Science and Religion during the Enlightenment

“Science offers us an explanation of how complexity (the difficult) arose out of simplicity (the easy). The hypothesis of God offers no worthwhile explanation for anything, for it simply postulates what we are trying to explain.”¹ This viewpoint, expressed here by American biologist Richard Dawson, is the belief of many scientists of our time. Religion is considered a hindrance to discovery and scientific progress. Faith is seen as teaching children and therefore our society to be comfortable with not understanding the world around them, thus making it the antithesis of science. Many modern Christians are adamantly against scientific studies as well, with the religious right being the most vocal players in the war between religion and science. Heated battles over creationism versus evolution, stem cell research, and climate change are just some of the controversies placing the religious against science and the scientific community. Was it always this way? Throughout history, have science and religion always been understood as being incompatible? To try to answer this question, a study of the Enlightenment, the origin of modern science and the scientific method, is a good place to start.

The seventeenth century was a time when man began to look at the world through a rapidly evolving set of eyes. The ideas and discoveries of the Enlightenment began to have a significant impact on the how the world was perceived. Science and the study of nature became of prime importance, yet this

new realm of study presented a possible confrontation with the entrenched ideas of religion and Christianity. How would the belief in God hold up when rational explanations were being discovered for natural phenomena? According to one prominent historian, “With the rise of modern science, the age of unshakable faith was forever gone in the West.”² However, science was not necessarily an enemy of religion. Unshakable, unquestioning faith was challenged by the new investigatory nature of intellectuals of the time. However, faith itself was not destroyed by science because many men found proof of a deity in their studies of nature. The new science of the Enlightenment changed the way people thought about religion. Inspired by their inquisitive nature, scientists such as Isaac Newton investigated Christianity and its tenets, coming up with their own unique beliefs about God. Scientific discoveries inspired religious figures, such as Cotton Mather, who saw nature as a way to prove the existence of God and felt that science was one of the best ways to glorify him. Both Isaac Newton and Cotton Mather were inspired by and made contributions of their own to the ideas of the Enlightenment, and a study of these two men and the beliefs they held shines a light on the way religion and science interacted during this age of discovery. Far from being at odds with one another, science and religion were deeply intertwined. Both men of science as well as men of religion were able to reconcile the two. Science was used as a supplement to the Bible and as a way to prove the existence of God.

Isaac Newton was one of the most brilliant minds of the Enlightenment. The publication of his book *The Principa* in 1687 was one of the most notable events in

the history of physical science. He discovered and explained principles of force and motion and celestial mechanics. Newton invented differential and integral calculus as well as developed the binomial theorem and various properties of infinite series. He also laid the foundations for the calculus of variations. Newton published a groundbreaking study of optics and began the experimental study of the analysis and composition of light, showing that white light is the mixture of light of many colors. Newton studied the world around him and made many amazing discoveries about how the natural world worked. His prominence in science is illuminated in the famous Alexander Pope couplet: “Nature and Nature’s Laws lay hid in night, God said, Let Newton be, and all was light.” This couplet exhibits the entanglement of religion and science in the popular thinking of the day.

Isaac Newton attended Trinity College at Cambridge. He showed an intense interest in mathematics, optics, physics, and astronomy, and it quickly became clear to those at the University that he would become a professor. Ordination as an Anglican priest was a requirement for being a member of the faculty, and likely because of this in 1675 Newton began a massive study of church history and doctrine. Through his intensive studies, which lasted throughout the next decade, Isaac Newton developed his own unique beliefs about God and Christianity.

Some of the first unorthodox beliefs Newton arrived at through his theological studies were his ideas about the Trinity. An extensive study of scripture led Newton to believe that the Trinity, the central tenet of Christian orthodoxy, was a post-biblical corruption. By the middle of the decade, he arrived at a view of God

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that was very similar to the ancient heresy of Arianism.\(^4\) Arianism was the belief that Christ was not an eternal person in a triune God, but rather a created intermediary between God and man. Renunciation of the Trinity was illegal during this time, and had he publically announced his views Newton would have been considered a heretic. However, in his writings and correspondence with his closest religious disciple, William Whiston, Newton insisted on a distinction between God, the omnipotent creator, and Christ, who has always been subordinate to God, yet was elevated by God to sit at his right hand.\(^5\) Newton had been right to keep his beliefs to himself. William Whiston, who inherited the Lucasian Professorship after Newton, lost the position for trying to publish religious views similar to Newton’s in a series of works.

Newton also became absorbed in the fourth-century struggle between what became Christian orthodoxy and Arianism. Newton sided with Arius (250-336), who taught that Jesus had been created by God rather than being co-eternal with God and the Father. After reaching this conclusion, Newton came to hate Athanasius (296-373), the principle architect of Trinitarian orthodoxy. He did not believe that Athanasius was simply mistaken about the Trinity; he regarded Athanasius and his associates as criminals who had seized and perverted Christianity for their own selfish reasons. He believed they had even inserted Trinitarian passages into scripture because there were passages that he was unable to find in versions of the


Bible earlier than the fourth century.⁶ After adopting his Arian position in the 1670s, Newton strongly believed for the rest of his life that the Trinity was a perversion of true Christianity.

His biblical scholarship and his denial of the Trinity led Newton to refuse to accept the thirty-nine articles of the Anglican Church and therefore refuse to become an ordained Anglican priest. Newton was offered the Lucansian Professorship in mathematics at Trinity College, but because ordination was a requirement to be a faculty member, his refusal to accept the articles presented a unique problem. Because of his mathematic genius, however, the University was willing to make a surprising exception and waived the rules by royal dispensation.⁷ This is an example of how the Enlightenment was beginning to change people’s priorities, and how science and mathematics were considered extremely important areas of study at this time- important enough even to make religious compromises in order to accommodate them. Although Newton hid many of his religious beliefs, he very openly refused to accept the articles of the Anglican Church. On his deathbed, Newton also refused the sacrament of the Anglican Church.⁸ However, even though he rejected the Trinity, Newton never rejected Christianity altogether or found it incompatible with his science. His scientific curiosity led him to question tenets of the church, but also solidified his belief in God.

Another belief Sir Isaac Newton came to adopt through his biblical scholarship was that prophecy was the most important part of scripture to study.

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This belief was clearly inspired by his scientific studies and their focus on the search for proof and evidence. The prophecies were of prime importance to Newton because if one could absolutely and unambiguously decipher the meaning of the Bible’s prophecies, especially events that were supposed to be going on during the present, than one would have a way to test the authenticity of the Bible directly. Six years after his death, Newton’s nephew published a small portion of his writings dealing with prophecy entitled *Observations upon the Prophecies of Daniel, and the Apocalypse of St. John*. In his *Observations*, Newton wrote:

> We have Moses, the Prophets, and Apostles, and the words of Christ himself; and if we will not hear them, we shall be more inexcusable than the Jews. ... And the giving ear to the Prophets is a fundamental character of the true Church. For God has so ordered the Prophecies, that in the latter days the *wise may understand, but the wicked shall do wickedly, and none of the wicked shall understand*. The authority of Emperors, Kings, and Princes, is human. The authority of Councils, Synods, Bishops, and Presbyters, is human. The authority of the Prophets is divine, and comprehends the sum of religion.

This passage makes it clear that prophecy was of great importance to Newton and his theological studies. More than any other part of scripture, he believed it imperative for Christians to study the prophecies in order to have a true understanding of the wishes of God, while simultaneously proving the authenticity of the Bible. The rest of the *Observations* goes on to analyze in great detail the prophecies of Daniel and St. John. Newton argued that the best way to discover the meaning of biblical passages was by investigating similar passages in the literature.

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of nearby societies. Using this method, the true meaning of the passages could be more easily deciphered. This is an example of how Newton’s scientific method of study influenced his theological scholarship. He was looking for hard proof and evidence within the scriptures themselves. This challenges this Christian idea of “faith.” Newton did not simply want to have blind faith in the Bible and the teachings of the clergy; he was searching for evidence to prove the validity of the scriptures the same way he searched for evidence for his scientific theories.

Newton had many problems with tenets of orthodox Christianity as well as those who preached it, however he never questioned the actual existence of God. Quite the contrary, Newton found in his scientific studies absolute proof of the existence of an omnipotent creator. In his published work on Optics, Newton asked,

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\text{Whence is it that Nature doth nothing in vain; and whence arises all that Order and Beauty which we see in the World?... and what hinders the fix'd stars from falling upon one another? ...Was the Eye contrived without Skill in Opticks, and the Ear without knowledge of the Sounds? ... Does it not appear that there is a Being incorporeal, living, intelligent, omnipresent, who in infinite Space... sees the things themselves intimately, and thoroughly perceives them, and comprehends them wholly by their immediate presence to himself.}^{12}
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In Newton’s perspective, he was studying and discovering how the world worked, but science had no answer as to why the world operated as it did. An omnipotent being guiding the universe was the only solution he could accept.

The universe could not exist in the way that it did, according to Newton, without the creation and control of an omnipotent God. Newton’s law of inertia states that matter in motion remains in motion and matter at rest remains at rest

\[11^{\text{Olson, Richard. Science and Religion. 121.}}\]
\[12^{\text{Newton, Isaac. Opticks: or, a treatise of the reflections, refractions, inflections and colours of light. The fourth edition, corrected. (1730) 344-345.}}\]
until operated on by an outside force. This discovery provided Newton with the argument for God as a necessary “first mover.” Newton also studied and made great discoveries about gravity and the orbit of planets around the sun, however he argued, “Gravity may put the planets into motion, but without the divine power it could never put them into such as circulating motion, as they have about the sun.”

Although he found a scientific explanation for the movement of the planets, that did not negate God’s essentiality in the process.

During this time period, a belief began to gain popularity among some academics that God had created the universe at the beginning of time, and since then had not intervened much at all in its operation. This was the basis for the belief in a deist god. The idea that God was not actively involved in the universe was akin to atheism for Newton and many others. When observed planetary motions did not fit perfectly with predictions made my Newton’s laws, he was thrilled because he hypothesized that God occasionally had to intervene to adjust their motions. He viewed God as a clockmaker, who had created the clock (the universe) and occasionally needed to wind it up.

This idea sparked controversy with another leading intellectual of the time, G.W. Leibniz (1646-1716). Leibniz believed that the existence of God was proven by the complex interconnectedness of everything in creation. He was highly offended by Newton’s claims that the motions of the planets might be slowing down

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15 This famous quarrel between Newton and Leibniz began as a dispute over who invented calculus.
and that, at some time in the future, God would perhaps send a comet to add a gravitational kick to the system and speed the planets up again. Leibniz objected to the idea that God was such a poor craftsmen that he “wants to wind up his watch from time to time.”\textsuperscript{16} Leibniz was so offended by Newton’s claim that he wrote a letter to Princess Caroline of Wales, the presumptive heir to the English Crown, complaining that Newtonianism was a central cause of the decline of morality in England.\textsuperscript{17} Of course, Isaac Newton himself saw things much differently. He believed that his scientific discoveries were further proving the existence of God. In his opinion there was no better way to shed light on and glorify God than through the study of nature. In the Opticks, he wrote,

\begin{quote}
And if natural Philosophy, in all its Parts, by pursuing this Method, shall at length be perfected, the Bounds of Moral Philosophy will be also enlarged. For so far as we can know by natural Philosophy is the first Cause, what Power he has over us, and what Benefits we receive from him, so far our Duty towards him, as well as that towards one another, will appear to us by the Light of Nature.\textsuperscript{18}
\end{quote}

For Newton, studying science (“natural Philosophy”) was the best way to enlarge our understanding of morals. Nature could illuminate the gifts given to man by God, as well as the responsibility of man to God and to one another.

Newton’s scientific mind and curiosity led him to dive deep into his studies of theology. Rather than simply accepting anything the clergy told him to be true, Newton performed an in depth study of the scripture. Newton was very frustrated

\textsuperscript{17} Olson, Richard, \textit{Science and Religion}, 124.
\textsuperscript{18} Newton, Isaac. \textit{Opticks: or, a treatise of the reflections, refractions, inflections and colours of light. The fourth edition, corrected.} (1730) 381.
by the fact that people blindly accepted Christian doctrine without doing any
investigation for themselves. He wrote, “The world loves to be deceived. There are
but few who seek to understand the religion they profess- to examine whether it be
ture with a resolution to choose and profess that religion which in their judgment
appears to be truest.”¹⁹ Religion was something of grave importance to Newton, and
his curious and questioning mind was offended by the fact that many around him
did not seek the truth about God. In his mind, the majority of Christians were blindly
accepting a perverted form of Christianity.

Newton’s science had a significant influence on his ideas on religion.
Inversely, the American minister Cotton Mather’s religious views influenced his
understanding of science and the discoveries that were being made during his
lifetime, such as those being made by Newton himself. Isaac Newton obviously
needs no introduction as a scientist but the minister Cotton Mather, on the other
hand, may seem on the surface to be an exclusively religious figure. More
background information is needed to qualify the preacher Mather as also a man of
science. Born in Boston, Massachusetts in 1663, Cotton Mather entered a prominent
religious family that also had a unique interest in science. His grandfather, John
Cotton (1584-1652), was described as the “chief spokesman of American
Puritanism.”²⁰ Cotton Mather’s father, Increase Mather, was minister to the Second
Church in Boston and president of Harvard College from 1685 to 1701.²¹ John

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¹⁹ Newton, Isaac quoted in Science and Religion 1450-1900: From Copernicus to Darwin. John Hopkins
²⁰ Hudson, James Daniel. “Cotton Mather’s Relationship to Science.” Georgia State University Digital
²¹ Cotton Mather Biography, Encyclopedia of World Biography, www.notablebiographies.com
Cotton and Increase Mather studied more than theology, and each had a strong interest in science. The example of the Mather family could even be used to further the argument that Puritanism itself had a significant impact on science.

In his article “Puritanism and Science,” Theodore Hornberger explains that some historians have linked English Puritans to the formation of the Royal Society of London, of which Isaac Newton served as president and Cotton Mather was a fellow. The Royal Society, founded in the mid-1640s, began as a group of natural philosophers that met to promote knowledge of the natural world through observation and experiments. It has been argued by historians that the Puritan ethic enhanced the cultivation of science because the deep-rooted religious interests of the day demanded the systematic, rational, and empirical study of nature for the glorification of God. The Puritan value of using your time for worthwhile pursuits is another reason it promoted men to study science. Evidence to support the fact that Puritanism was favorable to the development to science can be found in the list of the original members of the Royal Society. Of the ten men who made up the “invisible college” which became the Royal Society, only one was non-Puritan. Of the original list of members of the Society from 1633, forty-two of the sixty-eight (62%) were Puritans. This is compelling because Puritans made up a small minority of the English population at that time. This is significant because it again highlights the interconnectedness of science and religion at the time. The Puritan ethic had a favorable influence on the growth of science, and many members of the Puritan

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church, such as Cotton Mather, his grandfather John Cotton, and his father Increase Mather, found ways to integrate science and Puritan thinking.

John Cotton believed that the Bible contained the answer to all questions, however he also encouraged a more scientific quest for knowledge about God's creation. He sought physical explanations to natural phenomena. For example, during this time period, many saw the red sky during a sunset as a sign from God that the next day would be fair. John Cotton, on the other hand, shared a more scientific explanation- “The cloud is thinne and rare, and the body of the cloud pierced thorowly, by the beames of the Sunne, whence it is that the matter or cause of foule weather is discipated.” He explains his reasoning behind a stormy day by stating, “In that it is cloudy, it is a signe there is thicker matter in the coulde then the Sunne beams can easily pierce through; and therefore because of the heaviness of the matter, the Sun beams cannot drive those clouds away.”

John Cotton believed scripture and scientific discovery could be compatible. He wrote that Christ did not “mislike the study of nature” and reconciled his Cambridge University education with his Puritan beliefs by using scientific discoveries to prove scripture and the greatness of God.

Cotton Mather’s father, Increase, continued the family’s interest in science. He transmitted scientific knowledge of European scientists (who later developed into the Royal Society) to the colonies in his Essay for the Recording of Illustrious Providences (1684). Increase Mather kept up to date on scientific discoveries and

25 Ibid. 507
scientific explanations for natural phenomena, accepting these discoveries alongside his Christian faith.

Cotton Mather went even further than his father in bringing together science and religion. Cotton Mather saw science as a way of proving the existence of God. Heavily influenced by the Enlightenment, Mather saw proof of God in the idea of intelligent design. First posited by Plato, this is the theory that nature is so orderly and perfectly designed that a purposeful creator must have conceived it. To Mather, science did not challenge religion; science was a way to reveal truth, which in his mind included a Christian God. He believed, as Isaac Newton did, that nature provided ways to better understand God.

Cotton Mather had the utmost respect for Isaac Newton, praising the “discoveries of the great sir Isaac Newton” in his work *The Christian Philosopher: a collection of the best discoveries in nature, with religious improvements*. Mather was not aware of Newton’s unorthodox views on Christianity, but he was obviously very knowledgeable of Newton’s published work and studied it in detail. In the *Christian Philosopher* he wrote,

> But then comes the admirable Sir Isaac Newton, whom we now venture to call the Perpetual Dictator of the learned World, in the *Principles of Natural Philosophy*; and then whom, where has not yet shown among Mankind a more sagacious Reasoner upon the *Laws of Nature*. This rare Person, in his incomparable Treatise of *Opticks*, has yet further explained the *Phenomena of the Rainbow*; and has not only shown how the *Bow* is made, but how the Colours are formed; how the Rays do strike our Sense with the *Colours*, in the Order which is required by their Degrees of *Refrangibility*, in the Progress from the Inside of the *Bow* to the Outside: the *Violet*, the *Indigo*, the *Blue*, the *Green*, the *Yellow*, the *Orange*, and the *Red*.

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It is clear that Mather did not disapprove of Newton’s study of nature. On the contrary, Mather used the science of Newton and other intellectuals to prove the existence of God. Mather did not see science as a threat to Christianity; he saw it as the perfect way to further glorify God’s creation, as had Isaac Newton. Mather wrote, “Philosophy is no Enemy, but a mighty and wondrous Incentive to Religion.”

Even in areas where Newton felt uneasy about diminishing the role of God through his discoveries, Mather saw more evidence of a divine creator. For example, Newton was troubled by the fact that his theory of gravity included no explanation for the cause of gravitation. His mathematical demonstration of the mechanical process of the universe could be seen as diminishing the role of God. In his *Principia*, Newton stated, “Hitherto I have not been able to discover the cause of those properties of gravity from phenomena, and I frame no hypotheses.” Newton’s inability to find the cause of gravity, however, is proof to Mather of the existence of God and that Newton’s studies were in line with Christianity. In his “Biblia Americana” Mather stated, “That the Power of Gravity perpetually acting in the present Constitution of the System of the Universe, is an Invincible Argument for the Being of a GOD.”

Mather uses Newton’s discovery of gravity to even further prove the existence of God in his essay "Of Gravity" in the *Christian Philosopher*. In it he wrote,

> Our *Globe* in particular, which revolved at the rate of above a thousand Miles and Hour, would, by the centrifugal Force of that Motion, be soon dissipated, and spirited into the circumambient

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28 Newton, Isaac quoted in “Cotton Mather’s Relationship to Science”, Hudson.

29 Mather, Cotton quote in “Cotton Mather’s Relationship to Science”, Hudson.
space, were it not kept well together by this wondrous Contrivance of the Creator, *Gravity*, or the *Power of Attraction*.\(^{30}\)

Mather cited Newton in his works, but also studied and respected other intellectuals of the time as well. He added, “Tis enough to me what that incomparable Mathematician, Dr. *Halley*, has declar’d upon it: That, after all, *Gravity* is an Effect insolvable by any *philosophical Hypothesis*; it must be religiously resolv’d into the immediate Will of our most wise Creator.”\(^{31}\) Through his essay “*Of Gravity,*” as well as throughout the rest of *The Christian Philosopher*, Mather exhibited a vast knowledge about and appreciation of the science being conducted during his time. Within the book Mather introduced over 450 authors and titles, with nearly all of the leading scientists being mentioned. For a colonial writer, Mather demonstrated a remarkable range of knowledge.\(^{32}\) He was obviously well informed about discoveries that were happening around the globe, especially in Europe.

The Royal Society was certainly the main way in which Mather was able to keep up to date on the discoveries of scientists in Europe during his time. At the time he wrote *The Christian Philosopher*, Mather was a fellow of the Society. Mather also had a huge amount of foreign correspondence during his lifetime. In a collection of his foreign correspondence, the editor writes, “To edit Cotton Mather’s correspondence is to write a history of... western civilization... His letters mention every important person and event between 1680 and 1730 and allude, it seems, to


\(^{31}\) Ibid. 82.

every other important person and event before... Though incomplete, the collection represents the largest extant correspondence of any American Puritan.”

He had a true curiosity for things happening in his world, and not only in the west. His correspondence covered the colonies and twenty-one countries, including Kerala, Portugal, Indonesia, and India. Mather vigorously kept in touch with the rest of the world to try and overcome the well-known cultural lag in the colonies. He longed to know everything that a man of his time could know. He loathed the cultural inferiority that he felt and believed the narrow opportunities of the colonies were cramping his talents. Feeling that other colonists were making no real contributions to the international intellectual community, he lamented, “My small country affords no matter of intelligence worthy of any great notice to you.”

He wished to contribute to and influence the progress of thought that was going on during his lifetime, which was why he sent his many books and sermons abroad.

_The Christian Philosopher_ was Mather’s scientific contribution to the intellectual community. Scholars agree that the book is one of the major intellectual achievements of the colonial period.

In _The Christian Philosopher_ Mather brought together a huge amount of recent scientific discoveries that he had studied and attempted to prove that a divine and omnipotent designer necessarily created the universe. Central to this work was the design argument. Isaac Newton’s discoveries were used as evidence for this argument, for Newton described the world in

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34 Ibid.
mechanical and mathematical terms and insisted that the geometrical and mathematical order of the world implied a designer. Mather argued that God has revealed himself in two books, the book of scripture and the book of nature. Although he certainly considered the Bible to take precedent over the study of science, he did believe science to be a subordinate way to glorify and prove the existence of God.

In *The Christian Philosopher*, Mather discussed a wide variety of natural phenomenon. He discussed the scientific findings of the day, while also adding how these discoveries proved the existence of God. For example, Mather devoted an essay to the scientific description of the moon. He added that since we would be in danger of being drowned by the ocean if the size or the location of the moon differed even slightly, God wisely contrived the moon. Even his essay on insects praises the creator, for their infinitesimal bodies could only have been created by divine design.

Mather believed that the human body was the ultimate example of design. He writes that there is “no sign of Chance in the whole structure of our Body.” He had a strong interest in medicine and discussed all aspects of the body in *The Christian Philosopher*. As Newton had done in *The Opticks*, Mather discussed the eye in his book. The eye was a favorite example of design theorists because they believed that something so complex as an eye could not have developed without the help of a divine creator. Unless fully developed, the eye serves no purpose, so design theorists argue that it could not have developed slowly over time.

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one who studied the eye could even consider atheism. Newton posed the question, “Was the Eye contrived without Skill in Opticks?” And so, both Newton and Mather used science, such as the study of the eye, to prove the existence of God.

In today’s world and in popular culture, science and religion are seen as being completely incompatible. Journalist David Biema writes in Time Magazine:

Some [scientists] are radicalized enough to publicly pick an ancient scab: the idea that science and religion, far from being complementary responses to the unknown, are at utter odds- or, as Yale psychologist Paul Bloom has written bluntly, ‘Religion and science will always clash.” The market seems flooded with books by scientists describing a caged death match between science and God- with science winning, or at least chipping away at faith’s underlying verities.  

Richard Dawkins is an evolutionary biologist and a leader in the battle against religion. His book The God Delusion spent five weeks on the New York Times best-seller list. It attacks faiths philosophically and historically as well as scientifically. One of Dawkin’s most famous quotes is, “One of the truly bad effects of religion is that is teaches us that it is a virtue to be satisfied with not understanding.” Jerry Coyne, an American biologist, writes:

As a scientist and a former believer, I see [the compatibility of science and religion] as bunk. Science and faith are fundamentally incompatible, and for precisely the same reason that irrationality and rationality are incompatible. They are different forms of inquiry, with only one, science, equipped to find real truth. And while they may have a dialogue, it’s not a constructive one. Science helps religion only by disproving its claims, while religion has nothing to add to science. 

41 Ibid.
Many scientists today are against religion because they believe that religious belief lacks reason, a trait highly valued in the scientific community.

This is not a one-sided battle. In today’s world, religion has launched an even more aggressive attack on science. In the United States, many Christians from the far right can be described as “antiscience”: against evolution, human-induced climate change, and stem-cell research, along with a host of other scientific concepts. This position against science is pervasive throughout religious culture. During the 2012 elections in the U.S., several major Christian Republican contenders for political office held these types of views. The chemist Harry Kroto, a member of the Royal Society and winner of the Noble Prize for chemistry in 1996, has said “In the US [the religious right] have now almost complete control over politics, the judiciary, education, business, journalism and television. The Royal Society does not appreciate the true nature of the forces arrayed against it.”

Currently, many religious believers feel that science has nothing to offer religion. They see science as a competing belief, with some even calling it its own separate religion. “The truth is that the war is not between science and religion, but between two religions. Science has become a religion, in many respects, treated as a source of truth independent of all other sources of truth.”

Invoking the idea of science and religion being “at war” is a common theme today. However, during the time of Isaac Newton and Cotton

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Mather, seeing religion and science as at odds with one another would have been a novel viewpoint.

Scientists and theologians of the seventeenth century, including Newton and Mather, would have ardently disagreed with this modern view. Mather placed great value on reason and regarded man’s rationality as a gift from God. He believed that any reasonable man would ultimately accept the existence of God. In his work *Reasonable Religion*, for example, he commented that “Instead of saying, Shew your selves Regenerate Christians, we will only say, Shew your selves Rational Creatures”; and he depicted God addressing idolaters with the words, “Do but act Reasonably, and you will no more be such Transgressors of my Holy Laws.” Cotton Mather believed creation, when looked at reasonably, showed a divine pattern. “By the light of this precious and wondrous Candle [reason], we discern the Connection & Relation of Things to one another.”46 In his mind, any reasonable person, once they have studied nature and science, will come to the conclusion that God certainly exists and designed the universe.

Isaac Newton had a very similar view. Although he questioned some tenets of the Christian religion, Newton would have never suggested that science was going to replace belief in God. Instead, after studying gravity and the orbits of the planets, Isaac Newton concluded that there was no way that the solar system or the universe could exist without God’s intervention. He found that nature was so mathematically organized and full of patterns that the only reasonable explanation was that a divine and omnipotent god had created the universe.

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In conclusion, during the seventeenth century, the budding field of science and the scientific ideas of the Enlightenment were used by many to enhance their understanding of God and Christianity. Unlike the present day “battle” between religion and science, the scientific discoveries of men like Isaac Newton were used by himself and others to paint a picture of a world in which God was absolutely necessary. Currently, one of the fiercest battles between scientists and the religious is over creationism versus evolution, however during the seventeenth century Cotton Mather and Isaac Newton saw the creation of the universe, from their scientific point of view using the theory of intelligent design, to be firm proof of the existence of God. The Puritanism of Cotton Mather, far from being a hindrrance to science, actually encouraged the study of nature in order to glorify God. Isaac Newton did not blindly accept the tenets of the Church; he performed a deep investigation into the Bible and developed his own beliefs, however he never doubted the existence of God. Religion and science during the time of the Enlightenment were deeply interconnected. No one can know if Isaac Newton would have the same beliefs about God if he learned of all the scientific discoveries that have been made up to this day, but certainly during his lifetime he did not share the current view of science being in competition with religion. Stephen Hawking, one of the most celebrated physicists of all time, recently stepped down from his position of Lucasian Professor, the post once held by Isaac Newton. Hawking believes, “There is a fundamental difference between religion, which is based on authority, [and] science, which is based on observation and reason. Science will win because it
works.”47 This quote would have baffled Isaac Newton. He would not have understood what his beloved science would “win,” for during his life the battle between science and religion had not yet begun.