently in conflict with science, but it does conflict with a metaphysics of materialism.”<sup>105</sup> However, reducing religion to theism and science to materialism is, again, ignoring reality in favor of an easily-manipulated construct that caters to drawing a biased audience’s conclusion. When viewed as they actually are, four types of relationship can be found to exist between science and religion – conflict, independence, dialogue, and integration.<sup>106</sup> Clearly, these four facets of interaction are meaningful in discourse because of the thorough exploration they bring into the realm of possibility once NOMA is thrown out.

In short, saying that science and religion ask different questions and use different methods is a separating factor.<sup>107</sup> While it is important—imperative in fact—to account for the differences between science and religion as disciplines, it is worthwhile to the fostering of intellectual inquiry to allow the two to interact as well. “If science and religion were totally independent, the possibility of conflict would be avoided, but the

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<sup>104</sup> Strobel, 76, said by Stephen C. Meyer

<sup>105</sup> Barbour, 2000, 14

<sup>106</sup> Barbour 2000, 7

<sup>107</sup> Barbour, 2000, 18-19

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

possibility of constructive dialogue and mutual enrichment would also be ruled out.”<sup>108</sup>

After considering the value of the possible (if not necessarily actual) relationship between science and religion, it can be concluded that a theory such as NOMA should be rejected.

“Despite NOMA’s being a stance quite popular among scientists who neither want simply to discard religion nor yet desire to take its cognitive claims with any degree of seriousness, it is neither experientially substantiated nor rationally supportable.”<sup>109</sup>

Because NOMA is weak in itself and there are marked benefits to allowing thinkers in religion and science the opportunity to collaborate, NOMA has fallen from favor.

Indeed, “Science and religion are not so much non-overlapping magisteria as parallel magisteria in that each magisterium, relying on particular modes of doubt and faith, enriches the human condition in its own way.”<sup>110</sup> This conclusion seems to rather definitively point to there being a meaningful relationship between science and religion after all.

### The Inevitable Overlap

It cannot be denied that scientists must come to conclusions in science themselves. Scientific conclusions do not depend on existence or nonexistence of God. However, “Eventually scientists and theologians come to see eye to eye”<sup>111</sup> and such a realization is a crucial point in the advancement of both science and religion in academia. Really, the two have similar goals and can be addressed cooperatively. “Science is an

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<sup>108</sup> Barbour, 2000, 22

<sup>109</sup> Polkinghorne, *Zygon*, 44

<sup>110</sup> Raman, 955

<sup>111</sup> Chauchard, 92

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

approach to the created world, the work of God.”<sup>112</sup> Similarly, religion is an attempt to encompass the world as it is and provide a framework for probing scientific inquiries. A problem that science encounters in its attempts to account for the origins of the universe is the problem of the first cause, the impetus for everything subsequent. If the universe has a tangible beginning, where did that come from? If its beginning was from a scientific principle of any sort, what set that principle as actual? Macfie asserts, “Even granting, as I do not grant, that a world of sorts might have come by chance, I cannot believe that a world like this of ours—a world so knit together to produce marvelous results, a world full of living men and women—a world containing beauty, and wisdom, and love, could ever have come into existence without a Creative Heart and Mind.”<sup>113</sup> Is this conclusion worthwhile?

Consider the age-old question: what came first, the chicken or the egg? If one asserts that the egg came first, then he or she would have to explain the origin of the egg itself. Bear in mind that the egg is fragile, in need of constant care, will hatch into a helpless baby chick, and was (by this model) not created by another chicken despite its position as chicken offspring. The likelihood that something would protect and warm the egg and then the chick until it was viable is not likely, but possible to explain once the origin of the egg was squared away. This seems rather elaborate, so maybe the chicken came first.

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<sup>112</sup> Chauchard, 95

<sup>113</sup> Ronald Campbell Macfie “Science Rediscovered God” Edinburgh: T&T Clark, 1931. Macfie, 271

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

If one asserts the chicken came first, he or she has to explain from where a fully grown chicken was spontaneously generated. While the fully grown chicken does not require the care and protection an egg does, there is a perplexing mystery at hand if fully grown poultry is spontaneously generated. Clearly, either answer to the question of the chicken and the egg is problematic in terms of origin.

If the problem of the chicken and the egg is scrutinized by the principles of Occam’s razor, we can assert that the simpler explanation is better. The fact that we have chickens in the world today would mean that the first chicken lived at least long enough to reproduce. This would necessitate the existence of two chickens –one male and one female—and so the problem doubles in complexity. If two life forms are to be spontaneously generated, it would make sense in terms of simplicity to have two self-sufficient creatures appear. The fully grown chicken would need much less care than a baby chick, so it would seem simpler that the chicken came first.

Now, to step back from this extended metaphor, consider God as the chicken and the egg as creation. God preexists creation, but God is the reason creation is. This model loosely addresses the problem of the origin of the universe in a way that accepts both science and religion as part of the process. ““While there will always be points of contention or unresolved conflict, the major developments in science in the past five decades have been running in a strongly theistic direction...Science, *done right*, points toward God.””<sup>114</sup> This assertion is a crucial observation in present-day inquiry. There is a reason to incorporate religion into a scientific model of the origins of the universe.

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<sup>114</sup> Strobel, 77 said by Stephen C. Meyer

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

*(Strobel, 75--Galileo’s aphorism cited by Meyer in his interview)*

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

“We infer design because [naturalistic evolutionary theories] fail *and* we know of another causal entity that is capable of producing information—namely, intelligence.”<sup>115</sup>

Without its religious component, an explanation of the universe’s origins is flawed and lacking. “Theism affirms the existence of an entity that’s not only transcendent but intelligent as well—namely, God. Thus, theism can explain both Big Bang cosmology and the anthropic fine-tuning.”<sup>116</sup> While this proposal is not accepted universally, it is worth considering seriously.

Science is undergoing yet another paradigm shift. “This shift [towards a Big Bang/beginning] in scientific opinion, after millennia of opposition, represents the more significant change science can ever make toward biblical philosophy... While a beginning does not confirm the existence of a Beginner, it does open the way for that possibility.”<sup>117</sup> Such an unabashed acceptance of the potential involvement of a creator God in science is a huge leap away from the religious and scientific intolerance that was characteristic in the past.

While accepting God as a component (if not the impetus) for the creation of the universe, scientists are granting that God has been part of scientific discourse all along. “If God is the origin of all that is, he is consistent with all that is, and this means that a great deal of his purposive activity will be hidden in the structure of scientific law.”<sup>118</sup>

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<sup>115</sup> Strobel, 79 said by Stephen C. Meyer

<sup>116</sup> Strobel, 81 said by Stephen C. Meyer

<sup>117</sup> Schroeder, 22

<sup>118</sup> John Polkinghorne, “Science and Providence” Great Britain: SPCK 1989, third impression 1993 Polkinghorne, 37-38

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The inability of scientists to see God’s role in science is not overtly problematic, however. God’s involvement in science is inevitable. As Janet Soskice proposes, “In both [science and religion], there were originating experiences and events in which a model was first introduced, and there was a subsequent linguistic community and interpretative tradition which perpetuated it.”<sup>119</sup> This critical realism has led us to the cooperative model of science and religion that we are best suited to work off of today.

Cooperation is imperative between religion and science in the modern world. “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.”<sup>120</sup> Part of the reason for such an amicable relationship being possible is that science and religion are structured in a surprisingly similar way. Both science and religions are analogical. Religious models are also extensible and unitary.<sup>121</sup> In short, “There are many *parallels* between science and religion: the interaction of data and theory (or experience and interpretation); the historical character of the interpretive community; the use of models; and the influence of paradigms or programs. In both fields there are no proofs, but there can be good reasons for the judgments rendered by the paradigm community.”<sup>122</sup> As additional trials are carried out, it is possible to improve upon the currently-accepted truths in a given field. With enough modifications, it is possible for science to find a conclusive explanation for the universe and for religion to

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<sup>119</sup> Barbour, 1990, 45

<sup>120</sup> Barbour, 1990, 4

<sup>121</sup> Barbour, 1990, 45

<sup>122</sup> Barbour, 1990, 65

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fill in the gaps where science is focused intimately on facts when the questions under scrutiny are matters of faith.

As far as inquiry is concerned, “Revelation and experience, like faith and reason, are not mutually exclusive.”<sup>123</sup> Science and religion can therefore work together in terms of logic at a basic level. Moreover, “Complementarity and compartmentalization maintain peace between science and theology.”<sup>124</sup> They provide the pathways for meaningful interaction while also allowing a healthy distance to be maintained. They are not adequate on their own, however. Mutual support is necessary for true completion.

According to the mutual support model, theology and science overlap but are not coextensive. Where they overlap, one discipline can provide epistemic support for the other. Epistemic support is much more general than proof. Proof—as in decisive, one-and-for-all settlement of a question—if possible anywhere, is possible only in mathematics. The mutual support model has no stake in using theology to decisively prove or settle the claims of science, or vice versa.<sup>125</sup>

Because proof is clearly impossible in both science and religion, neither one will attain it; therefore, neither discipline can achieve a higher level of support than the other necessarily. For this reason, neither discipline can draw superior conclusions alone. Cooperative efforts are therefore more appealing because there is the possibility for increased support as more criteria enter the realm of use in formulating supports or explanations for reality. The scientific age is progressing towards this cooperation as well.

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<sup>123</sup> Barbour, 1990, 65

<sup>124</sup> William A. Dembski “Intelligent Design” Downers Grove, IL: InterVarsity Press, 1999.

Dembski, 189

<sup>125</sup> Dembski, 191

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Five important features of the scientific age are: the success of the methods of science, having a new view of nature, a new context for theology, religious pluralism in a global age, and the ambiguous power of technology.<sup>126</sup> None of these features is challenged by the cooperation of science and religion, and in fact such juxtaposition enhances them.

Whether a person is inclined to place their beliefs in the scientific camp or the religious camp primarily, similar conclusions can be reached. Trying to reconcile the disagreements between science and religion of the past is becoming increasingly possible. As thinkers of all kinds are changing their criteria for legitimacy and rationality to be more inclusive, science and religion are slowly becoming partners. Believers on both sides are coming to see the values present on the other. “[T]he Christian who himself knows that God really is, although that conviction does not come to him from science, can yet find in the scientific arguments such confirmation of his beliefs that he may fairly speak, in a shorthand way, of scientific proofs of his faith,”<sup>127</sup> even if it is only due to the Christian’s newfound willingness to look at faith with a scientific framework and vocabulary. The differing models do lend themselves to being interchanged in an almost seamless manner.

This conclusion should not be surprising. “Almost all great men of science in past generations felt that science required the hypothesis of a God, and frankly said so.”<sup>128</sup> The more intricate one’s knowledge of science, the more aware he or she is of the

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<sup>126</sup> Barbour, 1990, xiii-xv

<sup>127</sup> Chauchard, 96

<sup>128</sup> Macfie, 264

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shortcomings of scientific inquiry. Similarly, those well-versed in religious discourse are most apt to debate the failings of religious methodology.

Physicist Stephen Hawking is among reputable scientists who are open to (and in favor of) leaving room for God in science. “Hawking does not dispute the impossibility of forming an actual infinite by successive addition; rather he challenges the more fundamental assumption that a beginningless universe entails an infinite past.”<sup>129</sup> When asking the big questions in science, complicated answers are inevitably required to adequately address the problems at hand. In this complexity, the limits of what is included in the body of scientific knowledge are oftentimes found and consequently challenged. These challenges are incredibly helpful to the forging forth of scientific discourse.

Again considering Hawking, “In point of fact, it is false that there is no place for God in Hawking’s system or that God is absent...Hawking appears to retain God’s role as the Sufficient Reason for the existence of the universe, the final answer to the question Why is there something rather than nothing?”<sup>130</sup> By giving God such a scientifically legitimate position, Hawking is meaningfully asserting the validity of the cooperation between science and religion in hopes of finding the most adequate conception of the universe as it truly exists.

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<sup>129</sup> William Lane Craig and Quentin Smith, “Theism, Atheism, and Big Bang Cosmology” Oxford: Clarendon Press, 1993.

William Lane Craig ‘What Place, then, for a Creator?’; Hawking on God and Creation pp. 279-300

Craig, 285

<sup>130</sup> Craig, 280

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Scientists are not the only enlightened thinkers who accept and try to foster the relationship between science and religion in their work. “As Pope John Paul II has said, ‘Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each can draw the other into a wider world, a world in which both can flourish.’”<sup>131</sup> The open, amicable relationship between science and religion is fostered by progressive thinking by enlightened people on both sides. It has been asserted, “Revealed knowledge and knowledge based, even if indirectly, on science can and sometimes do meet. When traditional religious insights are reexamined in terms of current scientific knowledge, some insights can be revalidated by empirical reasoning.”<sup>132</sup> However, this relationship is reciprocal.

Only by the interchange of view-points and the intelligent comparison of its methods and problems can science and religion hope to join hands in evolving some philosophical concept big enough to embrace both God and his universe, and simple enough in its approach to truth to make a religion workable and satisfying in its expression to the modern man in an age of science.<sup>133</sup>

The relationship between science and religion today is no longer one of hostile competition. Rather than trying to undermine each other, thinkers from both disciplines

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<sup>131</sup> Barbour, 2000, 17

Message of His Holiness John Paul II” in John Paul II on Science and Religion, Reflections on the New View from Rome ed. Robert John Russell, William R. Stoeger, S.J., and George V. Coyne, S.J. (Vatican: Vatican Observatory, 1990), p. M13

<sup>132</sup> Ervin Laszlo, “Religion Versus Science: The Conflict in Reference to Truth Value, Not Cash Value” *Zygon*, Vol. 41, No. 1, (Mar., 2005): 57-61  
Laszlo, 61

<sup>133</sup> Edward H. Cotton, editor, “Has Science Discovered God?” New York: Thomas Y. Crowell Company, 1931  
Religion in a World Remade by Science  
By Harlan T. Stetson pp. 219-237  
Stetson, 327

*“Science tells you how the heavens go, and the Bible tells you how to go to heaven.”*

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are working diligently to see the merit in the other side’s perspective in hopes of improving the value of the conclusions drawn by both sides about the universe.

## Conclusion

Many of the strengths of science are present in religion and vice versa, and both disciplines also face many of the same shortcomings. Contrary to popular belief, neither system can formulate an entirely conclusive position that is *proven* to be true. The best either discipline can hope for is an adequately researched position that does not fall from favor after repeated attempts to discredit its value over time. The best way for either discipline to achieve such a conclusion is to be open to the possibility of collaboration with the other. After all, two heads are better than one.

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<sup>i</sup> A closed definition is a definition that says something is a certain way, and anything that is not precisely that is not that at all. Considering the heap paradox, if a heap is defined specifically as a conglomeration of three or more components with at least one component resting on at least one other component, the paradox is no longer problematic. It is only when the definition is flexible does such a problem arise from the discrepancy.

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## Bibliography

(alphabetically by source type)

### Books:

Aubert, Jean-Marie. *God for Science?*, Translated by Paul Barrett, O.F.M.Cap. Westminster, MD: Newman Press, 1967.  
(First published 1964, copyright Librairie Arthème, Fayard, Paris)

Barbour, Ian G. *Religion in an Age of Science*, Gifford Lectures Volume 1, San Francisco: Harper & Row, Publishers, 1990.

Barbour, Ian G. *When Science Meets Religion*, San Francisco: Harper, 2000.

Chauchard, Paul. *Science and Religion*, Translated by S. J. Tester, New York: Hawthorn Books, 1962.

Clayton, Philip. *God and Contemporary Science*, Grand Rapids, Michigan © Philip D. Clayton: Wm. B. Eerdmans Publishing Company, 1997.

Clements, Tad S. *Science vs. Religion*, Buffalo, New York: Prometheus Books, 1990.

Dembski, William A. *Intelligent Design*, Downers Grove, IL: InterVarsity Press, 1999.

Ferguson, Kitty. *The Fire in the Equations*, Great Britain: Bantam Press, 1994. and Grand Rapids Michigan: William B. Eerdmans Publishing Company, 1995.

Hawking, Stephen W. *A Brief History of Time*, Toronto and New York: Bantam, 1988.

Kuhn, Thomas S. *The Structure of Scientific Revolutions Third Edition*, Chicago: University of Chicago Press, 1962, 1970, 1996.

Macfie, Ronald Campbell. *Science Rediscovered God*, Edinburgh: T&T Clark, 1931.

Mooney, Christopher F. *Theology and Scientific Knowledge: Changing Models of God's Presence in the World*, Notre Dame and London: University of Notre Dame Press, 1996.

Polkinghorne, John. *Science and Providence*, Great Britain: SPCK, 1989. (third impression 1993).

Rizzi, Anthony. *The Science Before Science*, Baton Rouge, LA: IAP Press, 2004.

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

---

Schroeder, Gerald. *The Science of God*, New York: The Free Press, 1997.

Stannard, Russell. *The God Experiment: Can Science Prove the Existence of God?*, First published in Great Britain, London: Faber and Faber Limited, 1999. and Mahweh NJ: Hiddenspring, 2000.

Stout, Jeffrey. *The Flight from Authority*, Notre Dame, IN: University of Notre Dame Press, 1981.

Strobel, Lee. *The Case for a Creator*, Grand Rapids, Michigan: Zondervan, 2004

Chapters of Books:

**Angeles, Peter, editor.** *Critiques of God*, Buffalo, NY: Prometheus Books, 1976.

-Nagel, Ernest. “Philosophical Concepts of Atheism”: 3-18.

-Hook, Sidney. “Modern Knowledge and the Concept of God”: 21-40.

**Cotton, Edward H., editor.** *Has Science Discovered God?*, New York: Thomas Y. Crowell Company, 1931.

- Einstein, Albert. “The Meeting Place of Science and Religion” reprinted from The Forum: 93-102.

-Thomson, Sir J. Arthur. “How Science Changes our Vision of God”: 161-180.

-Stetson, Harlan T. “Religion in a World Remade by Science”: 219-237.

**Craig, William Lane and Smith, Quentin.** *Theism, Atheism, and Big Bang Cosmology*, Oxford, Clarendon Press: 1993.

- Craig, William Lane. “‘What Place, then, for a Creator?’; Hawking on God and Creation”: 279-300.

**Curd, Martin and Cover, J. A., editors.** *Philosophy of Science*, New York: W. W. Norton & Company, 1998.

- Ruse, Michael. “Creation-Science Is Not Science” (from *Science, Technology, and Human Values* 7 no. 40 (Summer 1982): 72-78): 38-47.

- McMullin, Ernan. “Rationality and Paradigm Change in Science”: 119-138.

**Wilson, Bryan R., editor.** *Rationality*, Oxford, Basil Blackwell: 1970  
Reprinted 1974, 1977, 1979, 1981, 1985, 1986

-Macintyre, Alasdair. “Is Understanding Religion Compatible with Believing?”, Chapter 4: 62-77.

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

---

-Hollis, Martin. “The Limits of Irrationality”, Chapter 10: 214-220.

Scholarly Journal Articles:

Brown, William Adams. “Why I Believe in God” *The Biblical World*, Vol. 54, No. 5 (Sep., 1920): 474-478.

Dilley, Frank B. “Is There ‘Knowledge’ of God?” *The Journal of Religion*, Vol. 38, No. 2 (Apr., 1958): 116-126.

Durfee, Harold A. “The Reformulation of the Question as to the Existence of God” *Philosophy and Phenomenological Research*, Vol. 28, No. 3, (Mar., 1968): 385-391.

Kishimoto, Hideo. “An Operational Definition of Religion” *Numen*, Vol. 8, Fasc. 3, (Dec., 1961): 236-240.

Laszlo, Ervin. “Religion Versus Science: The Conflict in Reference to Truth Value, Not Cash Value” *Zygon*, Vol. 41, No. 1, (Mar., 2005): 57-61.

Laszlo, Ervin. “Thinkpiece: Why I Believe in Science and Believe in God: A Credo” *Zygon*, Vol. 39, No. 3, (September 2004): 535-540.

Martin, Michael. “Is Evil Evidence Against the Existence of God?” *Mind*, New Series, Vol. 87, No. 347, (Jul., 1978): 429-432 -- not directly quoted, but used for ideas

Morreall, John. “God as Self-Explanatory” *The Philosophical Quarterly*, Vol. 30, No. 120, (Jul., 1980): 206-214.

Neville, Robert C. “Some Historical Problems about the Transcendence of God” *The Journal of Religion*, Vol. 47, No. 1, (Jan., 1967): 1-9.

Oosterheerdt, A. “The Transcendence of God in Its Relation to Freedom and Immortality” *The American Journal of Theology*, Vol. 14, No. 2, (Apr., 1910): 253-265.

Perkins, R. K. Jr. “An Atheistic Argument from the Improvability of the Universe” *Noûs*, Vol. 17, No. 2, (May, 1983): 239-250.

Philips, D. Z. “Philosophy, Theology, and the Reality of God” *The Philosophical Quarterly*, Vol. 13, No. 53, (Oct., 1963): 344-350.

Platt, David. “Some Perplexities Concerning God’s Existence” *Journal of Bible and Religion*, Vol. 34, No. 3, (Jul., 1966): 244-252.

*“I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.” – Galileo Galilei*

---

Polkinghorne, John. “The Continuing Interaction of Religion and Science” *Zygon*, Vol. 41, No. 1, (Mar., 2005): 43-50.

Raman, Varadaraja V. “Faith and Doubt in Science and Religion” *Zygon*, Vol. 39, No. 4 (December 2004): 941-955.

Smith, John E. “The Reality of God and the Denial of God” *The Journal of Religion*, Vol. 51, No. 2, (Apr., 1971): 83-102.