The Changing Relationship of God, Humanity and Nature Between the Fifteenth and Eighteenth Centuries

by

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Abstract

This paper examines the changing relationship among God, humanity and nature between the fifteenth and eighteenth centuries to help explain why some Christians struggle with issues involving science and faith today. I argue that changes in biblical interpretation and understandings of the authority of Scripture rooted in both the Protestant Reformation and the rise of modern Western science effected changes in how Western Christians have understood nature as a source of knowledge about God and about the relationship among creation, humanity and God, and that these changes have then shaped the understanding of the relationship between science and faith. By comparing and analyzing historical sources and examining the events and writings of three interlocutors – John Calvin, Galileo Galilei, and Thomas Paine – I retrieve evidence that demonstrates these changing relationships. Key findings include: firstly, the understanding of God’s gift changes from being Jesus Christ revealed in Scripture, to Creation, and then to Reason; secondly, the understanding of the Bible changes from being the first source of knowledge with authority, to being the second source with limited authority, to not being one source and having no unique authority; thirdly, the understanding of God moves from being active in a mysterious and symbolic world to the deist God of the mechanical worldview; finally, the understanding of humanity as dependent on God shifts to humanity as independent of God
and creation. The doctrinal conflicts, changes to biblical interpretation, challenges to the authority of Scripture and the Church moved faith to the private realm and science to the public realm. Christianity became subordinated, society became secularized and science took primary place over religion. The present faith struggles many Christians today face is one result of a desacralized world in which the once close relationship among God, humanity and nature became distant and no longer interconnected.
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Introduction

We live in an amazing world, in an expansive universe, with the wonders of life here on earth, and then beyond us our moon, the sun, the stars, galaxies and nebulae. We have explored and continue to explore space as well as atoms, quarks and the latest, the Higgs Boson particle – the so called god particle. All that we have explored and discovered through science has given us a great amount of empirical knowledge of the world. But we also live in a world of religion with people of faith who believe in a source of knowledge about our world that is beyond science, a source of knowledge that comes from and is about God – the Bible. One of the challenges we face as Christians in the Western world is the tension that exists when the knowledge we have from our Holy Scriptures, the Bible, and the knowledge we have through science do not agree.

Many people find the creation stories told in Genesis 1 and 2 to be confusing. They try to make these two stories work together as a continuum where chapter one leads to chapter two. That results in questions. How long ago was creation? If God created humanity in Genesis 1, then who exactly was created as Adam and Eve in Genesis 2 and why? People in the pews in our churches are struggling to make sense of the evidence for dinosaurs and how that might fit with the flood story in Genesis 7 and 8. Questions have arisen such as: Where were the dinosaurs in the Garden of Eden? Was the first creation story the time of early evolution and the second story the time of the Neanderthals and Cro-Magnon man? How did Noah find the polar bears and penguins to get them on the ark? What about the bugs and mosquitoes? Does the Bible imply that incest was okay for the first humans, Eve and her sons?

Many people of faith and atheists, too, are trying to read the Bible like a science or history book for different reasons and discovering that some things just do not make sense, like
the creation stories, the flood story, the parting of the Sea of Reeds, Joshua and Jericho, or the healings of Jesus. And many, unable to make sense of the Book of God’s Word, the Bible, while learning of the Book of God’s Works, nature, turn away from the revelatory knowledge of the Scriptures to the perceived concrete, rational knowledge of science. Their struggle leads them to believe that they must choose between faith and science as sources of knowledge about life and the world. Many come to believe that science and faith are mutually exclusive.

Science and Faith

For many years, there has been a belief that science and religion, or faith, were and are engaged in a war in which one needs to win and the other lose, where one will be proved right and the other wrong. However, Thomas Dixon writes that

… although the idea of warfare between science and religion remains widespread and popular, recent academic writing on the subject has been devoted primarily to undermining the notion of an inevitable conflict. …[T]here are good historical reasons for rejecting simple conflict stories.¹

Alister E. McGrath states that “religion and science are two of the most powerful cultural and intellectual forces in today’s world [and] some scientists and religious believers see them as locked in mortal combat” but that “there is no ‘master narrative’ which describes their relationship – such as the notoriously inaccurate ‘warfare’ narrative.”² Lawrence M. Principe teaches that “no serious historians of science or of the science-religion issue today maintain the warfare thesis.”³ So then, why do some people believe they must choose between science and faith, and where did this begin?

² Alister McGrath, Science and Religion (Oxford: Blackwell Publishers Ltd., 1999.), 1
³ Lawrence M. Principe, Science and Religion The Teaching Company’s Great Courses (Virginia: The Teaching Company 2007), 7.
The beginning of the warfare scenario lies in the mid-nineteenth century in the works of John William Draper (1811-1882) and Andrew Dickson White (1832-1918). In the works of both, the idea of conflict or warfare between science and Christianity is found. In 1874, Draper, a chemistry and physiology teacher, wrote a *History of the Conflict between Religion and Science* for the International Scientific Series of books by prominent scientists. He was enticed by the opportunity to write out of his own position against Roman Catholicism. Draper saw the Protestant Reformation and the private interpretation of scripture as the “twin sister of modern science” and he sought absolute freedom of thought even in religion.4

In 1896, Andrew Dickson White wrote *A History of the Warfare of Science with Theology* in which he stated that there had been a long standing conflict over time between science and religion (or the Church). According to Lindberg and Numbers, White, an Episcopal historian, wrote partly to “discredit religious critics envious of the funds given to his new university in Ithaca and distressed by its thoroughgoing secularism.”5 White was seeking to create “an asylum for Science – where truth shall be sought for truth’s sake, not stretched or cut exactly to fit Revealed Religion.”6 Lindberg and Numbers also point out that when one investigates the history of the rise of Western science, this narrative of warfare and conflict is not valid. Alfred North Whitehead (1861-1947), a mathematician and philosopher, and Michael B. Foster (1903-1959), a philosopher, had begun to downplay the conflict scenario in the 1920s and 1930s, having explored and learned that in many ways Christianity encouraged the rise of science by establishing that nature “behaves in a regular and orderly fashion – a basic premise of

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5 Ibid., 2.

6 Ibid.
modern science.” Many of the philosophers, early modern scientists, were actually Christians, Catholic and Protestant, working to lift up God’s works and God’s glory, believing the knowledge revealed through natural science, revealed God, just as the Holy Scriptures revealed knowledge of God. As Barbour writes, the conflict thesis has been an oversimplified account of the relationship between science and faith. He observes that, “as in the case of Isaac Newton, scientific and religious ideas interacted in complex ways within the life of the same person.”

John Polkinghorne, a theoretical physicist and theologian, Arthur Peacocke, a theologian and biochemist, and Ian Barbour, a physicist and theologian, assert that there is a unity of knowledge and truth and that there is the possibility for “active intercourse across the boundary between the two disciplines [i.e., theology and science] of a kind variously characterized as aiming at consonance, dialogue, integration or assimilation.” McGrath writes on Barbour’s typology for relating science and religion, which includes conflict, independence, dialogue and integration, stating that Barbour tends to present “these four options as stages in an intellectual journey of discovery.”

To come to the place where a unity of knowledge and truth is seen, the past must be understood; that is, the journey of the relationship between science and religion must be explored in order to make sense of the present. James Hannam points out that few people realise “that Newton’s science also has its roots embedded firmly in the Middle Ages,” or as Patrick Collinson puts it: “What do revolutionaries have to work with but the ideas and aspirations they

inherited?" The present relationship between science and faith, in the Western world, has its roots in the changing relationship between science and faith from the Middle Ages through the centuries which followed. Brad S. Gregory suggests the changing relationship occurred through two revolutions – one religious, the other scientific.

As much as the rise of Western science emerges from the Middle Ages, it is believed by such writers as Alister McGrath, Peter Harrison, and Brad Gregory, that there were certain key factors during the time of the Protestant Reformation that contributed to the divide that now exists between science and religion in the Western world. These factors are the reading of scripture in one’s own language, having the right to interpret without the direction of the clergy and past commentaries, and the de-sacralment of nature. Recently, Margaret Atwood wrote an article entitled “Back to the Garden” in which she describes the story of how faith and nature were once entwined until the invention of the telescope and the discoveries of science led nature to be seen as separate from God. She describes how nature came to be seen like a machine in which animals were also machines. Following the years of the Protestant Reformation, the scientific revolution’s discoveries of the telescope and space, through Copernicus and Galileo, emerged. The redirecting of the right to interpret Scripture from the Church to individuals also came through the fifteenth century to the present and the belief in sola scriptura, scripture first above tradition for Protestants, and other doctrinal differences, would eventually lead to faith being a part of the private life and not the public sphere.

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Purpose of this Paper and Thesis Statement

The purpose of this paper is to demonstrate the changing relationship among God, humanity and nature that helps to explain why some people in our pews struggle with issues between science and faith and the relationship among God, humanity and nature. The thesis argues that changes in biblical interpretation and the authority of Scripture rooted in both the Protestant Reformation and the rise of modern Western science in the fifteenth century through to the eighteenth century effected changes in how Western Christians have understood nature as a source of knowledge about God and the relationship among creation, humanity and God, and have shaped the understanding of the relationship between science and religion today. It examines the elements of the Protestant Reformation and the scientific revolution that drove a deeper wedge between the sources of knowledge of God (i.e., the Book of God’s Word and the Book of God’s Works) that some believe to be at war with one another.

This thesis rests on five interrelated claims.

First, with changes in the modes of biblical interpretation towards reading scripture in its literal historical sense and denying the legitimacy of traditional allegorical interpretations, and with the adoption of the principle of sola scriptura, Protestantism raised the authority of the Bible above ecclesiastical authority.

Second, the growing belief that original sources are the best for learning and therefore the Bible and nature, not the traditions saved and offered by the Church over the centuries, should be the sources of knowledge of God. This permitted and encouraged the exploration of nature as a better source of knowledge than accumulated writings, raising science to a place of independent knowledge and authority on the natural world while the Scriptures remained the authority on salvation.
Third, through the iconoclastic actions of the Protestants, the demystification of objects in the church and in nature led to the philosophical accounts of natural things having more influence and authority for those exploring nature and learning about the natural world, just as the written Word, the Scriptures, would hold more authority for Protestants than other modes of representation such as signs, symbols and allegory in the Middle Ages and earlier.

Fourth, the above elements of the Protestant Reformation were factors in the growing divide between science and religion even though the philosophers and theologians of the time were people of faith exploring God’s creation and the revelation of God through the Book of God’s Works.

Fifth, the elements of the Protestant Reformation that led to an increasing divide between science and religion were products themselves of a changing world context through which doctrinal differences and changing relationships with secular authorities would move religion into the personal realm and science into the public realm.

In summary, significant changes in biblical interpretation, the authority of the Church and the authority of Scripture, the ensuing doctrinal conflicts, the changing status of Aristotle’s authority and the changing perception of nature from sacramental to mechanistic, alongside the rise of Western science, all contributed to the divide between science and faith that has led us to the current world view in which many believe they must choose between them.

This thesis is divided into three parts followed by a conclusion. Part One will address the events that set the stage for the fifteenth century including the new awareness of the historicity of texts, the relationship between the Church and Aristotelian science, and the new understanding to let Scripture and nature speak for themselves without the allegorical interpretations of the Middle Ages, and the Protestant call for reading Scripture in one sense, the literal-historical sense. John
Calvin’s place in the Reformation and his writings on God, nature, knowledge and the authority of the Church and of Scripture will provide evidence of the beliefs of the time in the relationship among God, humanity and nature.

The second part will address the rise of Western science through the discoveries of Copernicus (1473-1543) and Galileo (1564-1642) and the challenges to the authority of both Scripture and the Church that their discoveries elicited. Evidence of the changing relationship among God, humanity and nature will be demonstrated through the writings of Galileo. The attempts made to invoke Scripture to support scientific discoveries such as the principle of accommodation and natural theology based on reason and experience versus revealed theology based on the Scriptures will also be discussed.

In the third part, after reviewing the history around the time period of Thomas Paine (1737-1809), the changing understanding in the relationship among God, humanity and nature will be shown and will include a discussion of the rise of deism and the fear of atheism. Paine’s writings will be compared with both Calvin’s and Galileo’s in order to examine the changing relationship through the fifteenth to eighteenth centuries. Paine’s creed demonstrates how faith and religion moved into the personal realm, not requiring the direction or oversight of any religious authority. Science, reason and rationality became the religion of the public realm.

In the conclusion, the interrelated claims will be summarized indicating how changes in biblical interpretation, the authority of Scripture, the rise of the written word and the individual’s right to interpret the Scripture, alongside the rise of Western science and its growing empirically verifiable body of knowledge of nature, drove a deeper wedge between the sources of knowledge of God that continue to be felt today.
Part One: The Protestant Reformation and John Calvin

The Middle Ages

Brad S. Gregory writes that those who study the Protestant Reformation and the rise of Modernity need to understand the Middle Ages in order to understand the complex web of events and thoughts that influenced the centuries which followed.15

The period of history called the Early to Late Middle Ages, from the fifth to fifteenth centuries, was marked by the fall of the Roman Empire at one end and the beginning of the Renaissance at the other. After Rome fell, Europe experienced depopulation, barbarian invaders and the rise of Islam. Monasteries were founded and the Carolingian dynasty and empire took hold. This all came to a close with the arrival of the Vikings and then subsequent growth in the population, technology and agriculture, and the rise of towns. There was an increase in travel and trade and a number of Crusades were undertaken.

In this time period, Western Europe saw the rise of scholasticism, a “rational and systematic approach to several fields of knowledge”16 that was developed and promoted through a basic course of study in the seven liberal arts – i.e., grammar, rhetoric, logic, arithmetic, geometry, astronomy and music – that were taught in the growing number of universities using the Bible and Peter Lombard’s book *Four Books of Sentences*. The latter was a compilation of opinions on theological subjects. Students in the universities were taught to deliver sermons and lectures that by the end of the thirteenth century became increasingly abstract, sophisticated and distant from the Bible, reflecting also the acceptance of Aristotle’s recently rediscovered works.


Because of this, many criticized this trend and theology for “exaggerated subtlety and contrasting it with the simplicity of biblical doctrine.”\footnote{Hauser, 255-256.}

The eleventh century Great Schism saw the split into the Eastern and Western Churches in which claims of heresy and schism in the Church reflected the conflicts between states and peasant revolts. Towards the end, in the Late Middle Ages, the people of Europe faced famine, plague and war. The Black Death killed approximately fifty percent of the population and the aftermath created social, religious and economic upheavals.

The Church

To understand the Protestant Reformation and the elements that affected the relationship between science and religion, it is important to understand the role the Church played both in the lives of the people leading up to the eve of the Reformation and in the world of the Middle Ages.

The Church was international. As Europe consisted of small principalities, city-states and regions held together more by language and history than politics, the Church was a common factor and influence in their lives. It was involved in the settling of disputes and by the time of Innocent III (1198 to 1216) the papacy was intricately involved in the political arena of Western Europe. Within the papacy, there was corruption and in-fighting between the most powerful families that eventually challenged the papacy itself.

By the end of the fifteenth century, within the communities where the average folk lived, the local priest was often the most or only learned person, and the churches were filled with paintings that illustrated and taught the life of Jesus and other stories from the Bible that helped the people to know their faith, their life as Christians and their path to salvation. The Church provided a sense of stability and the rites of passage through mortal life to eternal life. The
Church was the centre of life socially, intellectually and spiritually and it was the authority on God, Christ, the Holy Spirit and the Bible. Yet, its corruption and abuses came to be seen by many, and its knowledge of God and the Scriptures would later be challenged within a call for reform.

McGrath writes that the abuses and corruption existed from top to bottom, from the pope to the lowliest of the clergy. There was criticism against the Church’s financial excess and preoccupation with social status and political power. Many senior clergy acquired their positions because of the influences of their families and/or finances. Monasteries were depicted as places of homosexuality and lice. Lower clergy were often of low social status and illiterate, having memorized what they needed to know including the words of the Mass. As the laity became more learned and literate by the fifteenth century due to Johann Gutenberg’s invention of the printing press in 1456, which was itself an agent of change, they became ever more critical of the clergy. The negativity towards the clergy was due to their incompetence and the privileges they enjoyed such as tax breaks. McGrath also notes that

Towards the end of this period, on the eve of the Reformation, religion was perhaps more firmly rooted in the experience and lives of ordinary people than at any time in the past…. The direct connection between religion and everyday life was taken for granted. The spiritual and the material were interconnected at every level. "

Whereas over the years of the Middle Ages, as McGrath states, the Christian faith had been mostly centred on monastic life and convents, in the later years of the fifteenth century, in the building of churches, pilgrimages and the cherishing of relics and even writing and interest in mystic literature, there was a deepening spirituality that was “not always in orthodox forms.”

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19 McGrath, 24.
As new ideas unfolded, so did criticism of the Church which was believed to be neither meeting the needs of the people nor being relevant to their daily lives. As the lay people grew in literacy, and as books became more available, the possibility of “an economically empowered middle class” was becoming a reality. With a growing interest in and understanding of religion there were changes beginning in how people saw the world, nature, humanity and God that added to the criticisms of the Church and its authority over them.

Knowledge

According to James Hannam, a common belief and metaphor of the early Renaissance was that Christians could learn about God in two ways: by reading either the Book of Nature or the Book of Scripture. The idea of there being two sources of knowledge of God, the Book of God’s Word and the Book of God’s Works, also referred to as the two witnesses to the Creator, came from a teaching song, madrashe, of the fourth century exegete Ephraem of Syria. The world view that developed over the centuries and into the Middle Ages based on these two sources was that everything and everyone had a purpose, and that as God was the ultimate creator and governor of the universe it was through God that all purposes were acquired. For example, the reason or purpose for the lion’s sharp teeth and claws was that God designed it so that it could capture its prey. Furthermore, the lion acted as a sign or symbol to be a reminder of Jesus Christ “who is the king of men just as the lion is the king of the beasts.”

Harrison writes that Hugh of St. Victor’s writings, from the twelfth century, present a typical understanding of the time in the use of the metaphor of the Book of God’s Word and the

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20 McGrath, 24.
22 Hannam, 35.
Book of God’s Works. As Harrison explains, Hugh of St. Victor claimed all of the elements of the empirical world are figures, which had been invested with divinely instituted significance. The creatures, then, were natural signs. The interpretation of the two books was integrated and rested on the principle that the meaning of the words of the Scriptures could not be known until the meaning of the objects to which the words referred was known. Linking the words of Scripture with the objects of nature was the universal medieval practice of allegorical interpretation. Allegory was not just a strategy for reading alternative meanings into texts but a process whereby the word pointed to more eloquent things of nature. These two sources revealed knowledge of God, the Bible as the written source and the world as the sensible source, that is, acquired through the senses. God was behind and was revealed through both.

Biblical Interpretation

The allegorical interpretation of the Bible had very early beginnings in the Christian writers of the second and third centuries who were influenced by Plato. These early writers claimed that the visible world provided a key or keys to understanding that which was not visible and that God had made the created order with symbols that pointed beyond themselves to spiritual realities. This was the accepted relationship between God and nature. As Harrison points out, what was needed in these early centuries was a method “by which natural things could be made to yield up their secret meanings.” This interpretation method came through

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23 Harrison, 3.
24 Hannam, 65.
25 Harrison, 15.
Origen and was behind the symbolic understanding of nature in the Middle Ages and the understanding of the Book of God’s Works.\textsuperscript{26}

Origen’s method of interpretation showed that the world was a place where the soul could learn of God and salvation, and so consequently, God, humanity and nature were intertwined. The things of nature were regarded as signs and the way the things of the world were interpreted was similar to the way Scripture was interpreted because each was seen as imbedded with signs and symbols that revealed God and could be discovered by those who sought to understand them more deeply.

Origen claimed Scripture had three senses: the literal-historical sense, the moral sense and the allegorical sense, each corresponding to the body, the soul and the spirit. The literal sense provided the obvious history, the moral sense showed how life was to be lived and the allegorical sense contained theological truths. Approaching the interpretation of Scripture with these senses afforded the interpreter the ability to make sense out of passages using the next level when the literal-historical sense left the interpreter puzzled. This also allowed many interpretations to be possible. The created world was also interpreted with these senses so that natural objects could be understood literally and spiritually. St. Ambrose of Milan believed that a far more important key to the moral references of living things was scripture itself. In using the image of ‘fishers of men’ and in comparing the kingdom of heaven to a fishing net, Christ had not only authorised the general use of natural objects in moral edification, but he had shown the comparison of man and fish is particularly apposite. Similarly, in speaking of himself as ‘the Vine’, Christ had revealed something of the hidden moral purpose of the grape.\textsuperscript{27}

\textsuperscript{26} Harrison, 18-19. Harrison references \textit{On First Principles}, IV. i.11 from \textit{Ante-Nicene Fathers} (Edinburgh: T. & T. Clark, 1989)359. and \textit{On First Principles}, iv. ii.5,9; iv iii.4 noting that the biblical warrant for allegory was provided by Paul in his letter to the Galatians 4:24. Harrison also states allegorical methods had been used by Greek philosophers; e.g., by Homer and Hesiod, and by Philo on the Old Testament linking the Hebrew scriptures with Greek philosophy. Alexandrian Christians accepted the allegorical method.

\textsuperscript{27} Harrison, 23. Harrison references, from the fourth century, Ambrose of Milan, \textit{Hexameron} v.v.13.
Written about the same time as Origen, by an unknown author, was the *Physiologus*, which was a small book that disclosed the allegorical meanings in the created world. This book, used through the centuries and in the Middle Ages, provided a repository of animal lore such as the idea that the serpent is the tutor for humanity as it symbolised spiritual truths like throwing off the old lives in Christ as the serpent throws off its skin. The pelican became a symbol of Christ’s atonement because of the account of its treatment of its young, weeping over them for three days and on the “third day the mother strikes her side and spills her own blood…and the blood awakens them from death.”28 The pelican became a central symbol in the iconography and sculpture of the Middle Ages and the story was repeated in many medieval bestiaries. In the fourth century, St. Augustine endorsed the belief that natural objects were signs leading to spiritual truths, that Scripture was about faith and morals and what could not be understood literally was to be understood figuratively.29 Eventually, Origen’s methods of interpretation would be expanded. Called the *Quadriga*, it would be used in the Middle Ages and into the fifteenth century and understood as

\[
\begin{align*}
\text{Littera gesta docet, quid credas allegoria,} \\
\text{Moralis quid agas, quid speres anagogia.} \\
\text{(The letter teaches the deed, the allegory what you believe, the moral what you should do,} \\
\text{the anagoge what you should strive for.)}^{30}
\end{align*}
\]

This fourfold method meant that the literal interpretation was the foundation, the allegorical provided doctrine, the moral or tropological was interpreted morally and the analogical related to Christian hope.31 Through this method there was general agreement on the interpretation of the Scriptures which continued the multiple meanings of Scripture. William

\[28\text{Ibid., 25.}\]
\[29\text{Harrison, 25-26.}\]
\[30\text{Ibid., 27.}\]
\[31\text{McGrath, 31.}\]
Yarkin claims that despite the attention to the figurative meaning, the literal sense still served as
the foundation because it was through the literal sense that the correct symbol for the figurative
meaning could be identified. The literal-historical sense provided the base on which the allegory
was placed. In the minds of the medieval Christians, the world (nature) and Scripture were to
be read together as this would provide the knowledge humanity required and sought about God
and morality. The multiple readings of Scripture were accepted in the Middle Ages including,
according to Aquinas, that there are many readings because things signified by terms can be
signs of other things. The ultimate example of this and the belief that multiple readings were
divinely ordained was found in Christ’s use of bread and wine as symbols in the Last Supper.
Harrison adds, concerning the legacy of Augustine, that

Literal meaning was important, but subservient to spiritual meaning. The natural world,
for its part, was reduced to a catalogue of naked signs, the true meaning of which was
provided by scripture, the reference of which lay beyond the physical world. To be
concerned with natural objects alone was to be “a slave to the sign”: it was to engage in
an idolatrous ‘literalism’ applied to objects…. The world was not to be read too
literally.

Historicity of texts

According to McGrath, by the end of the twelfth century, the questions of the early years
of Christianity concerning the Scriptures had been asked and resolved. The question of the canon
had been established in the fourth century. The translation of the Bible into Latin, known as the
Vulgate, coincided with the rise of Latin as the language of the West in both the Church and
universities, and it became the long standing translation going back to Jerome and was believed

31 Harrison, 28.
34 Harrison, 31.
to be reflective of the original texts. The Church was the ultimate authority and interpreter of the Scriptures guided by God.

However, by the time of the European Renaissance beginning in the fourteenth century, there was also a rise in humanism, a belief system that sought the “cultural eloquence and excellence of the classic civilizations of Rome and Athens.” Humanists believed that their culture could be renewed by engaging in the past and re-tapping the heritage of the Greeks and Romans. Humanists sought to return to the sources, to study ancient Greek and ancient Latin, and to bypass the Middle Ages. Desiderius Erasmus (1469-1536) was one such humanist who published a complete translation of the Greek New Testament in 1516, and in his *In Praise of Folly* (1511), he satirically attacked his century’s religious and secular society and medieval intellectual and religious life too. These humanist Christians were concerned with the need for reform in the Church just as there was reform happening in architecture and the arts alongside a renewed interest in Roman law and Greek philosophy. Their thought was that just as there was a return to the sources in other areas, there could be a return to the sources of faith and of the apostolic age in order to renew the Church. They saw the Bible as the source of faith and Christianity, and therefore the writings of the medieval theologians could be set aside to pursue a direct connection with the New Testament. As McGrath explains, “The scholastic theology would be marginalized in favour of reading the text directly.”

The humanist scholars’ belief that the content of the Bible was to be studied in its original languages brought a challenge to the Vulgate. Errors found in the Vulgate led to greater importance being placed on Latin grammar and the syntax of the Bible for interpretation, and whereas authorship of Scripture had been previously attributed to God, the questions of how

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35 McGrath, 30.
36 Ibid., 31.
human language could report divine truths and how there could be diverse meanings of Scripture passages were beginning to come to the forefront. These scholars began to study “the authenticity of texts, editing them, and translating them from the original.”\(^{37}\) This exploration of the ancient texts began to reveal that ancient works had a history of their own, and this led to the production of dictionaries, encyclopaedias, polyglot Bibles, concordances and commentaries, and the scholars began to search to understand the biblical world.\(^{38}\) This discovery of the historicity of texts, the intent of original authors and the work of later editors, and the ability of a community of scholars to identify errors in the Vulgate initiated a new view of authority for the interpretation of Scripture, eventually moving that authority from the Church to the community.\(^{39}\) By the sixteenth and into the seventeenth centuries, the textual criticism of the Bible, and the study of ancient Near Eastern history, was brought about through humanism’s textual methods of studying languages in written original sources with history and linguistics. Together this transformed biblical scholarship.

**Aristotle and the Church**

The beliefs in God and nature in the Middle Ages cannot be discussed without attending to the influence of Aristotle (384-322 B.C.E.) on Christian theology. Aristotle was interested in the natural world, or natural philosophy, and worked to build a body of knowledge based on observation. He studied such things as act and potency, form and matter, substance and accident, and was able to adapt his findings to different contexts. Aristotle believed that studying natural phenomena would uncover knowledge of the natural laws behind them. He believed these natural laws were divine and therefore could not be described mathematically.

\(^{37}\) Yarkin, xxi.  
\(^{38}\) Yarkin, xxi.  
\(^{39}\) McGrath, 33.
F.M. Cornford writes that prior to Socrates, the early Greek philosophers focused on the discovery of nature, and questioning origins – i.e., the beginning of things in nature. Then, with the Socratic philosophy, the direction turned to the study of humanity and the purposes of human action in society, the meaning of right and wrong, and the end.\(^{40}\) Aristotle’s philosophy became “governed by the idea of aspiration…the idea that the true cause or explanation of things is to be sought, not in the beginning, but in the end.”\(^{41}\) Aristotle would teach his students to do research, amassing facts about human and natural history by observation. His philosophy focussed on final causes. For example, the acorn, if nothing hinders its growth, develops without fail into an oak tree. Cornford notes that Aristotle’s denial of the separate existence of ideal forms and the model meant the creator must also disappear.\(^{42}\) Although Aristotle had no need for God in his understandings of biology, when it came to the physical sciences, he could not dispense with God for he saw the cause or reason of all movement to be not in the beginning but in the end and that was God.\(^{43}\) In the Middle Ages, scholastic rationalism was challenged in the attempt to reconcile Aristotle’s God with that of the Gospel. Gregory states it was because Aristotle’s ideas lacked a notion of creation, for “if the faith was true, then these Aristotelian truth claims, such as the eternity of the world, had to be false.”\(^{44}\) At one point his works were banned. Later the ban was lifted when his works were reconciled with the Christian God by Thomas Aquinas in the thirteenth century who saw that Aristotle’s ideas could be adapted to fit Christian truth claims.

Harrison writes that by the thirteenth century, the study of nature was very much a scholarly enterprise and the sources of the knowledge of nature were to be found in texts. The

\(^{40}\) Francis M. Cornford, Before and After Socrates (New York: Cambridge University Press, 1932), 1, 4, 90.
\(^{41}\) Cornford, 90.
\(^{42}\) Ibid., 96.
\(^{43}\) Cornford, 100.
\(^{44}\) Gregory, 315.
scholastics found nature in books and from time to time added glosses – i.e., their opinions – to the authorities based on their own observations; they saw their main task, though, to be the preservation and transmission of a world that had been closely observed by the minds of the past. 45 One of the chief sources of the past, for them, was Aristotle. His works had been translated from Arabic into Latin, having been re-discovered after being lost to Western Christianity after the Great Schism (1054). Aristotle’s works were believed to be factual and an improvement of the state of knowledge of the world. Aristotle found favour in the universities, where there was a nurturing of encyclopaedic approaches to knowledge, an openness to be led by reason. 46 Thomas Aquinas, in the early years of the renaissance of Aristotle’s works, is representative of the scholastic method which was also a part of medieval thought. Hannam states, like Gregory, that Thomas Aquinas took from Aristotle that every effect in the world must have a cause and all causes required a first cause and this he called God. Aristotle called this the prime mover. 47

In addition, Aquinas like Aristotle, saw knowledge beginning with the senses. This was in opposition to the Augustinian belief that associated the senses with the Fall. Aquinas also insisted that humanity had a natural light or inclination for acquiring knowledge that had survived the Fall and that was separate from grace or supernatural gifts. Acquiring knowledge of the natural world would come to be seen as the way for humanity to recover from the Fall and that humanity had the ability to do so without God. Nature became neutral, not evil, and therefore all knowledge of nature, whether pagan or Christian, was acceptable, and actually became part of the process of redemption which Harrison summarizes as: “Knowledge is the

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45 Harrison, 65.
46 Hannam, 191.
47 Hannam, 98.
fulfilment of a natural, and God-given, inclination. And reason, after all, was the image of God…. The whole enterprise of natural theology was premised upon this optimistic view of the natural powers of the human intellect.⁴⁸

Harrison writes that up until the end of the sixteenth century nature for the most part was interpreted according to written authorities. All scholastic learning, be it in theology, medicine, mathematics, or natural history, was based upon the dual principles of authority and reason. Authority extended not only to ecclesiastical councils, the doctors of the Church and the Scriptures, but also came to include recently translated pagan sources such as Aristotle, Galen and other ancients. To a large extent, then, the secular writers of antiquity came to share the privileged status accorded to Scripture and the Church Fathers. The ancient sources who studied nature through observation shared authority with the word of God.⁴⁹ Yet, the studies of the humanists, as already noted, would challenge that authority as they returned to the original texts and discovered errors in translation and eventually, the knowledge itself, when explorers began to discover parts of the real world never known by the ancients.

Alongside the discovery of ancient sources and improved translations – accepting them as sources with authority – and the desire to reform and to return to the New Testament by the humanists, came a new understanding of the relationship among God, humanity and nature. McGrath writes that Giovanni Pico della Mirandola (1463-1494) provides an example of one of the leading voices in the Renaissance who saw humanity with the capacity to determine its own identity, urged by God to do so. In his Manifesto of the Renaissance (1486) he explained that humanity was not constrained by any limits and was able to determine its own limits by itself, in


accordance with free will given by God. Such ideas were changing the understanding of humanity’s place with nature and God. Humanity’s place was changing from being fixed to being mandated by God to change the world as God’s agent. God was slowly being shifted from God’s former governing position in relationship with humanity to a new more distant position. The medieval Church, however, clung to the existing social order as they understood the order of the world to be divinely set and therefore not to be challenged.

As the view of God and God’s position in the world changed, and as empirical inquiry gained prominence with the rise of reason and rationality, God, transcendent and separate from God’s creation, would no longer be acting in creation through signs, symbols, or the sacraments of the Church. Gary B. Deason writes that the radical sovereignty of God in Reformation thought, which is seen in Luther and Calvin, meant that God’s governing was coming to exclude the active contribution of lesser beings, including humanity. This exclusion led to a view of nature as passive, without power. This would give rise to the mechanical view of nature by the mechanical philosophers. It would be the Protestant doctrine of God’s radical sovereignty that would further push against Aristotle’s views, the Aristotle-Church alliance; whereas in medieval thought God cooperated with nature, God would become distinct from nature.

Protestantism may be seen as the stepping stone or link between the medieval worldview of order, natural and divinely ordained, and the emerging world order of continued exploration, learning, and the pursuit of reform and transformation. Protestantism is linked with the ideas of reform and progress, but as the medieval history shows, Protestantism was not the cause. The roots were much deeper but aspects of Protestantism would drive the deeper wedge between

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50 McGrath, 34.
rising science and faith. The understanding of the relationship among God, humanity and nature would change.

**Protestant Reformation**

The complex factors of the events of history in the changing world through the Middle Ages, criticisms of the Church and clergy, the acceptance of Aristotelian science by the Church and by the universities, the practice of allegorical interpretation, the rise of humanism, changes in biblical scholarship and theology – these, together, formed the backdrop behind the Protestant Reformation. This was the scene in the fifteenth century, the eve of the Reformation.

The understanding of the relationship among God, humanity and nature would be further changed by what McGrath calls Christianity’s dangerous idea. This idea was that all Christians have the right to interpret the Bible for themselves without the direction, glosses, and commentaries of the Church. This idea, and the fall-out from it, resulted in Christianity being born again, according to those who followed the movement. McGrath claims

To its supporters, the Protestant Reformation represented a necessary correction and long-overdue renewal of the Christian faith, liberating it from its imprisonment to the transient medieval intellectual and social order and preparing it for new challenges as western Europe emerged from the feudalism of the Middle Ages. ⁵²

The Protestant movement was seen by those who opposed it, as corrupting and abandoning some of the traditional beliefs and practices. However, underlying the movement was the serious question the Protestants were really raising; namely, “who has the authority to define its [Christianity’s] faith? Institutions or individuals? Who has the right to interpret its foundational document, the Bible?” ⁵³ Protestants were to side with the belief that individuals had the right and the authority to interpret the Bible themselves. Furthermore, they believed that

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⁵² McGrath, 2.
⁵³ Ibid., 3.
the Church had degraded and corrupted the Christian faith through the multiplicity of meanings in interpretation, the incorporation of Aristotle’s natural philosophy, and with the abuses in the clergy; it was time for reform.

Early in the sixteenth century, Martin Luther began to question how Christianity had arrived at its core ideas and how humanity achieved salvation. He determined that the “primary source of Christian theology was not the scholastic tradition, still less the philosophy of Aristotle. It was the Bible, especially as interpreted through the writings of the early Christian theologian Augustine of Hippo.”

Luther developed the doctrine of justification by faith – i.e., that God, through Christ, provides the righteousness required for salvation as a free gift. This direct gift meant there was no need for an intermediary like the saints, nor was there a role for the Church, its sacraments, the priests or even the pope. The Bible alone provided the path through Christ for salvation and all who were baptized were priests. McGrath states that “with this doctrine of the universal priesthood of believers, Luther insisted that every Christian had the right to interpret the Bible and to raise concerns about any aspect of the church’s teaching or practice that appears to be inconsistent with the Bible.”

Furthermore, every Christian had the right to read the Bible in his/her own language and interpret it for him/herself. Luther would later challenge the Mass, denying the doctrine of transubstantiation, claiming it rested on outdated and wrong beliefs based on Aristotle’s work. With the exploration and discovery of the New World, new creatures and plants, people living in places not previously known, even the great Aristotle would be shown to be not fully informed about the natural world. Luther believed that the Church had made a distressing alliance with Aristotle, and the vehicle of salvation through faith in Christ was to be found in the Scriptures alone.

54 Ibid., 42.
55 Ibid., 53.
The motto of the Protestant Reformation may be said to be *sola scriptura* (Scripture alone) and every individual had the right to read it and interpret it for him/herself. According to Harrison, the central question would become how to interpret the Bible. Whereas that question in previous years resulted in the Quadriga, Protestants would come to prefer the literal or natural sense of scripture combined with a suspicion of allegory.\(^{56}\) The literal sense came to be seen as the truest sense, and Origen was challenged for not having paid attention to this sense and having consequently turned the Word into allegory. The Reformers saw the allegorical interpretation as distanced from the true Gospel of Jesus Christ, and eventually came to “insist that each passage of scripture had but a single, fixed meaning.”\(^{57}\) This would give rise to conflict between Protestants and Catholics over interpretation and the traditions of the Church including doctrinal differences such as the doctrine of the Trinity.

Harrison summarizes the Protestant reasons for turning to the literal historical or grammatical sense. He claims the reasons were: that with the humanistic quest for origins came the realization of the historicity of texts; this awareness led to a desire for more accurate translations and an understanding of what the original author had said and meant to communicate; that if the Bible were to be the ultimate source of knowledge of God and nature then the multiple meanings from allegorical interpretation must be reduced so that as new readers approached the texts there might be only one possible way of interpreting them and that would have to be the literal historical sense.\(^{58}\) Words were to have one meaning, not many, and this ended the symbolic conception of nature and Scripture changing the relationship among God, humanity and nature. Nature lost its meaning, was desacralized, no longer interpreted like

\(^{56}\) Harrison, *The Bible*, 108.

\(^{57}\) Ibid., 111.

\(^{58}\) Harrison, *The Bible*, 113-114.
Scripture allegorically; and the word, written and understood literally, used in Scripture and in
the description of nature, would claim the new place of authority. The transcendent God
revealed through the Book of God’s Word and the Book of God’s Works, through signs and
symbols, images, relics, and experienced through the sacraments, would become the
transcendent God revealed through the revelation of Jesus Christ through the Scriptures alone.
Neither book would be read allegorically. The Protestant insistence on the literal sense meant a
new non-symbolic conception of natural things. The consequence of this opened the possibility
for other ways of knowing nature scientifically, mathematically, mechanically, causally; in other
words, ordered and classified in ways other than by resemblance and symbolism.59

Yarkin states that “among Protestants the sacrament of the proclamation of the Word was
effectively replacing the Eucharist as the primary mode of Christian participation in the divine
mystery.”60 The Protestants would limit meaning to words and the result would be the Protestant
destruction of not just the sacramentality of nature but also the very real destruction of paintings,
sculptures, canvas, wood, stone or stained glass that were images. As Collinson reports, “the
Church was to be validated by the Bible, not the Bible by the Church.”61

John Calvin

By the 1530s there were two reformation movements happening in Western Europe. One
was that from Luther in Germany which came to be known as Lutheranism, while the other was
found more in southern Germany and the Swiss cities and would be known as the Reformed
tradition. John Calvin, while in Paris studying, had encountered the ideas of Martin Luther. After
fleeing to Switzerland and the already Protestant city of Basel, it was there that Calvin wrote his

59 Harrison, The Bible, 114-115.
60 Yarkin, xxi.
views, as a catechism, following the format of the Apostles’ Creed, with an introductory letter to Francis, King of France, pleading for toleration of this new form of Christianity. It is this book, *Institutes of the Christian Religion*, and his letter to the king that reveal the changing understandings of the relationship among God, humanity and nature, and the authority of the Church and the Scriptures, in early Protestant thought of the sixteenth century. Barbara Pitkin states that Calvin’s writings reveal the developments in biblical scholarship and the new attitudes toward the authority of Scripture that began in the medieval era, on into the fifteenth century and that took root in the sixteenth century. Like other reformers, Calvin supported the insistence of *sola scriptura* as the ultimate authority in matters of faith as well as the belief that Scripture was clear and people were able to read and understand it.

In John Calvin’s letter to the king of France he is clear about his position with respect to the Roman Catholic Church and the Scriptures. He writes:

> Look now to our adversaries (I mean the priesthood, at whose beck and pleasure others ply their enmity against us), and consider them for a little by what zeal they actuated. The true religion which is delivered in the Scriptures, and which all ought to hold, they readily permit both themselves and others to be ignorant of, to neglect and despise; and they deem it of little moment what each man believes concerning God and Christ, or disbelieves, provided he submits to the judgement of the Church with what they call implicit faith; nor are they greatly concerned though they should see the glory of God dishonoured by open blasphemies, provided not a finger is raised against the primacy of the Apostolic See and the authority of holy mother Church. Why, then, do they war for the mass, purgatory, pilgrimage, and similar follies, with such fierceness and acerbity, that though they cannot prove one of them from the word of God, they deny godliness can be safe without faith in these things – faith drawn out, if I may so express it, to its utmost stretch?

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The *Institutes* is organized following the Apostles’ Creed’s four parts: God the Father, the Son, the Holy Spirit and the Church. Calvin begins by saying the subject is twofold, being the knowledge of God and of ourselves. He places Scripture first; yet in his view of nature, the Book of God’s Works, he is not too different from the understanding of the Middle Ages. He states,

> It shows both wherein the true knowledge of the Creator. . . is not learned at school, but that everyone is self-taught it from the womb, chap. iii. Such, however, is man’s [sic] depravity, that he stifles and corrupts this knowledge, partly by ignorance, partly by wicked design…. This inward knowledge is aided from without, namely by the creatures in which, as in a mirror, the perfections of God may be contemplated.\(^{64}\)

In chapter two, he continues:

> My meaning is: we must be persuaded not only that as he [God] once formed the world, so he sustains it by his boundless power, governs it by his wisdom, preserves it by his goodness, in particular, rules the human race with justice and judgment, bears with them in mercy, shields them by his protection; but also that not a particle of light, or wisdom, or justice, or power, or rectitude, or genuine truth, will anywhere be found, which does not flow from him, and of which he is not the cause; in this way we must learn to expect and ask all things from him, and thankfully ascribe to him whatever we receive.\(^{65}\)

In this can be seen Calvin’s belief that God is the first cause, that God does interact with humanity and that God governs and preserves the world. He adds further:

> 1. Since the perfection of blessedness consists in the knowledge of God, he has been pleased, in order that none might be excluded from the means of obtaining felicity, not only to deposit in our minds that seed of religion of which we have already spoken, but so to manifest his perfections in the whole structure of the universe, and daily place himself in our view, that we cannot open our eyes without being compelled to behold him.\(^{66}\)

Calvin saw God alone as the principal cause of all things which existed before the creation of the sun, and that God employs what God wills as God’s own instrument. Calvin’s example, using literal interpretation of the text, is from the story of Joshua; that the sun stayed in its course in the

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\(^{64}\) Calvin, 27.

\(^{65}\) Calvin, 40-41.

\(^{66}\) Calvin, 51.
sky, as a response to Joshua’s prayer, is an example of a miracle of God through which God declared “that the sun does not daily rise and set by a blind instinct of nature, but is governed by Him [God] in its course, that he may renew the remembrance of his paternal favour towards us.”

As for the sciences, Calvin believed that they were designed to illustrate the proofs of God’s work in creation that even the average peasant without knowledge of the sciences can see.

2. In attestation of his wondrous wisdom, both the heavens and the earth present us with innumerable proofs, not only those more recondite proof which astronomy, medicine and all the natural sciences are designed to illustrate, but proofs which force themselves on notice of the most illiterate peasant, who cannot open his eyes without beholding them… [and] those who are more or less intimately acquainted with those liberal studies are thereby assisted and enabled to obtain a deeper insight into the secret workings of divine wisdom.

Calvin also believed, however, that divine truths were presented in the Scriptures in non-technical, or non-scientific language, because the Word was accommodated to the reader.

Deason discusses Calvin’s commentary on Genesis and his principle of accommodation. Deason describes how Calvin stated that “Moses wrote in a popular style things which, without instruction, all ordinary persons endued with common sense, are able to understand; but astronomers investigate with great labour whatever the sagacity of the human mind can comprehend…. Moses, therefore, rather adapts his discourse to common usage.”

Calvin also expresses his concern for the place of nature with respect to God. After discussing the work of philosophers’ understanding of the human body as a microcosm, a specimen of divine power, his concern is that nature is not the architect of the universe; God is. He writes:

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67 Calvin, 173.
68 Calvin, 51
69 Deason, 171.
At this day, however, the earth sustains on her bosom many monster minds – minds which are not afraid to employ the seed of Deity deposited in human nature as a means of suppressing the name of God. Can anything be more detestable than this madness in man, who, finding God a hundred times both in his body and his soul, makes his excellence in this respect a pretext for denying that there is a God? He will not say that chance has made him differ from the brutes that perish; but substituting nature as the architect of the universe, he suppresses the name of God.\textsuperscript{70}

Moving from a fear of a denial of God he turns to dealing with those who “turn to the frigid doctrine of Aristotle, to employ it for the purpose both of disproving the immortality of the soul and robbing God of his rights.”\textsuperscript{71} Calvin denounces a passage from Virgil claiming it says “that the world which was made to display the glory of God, is its own creator.”\textsuperscript{72} He opens his sixth point by stating:

Let each of us, therefore, in contemplating his own nature, remember that there is one God who governs all natures. … Nothing, indeed, can be more preposterous than to enjoy those noble endowments which bespeak the divine presence within us, and to neglect him who, of his own good pleasure, bestows them upon us.\textsuperscript{73}

Calvin refers to Psalm 107 as the psalmist reflects on the works of God that men call fortuitous events, like helping the miserable when they are lost in the desert, or leading them back to the path, supplying food, bringing people back from the dead or curing diseases. He sees these as proofs of divine providence and divine majesty. For Calvin, all must see that to seek God, the most direct path is “to contemplate him in his works, by which he draws near, becomes familiar, and in a manner communicates himself to us.”\textsuperscript{74} He states it plainly, later, saying that

\begin{itemize}
\item \textsuperscript{70} Calvin, 53.
\item \textsuperscript{71} Ibid., 53.
\item \textsuperscript{72} Ibid., 54.
\item \textsuperscript{73} Ibid., 55.
\item \textsuperscript{74} Calvin, 57.
\end{itemize}
“God gives both of himself and his immortal kingdom in the mirror of his works” and this is what the body of philosophers miss and through which they “betrayed their stupidity.”

In Paul Helm’s study of Calvin, he notes that Calvin, as expected of a Reformer, gave Scripture, or the Doctrine of Scripture, prominence, “underscoring his view that its authority is logically prior to that of the Church, and that its authoritativeness is evidenced principally to individuals.” Helm states that Calvin and the Reformers objected to the understanding of faith in the medieval era – that is “faith as mere assent” – and that faith assents actually to God’s revelation in Scripture alone, and confidence in this is the first act of faith that is grounded in the internal testimony of the Holy Spirit. For Calvin, “God the Holy Spirit gives faith, and faith characteristically has special regard for, and relies upon, the promises of God as recorded in Scripture.” In the Institutes, Calvin writes further that

since God, in order to bring the whole human race under the same condemnation, holds forth to all, without exception, a mirror of his Deity in his works, another and better help must be given to guide us properly to God as a Creator. Not in vain, therefore, has he added the light of his Word in order that he might make himself known unto salvation. … The course which God followed towards his Church from the very first, was to supplement these common proofs by the addition of his Word, as a surer and more direct means of discovering himself.

Calvin saw God revealed through the Word first as Creator and then as Redeemer in the person of the Mediator, Jesus Christ. Humanity, because of its special place as spectator of God, has then a special duty to give ear to the Word. For Calvin, the two ways of knowing God, as creator and redeemer, are logical as only a creator and world ruler would have the power to bring about

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75 Calvin, 59.
76 Paul Helm, *Calvin at the Centre* (Oxford: Oxford University Press, 2010), 67.
77 Helm, 67.
78 Ibid., 67.
79 Calvin, 64.
an event of salvation for the creation. In his seventh chapter he establishes that the Scriptures “are the only records in which God has been pleased to consign his truth to perpetual remembrance, the full authority which they ought to possess with the faithful is not recognized, unless they are believed to have come from heaven, as directly as if God had been heard giving utterance to them.”

He further writes:

For if the Christian Church was founded at first on the writings of the prophets, and the preaching of the apostles, that doctrine, wheresoever it may be found, was certainly ascertained and sanctioned antecedently to the Church, since, but for this, the Church herself never could have existed. Nothing, therefore can be more absurd than the fiction, that the power of judging Scripture is in the Church, and that on her nod its certainty depends.

Furthermore, regarding the faults of the Church which he saw as going beyond the boundaries of the early Church fathers and with regard to the Church leadership in the sixteenth century he says:

They step beyond the boundary, therefore, when in sacred matters they are so much delighted with gold, silver, ivory, marble, gems, and silks, that unless everything is overlaid with costly show, or rather insane luxury, they think God is not duly worshipped. . . when they placed lazy gormandising monks in dens and stews, to gorge themselves on other men’s substance. . . they leave not a corner without images. . . they pass in pretending that, as soon as the words of our Lord are pronounced, the substance of bread and wine ceases, and is transubstantiated into body and blood.

Calvin continued presenting the idea that the Church had gone beyond its boundaries regarding who might participate in the Lord’s Supper and how the constitutions, canons and dogmatic decisions were made without the authority of Scripture. He further challenged the rigid binding of the priests to celibacy, the suspending of the authority of Scripture to the judgement of the Church, and finally, how miracles were claimed to be the work of the saints. Calvin claimed that

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80 Peter Wyatt, Jesus Christ and Creation in the Theology of John Calvin (Pennsylvania: Pickwick Publications, 1996), xii.
81 Calvin, 68.
82 Ibid., 69.
83 Ibid., 9.
regarding miracles or wonders, the mark of sound doctrine is its tendency to promote the glory of
God not men and therefore “we are in error if we regard as miraculous, works which are used for
any other purpose than to magnify the name of God.” 84 For Calvin, Satan has his miracles
which are still able to delude the unwary, and as the Protestant opponents tell them, miracles
occur not by the idols nor through sorcerers, but by the saints. And yet Calvin, quoting 2 Cor.
11:14 states “as if we did not know it to be one of Satan’s wiles to transform himself into an
angel of light.” 85 His reference is that Satan’s ministers also disguise themselves.

Calvin acknowledges the need for external helps to understand salvation, which he calls
our infirmity, and that the ability to help people has been given like a treasure to the Church
through which pastors and teachers might preach the Word. He also agrees that the sacraments
are helps to experience God because humanity has not yet achieved the rank of angels. On these
two, the Word and the Sacraments, whenever sincerely heard and practised, the true and visible
Church of God is revealed. 86 Yet, he adds that there is nothing Satan would not do to destroy
these marks of the Church and that

To his wiles it was owing that for several ages the pure preaching of the word
disappeared, and now, with the same dishonest aim, he labours to overthrow the ministry,
which, however, Christ has so ordered in his church, that if it is removed the whole
edifice must fall. 87

The “several ages” that Calvin refers to above, was believed by the Protestant Reformers to be
the ages of the Church that followed the ages of the early Church Fathers and that these ages
were coming to an end – no more ecclesiastical power and authority over the Word of God, no

84 Calvin, 9.
85 Ibid.
86 Calvin, 288-289.
87 Calvin, 290.
more allegorical interpretations, no more images, relics, or other devices that tarnished the true Church.

In summary, the writings of John Calvin of the sixteenth century provide a look at the Reformed tradition beliefs of Protestantism in the sixteenth century concerning the relationship among God, humanity and nature at a time when Western science had achieved better interpretations of ancient texts, the transfer of information through the printing press, and explorers had brought back new knowledge of the world. The authority and purpose of the Bible would be seen to rest as “an instrument of the Holy Spirit to reconcile humanity to God through Jesus Christ in the community of the church.”88 The beliefs of the Reformers in the literal sense and the right of individuals to read and interpret the Scriptures without the Church would continue to affect the relationship between science and faith as the centuries unfolded. Calvin’s understanding of God revealed through nature still reflects much of the medieval world view yet his words reflect the changing view on statues, relics, and images that would be destroyed through the Protestant iconoclasm.

Harrison argues that the Protestant belief in the priesthood of all believers afforded individuals direct access to God and the Bible without the interference or interpretation and glosses of the clergy and this freedom carried over into the sciences whereby students of nature were granted direct access to the book of God’s works without the writings and interpretation of the classical writers and the Church authorities.89 God, as Calvin believed, was sovereign and distant but had set in motion the world with laws for nature that were regular and that could be discovered through experimentation. According to Harrison, the Protestant demystification of the world promoted the mechanical conception of nature because of the Protestant scepticism of

88 Bruce Gordon, Calvin (New Haven: Yale University Press, 2009), 104.
89 Harrison, The Bible, 7.
miracles, the presence of God in the sacraments, and the challenge to the authority of the priests in relaying these mysteries. This, he says, provided the “pre-requisite for scientific investigation” of nature. His thesis is that the Protestant approach to interpretation of both the Scriptures and nature affected the rise of Western science, and for this thesis, then, changed the relationship among God, humanity and nature.

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90 Harrison, The Bible, 7.
Part Two – The Rise of Western Science and Galileo Galilei

The Rise of Western Science

Through the Renaissance, natural philosophy, (the exploration of the natural world, the Book of God’s Works), was encouraged in the Church-sponsored universities as long as religious controversy was avoided.\(^91\) The world made possible the knowledge of God and therefore studying nature would reveal the glory of God. God’s glory and wonder in creation was discovered through observation. Through observation and reason, scientific discoveries of the world were made such as: the isolation of acids, including alcohol, by Christian alchemists; and the polarity of magnets and how they worked by Peter the Pilgrim, both in the thirteenth century.\(^92\) Robert Grosseteste developed the beginnings of the scientific method. Later there was the discovery of pulmonary circulation and the correct explanation of the rainbow as well as the ability to view solar eclipses. Moving from fifteenth to the sixteenth centuries, the explorers of the seas and the explorers of the skies would show that some of Aristotle’s claims were wrong, that people could and did live in the lands of the tropics and that the heavens do change, as a new star had arisen in Cassiopeia in 1572.

Robert S. Westman points out that as the Protestant Reformers moved toward literalism in biblical interpretation and an understanding that the whole story of Scripture was a narrative held together, a single theme being the life and ministry of Christ, they employed the principle of accommodation, as noted in Calvin’s works, to mediate between the truth of Scripture and that which was being revealed through science.\(^93\)

Discoveries of the natural world which brought

\(^91\) Hannam, 193.

\(^92\) Hannam, 132, 141.

more attention to the texts of Scripture that appeared scientific further elevated the work of science. The problem was that if scripture led to salvation, and as Augustine believed, the Bible was the truth on faith and morals, then what should be made of the material in Scripture which seemed to present a kind of natural science? Should Moses and the accounts of creation and the flood be considered literally or allegorically? Interpreters wanted to avoid suggesting that Moses was expert in theological matters but not on the physical matters of the world. If there were a split in Moses’ expertise it would undermine the validity and authority of Scripture.94 Both Protestants and Catholics would use the principle of accommodation with the belief that all theologians agree that if Scripture could be understood literally then it was not to be interpreted in any other way.95

The rise of Western science would bring a new player into the arena of interpretation – the scientist, who would also use this principle of accommodation. Scientific reformers would challenge theological doctrines and the years of tradition in this complex historical time. The new question concerning who had the right to interpret Scripture would no longer be the case of the Reformers’ view of the individual versus the Church. The question would become, who has the right to interpret Scripture, the Church or the scientists?96 This would lead to clashes because as truth claims of the Church aided by Aristotle’s teachings came to be viewed as wrong, and new scientific discoveries were made, the Church and its authority over the Scriptures would be further challenged.97

94 Harrison, The Bible, 133-134.
95 Westman, 99.
97 Lindberg, “Galileo, the Church, and the Cosmos,” in When Science and Christianity Meet, 35.
As Aristotle saw an earth-centred world, like Ptolemy, in 1543 the printing of Nicolaus Copernicus’ book, *On the Revolutions of the Celestial Orbs*, presented the heliocentric model with mathematical evidence and a defence stating that this was the true description of the universe. Copernicus’ book was technical and there were still many reasons why astronomers could not accept the heliocentric model. This was the case mostly because his arguments were not convincing in that the sun in the centre of the universe challenged the Aristotelian dichotomy of heaven and earth. But the Catholic Church at this point did not find the heliocentric idea particularly dangerous. This would change with Galileo and the telescope for with the telescope Galileo would see stars, the moon, planets and the sun. He would find previously unknown stars which made the heavens ever larger. He would find craters on the moon, the phases of Venus, the moons of Jupiter, the rings of Saturn and spots on the sun. As a result, the “Galileo Affair” provides a window into the relationship between science and the Church as well as the changing relationship among God, humanity and nature at that time.

**The Mechanistic Worldview**

As already noted, moving from the sixteenth to the seventeenth centuries, aspects of Greek thought that had been accepted were being rejected, but mathematics, logic and experimentation would continue to be a part of the mechanistic worldview. The application of mathematics to nature would show that matter was passive, controlled by nature’s laws and that these laws could be discovered and explained mathematically by humans. It was understood then, that God had established mathematical laws in nature and maintained them, and this applied to the whole universe. It was also believed that the mechanistic worldview or model was a better biblical fit because it meant that the world was fabricated, not generated. Fabricated meant that it was made as was written in Genesis, yet this also meant the de-deification of nature,
the de-sanctifying of nature, that set nature apart from God and limited God’s work through nature in the sacraments and miracles. According to Hooykaas, the world came to be seen as a machine: God was the ultimate “mechanician” who willed the world into being and humanity were also “mechanicians” being made in the image of God. Knowledge of nature would later come to mean dominion over nature and with this concept would come the right of humanity to use, manage and even exploit nature for its own purposes. Into this complex world of the seventeenth century, of religious conflict, rising Western science, and the mechanistic worldview, came Galileo, who saw nature as a source of knowledge of God and who thought that the Book of God’s Works was written in the language of mathematics.

The Galileo Affair

Harrison claims that moving from the Middle Ages to Early Modernity, the two books of God became two cultures with less common ground, and the seventeenth century dispute would be over the right of the individual to make his /her own determination of how these two books were to be read. Reading the Bible literally, the consequence of Protestantism, resulted in the possibility of the Bible being false. Galileo Galilei (1564-1642), a Catholic and mathematician, would adopt a literal approach to interpretation but in order to not falsify Scripture, he, like Calvin, would use the principle of accommodation. Brad Gregory claims that the doctrinal differences between Catholics and Protestants, and among Protestants, would eventually lead to the elimination of religious claims having a bearing on the understanding of the natural world, but this would lead to a challenge of faith itself because both Catholics and Protestants believed

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98 Hooykaas, 61.
99 Harrison, 267-268.
that God was revealed in history and the natural world. Perhaps Protestantism’s unspoken, or unconscious, challenge was the incarnation itself because the incarnation was to be understood as God revealed in natural humanity, a mystery and a sign. Gregory adds that in the seventeenth century, reason would be the common mechanism of its thinkers, with the belief that yes, God existed, but knowledge of God through theology, Scripture, tradition and religious experience was pushed to the side by the philosophers and their approaches to the natural world using mathematics, empirical observation and experimentation.

Thomas Dixon writes that Galileo Galilei, a layman, sought harmony between the knowledge revealed through the Bible and the knowledge discovered in nature, yet through his work and his words he challenged the authority of the Bible, the authority of the interpretation of Scripture, and the authority of the Church. Like the Protestants, he challenged Aristotle and he challenged the nature of interpretation of the Bible, claiming, as he told the Grand Duchess Christina in a letter dated 1615, quoting Cardinal Baronio, “that the intention of the Holy Spirit is to teach us how one goes to heaven and not how heaven goes.” This was similar to the Protestant understanding that the Scriptures, being the Word of God, reveal salvation. Finally, Galileo disobeyed the authority of the Pope himself. Galileo’s experiences with the Church became known as a major dispute between science and faith but really it was about the authority of the Church at the time of the Counter Reformation, the close of the Council of Trent (1545-1563) and after the Thirty Years War (1618-1648) between Catholics and Protestants, and the threat to the Church’s authority and place in people’s lives. Hooykaas notes that Galileo believed

100 Gregory, 47.
101 Gregory, 48.
103 Dixon, 22.
in humbly accepting the decrees of the Pope on scientific matters but he expected the decrees to be based on the advice of scientists like himself even though he was a layman.\textsuperscript{104}

Each of these challenges is observed in Galileo’s works and supports the five interrelated claims of this thesis. The authority of the Bible would be held with the principle of accommodation to be higher than the authority of the Church. Knowledge of nature would be found through scientific exploration raising science to a place of independent knowledge. Nature would lose its sacredness; it would be de-mystified, de-sanctified, while the Word of God would be the vehicle for personal salvation. The seventeenth century was a time of great discoveries and changes with the rise of Western science and this would lead to a wedge between science and faith around the authority of Scripture and the Church. This would be a part of the movement of faith into the personal realm and lifting science, the exploration of the natural world, into the public realm where doctrinal differences could be avoided or ignored. Natural theology, exploring the nature of God and creation, would be based on reason and experience; revealed theology would be based on the Scriptures alone offering the route to salvation.

Galileo’s discoveries through the telescope would defend and prove Copernicus’ heliocentric theory and it would be through long private letters that he would begin his criticism of those who did not believe the sun was the centre of the universe, who continued to believe and defend the geo-centric model.

In 1610, Galileo wrote to Cosimo II de’Medici, the fourth Grand Duke of Tuscany, in a letter known as The Sidereal Messenger. In this letter, he shares his delight in discovering the new planets (moons) of Jupiter and that “the Maker of the Stars himself seemed to direct me by clear reasons to assign these new planets to the famous name of Your Highness in preference to

\textsuperscript{104} Hookyaas, 125.
all others.” He continues, stating that as he was the one to have discovered these stars which previously had been unknown, and as he was the first to investigate them, it was right that he should name them and so he called them the Medicean Stars for the prince. He adds that he hoped the prince would accept them as “from God, the Maker and Governor of the stars.”

Galileo would not have been able to discover the moons of Jupiter or anything else if it had not been for his learning about “a Dutchman [who] had constructed a spyglass, by the aid of which visible objects, although at a great distance from the eye of the observer, were seen distinctly as if near.” With his own telescope Galileo saw that space was so much larger than previously believed. From his work entitled History and Demonstrations Concerning Sunspots in 1613, Galileo conjectured that the sun’s environment “is very tenuous, fluid, and flexible” as he had seen the spots on the sun change shape, combine and separate. He argued that this would not be possible if the environment were solid and rigid “(a proposition that will seem very novel to the common philosophy.)” The common philosophy would have been that of Aristotle and the Church. In his notes on Heavenly Change and Aristotelian Empiricism (1613), he is somewhat kind to Aristotle claiming that Aristotle himself would have moved from his astronomical beliefs if he had had access to the observations that Galileo did. Galileo wrote:

Thus, since he [Aristotle] argued for the immutability of the heavens from the fact that no alteration had ever been seen there in past times, it is very reasonable to believe that if the senses had shown to him what they have shown to us, he would have followed the contrary opinion, to which we are now led by such marvelous discoveries. …I am opposing Aristotle’s doctrine.

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106 Galilei, 47.
107 Ibid., 49. Galileo does not name the Dutchman. His point is that he was not the first to invent the instrument. The Dutchman may have been Hans Lippershey (c.1570-c.1619) or Jacob Metius (c.1571-c.1631).
109 Galilei, 100.
The contrary opinion would have been that of Copernicus, the heliocentric model. In addition, being against Aristotle was to side with the Protestants at a time when the Catholic Church was in conflict with the Protestants.

In his letter to his former pupil Benedetto Castelli (1613), after Galileo’s views had been criticized at the ducal court on scriptural grounds, Galileo argues in this private letter against Copernicus’ model being wrong because it contradicts scripture:

. . . though Scripture cannot err, nevertheless some of its interpreters and expositors can sometimes err in various ways. One of these would be very serious and very frequent, namely, to want to limit oneself always to the literal meaning of the words; for there would thus emerge not only various contradictions but also serious heresies and blasphemies, and it would be necessary to attribute to God feet, hands, and eyes, as well as bodily and human feelings like anger, regret, hate, and sometimes even forgetfulness of things past and ignorance of future ones. Thus in Scripture one finds many propositions which look different from the truth if one goes by the literal meaning of the words but which are expressed in this manner to accommodate the incapacity of common people; likewise, for the few who deserve to be separated from the masses, it is necessary that wise interpreters produce their true meaning and indicate the particular reasons why they have been expressed by means of such words.  

Galileo’s words here demonstrate his belief in the truth and authority of Scripture. He also indicates the need to understand that Scripture was written to accommodate average folk, meaning it is required to be interpreted through the principle of accommodation. He further wrote:

For the Holy Scripture and nature both equally derive from the divine Word, the former as the direction of the Holy Spirit, the latter as the most obedient executrix of God’s commands; moreover, in order to adapt itself to the understanding of all people, it was appropriate for Scripture to say many things which are different from absolute truth in appearance and in regard to the meaning of the words;  

He later explains that if Scripture had been totally clear on natural phenomena it would have caused confusion for people and made them more resistant to those texts on salvation. He


\[111\] Galilei, 105.
further claims that two truths can never contradict each other and therefore wise interpreters are required to discover the true meaning of scriptural passages that would then agree with the physical observations. Although this may make sense, he was actually claiming that he, a scientist and layman, was better able to interpret Scripture than the Church. Galileo later states that he believed the authority of Scripture is for persuading people about those passages which are necessary for their salvation and “surpass all human reason, and so could not become credible through some other science or any other means except the mouth of the Holy Spirit itself.”

Having said this, he does continue claiming that he did not believe that the God who gave us our senses and abilities to explore and learn would not want us to use them. This applied especially to the sciences as Scripture only had small passages about the natural world, and in particular astronomy for as Galileo pointed out, the Scriptures say nothing of the names of the other planets. If the writers of the Scriptures had wanted people to know these things they would have written them.

Galileo used the passage Joshua 10:12-13, that was used to speak to the governing power of God over the heavens by Calvin, to support the Copernican theory of the heliocentric model against Aristotle and those who were challenging his own opinion. Galileo claimed that the sun stopped, lengthening the day, but as it was in the middle of the universe, it stopped in its own movement, its own rotation, and since the sun’s movement draws the other planets around it, stopping would have lengthened the day in answer to Joshua’s prayers. Once again, Galileo, the layman, interprets Scripture to defend a new theory and does so contrary to the accepted

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112 Galilei, 106.

113 In 1536, John Calvin used the Joshua passage to attest to God’s governance of nature, that the sun does not rise daily set by nature but by God (Institutes, 173). Galileo, then, used the same passage in his letter to Castelli in 1613 to support the Copernican theory of the heliocentric model of a mathematically predictable nature.

understanding of the Church, challenging the Church’s authority, the Church’s ability to interpret Scripture, as did the Protestants, and raising up the authority of science and its practitioners.

In Galileo’s letter to the Grand Duchess Christina (1615), his words likely offended those who opposed him regarding the place of the sun and the earth and how to interpret Scripture. He wrote to Christina that as he had discovered things in the heavens that had previously been invisible, and that contradicted the accepted philosophy in the schools, a number of professors had risen against his writings. He states:

> These people seemed to forget that a multitude of truths contribute to inquiry and to the growth and strength of disciplines rather than to their diminution or destruction, and at the same time they showed greater affection for their own opinions than for the true ones. …To this end they produced various matters, and they published some writings full of useless discussions sprinkled with quotations from the Holy Scripture, taken from passages which they do not properly understand and which they inappropriately adduce.\(^\text{115}\)

Further in this letter, Galileo adds that those against him persisted in their task of denigrating him and his findings “by every imaginable means, [and] they have decided to try to shield the fallacies of their arguments with the cloak of simulated religiousness and with the authority of the Holy Scriptures, unintelligently using the latter for the confutation of arguments they neither understand nor have heard.”\(^\text{116}\) Galileo’s words continue to criticize the professors of the universities who were against him but also the Church authorities as well. He argued that Copernicus, a Catholic and clergyman, honoured as the supreme astronomer, who regulated the calendar and constructed tables of all planetary motions, dedicated his book *On Heavenly Revolutions* to the Supreme Pontiff, and whose book was printed, accepted, read and studied, was later declared a heretic even while his works were being proved accurate.\(^\text{117}\) Galileo


\(^{116}\) Ibid., 111.

\(^{117}\) Ibid., 113.
continued claiming that his own enemies were shielding themselves with religious zeal, trying to involve the Bible to make it subservient to their own objectives which he believed was against the purpose of Scripture and the Holy Fathers, and in doing so attempting to extend the authority of Scripture beyond matters of faith, abandoning the senses in favour of whatever the Scriptures say. He accuses those, who wished Copernicus’ book to be condemned, of using the authority of Scripture, commentary from experts in theology and sacred Councils of the Church, to support their position. Although Galileo held the authorities supreme, he believed it was not wrong to speak out against those with whom he was arguing when he believed their actions were out of personal interest and not the intention of the Holy Church. He turns again to the importance of understanding that Scripture cannot lie and that it is written by the sacred writers in such a way as to accommodate the capacities of the unrefined masses and therefore requires wise interpreters.\textsuperscript{118}

Galileo concludes these thoughts saying, “Therefore, I think that in disputes about natural phenomena one must begin not with the authority of scriptural passages, but with sense experiences and necessary demonstrations. \ldots; and so it seems that a natural phenomenon which is placed before our eyes by sense experience or proved by necessary demonstrations should not be called into question, let alone condemned, on account of scriptural passages whose words appear to have a different meaning.”\textsuperscript{119} With these words, observed accounts of nature such as the stars and the planets and other natural phenomena assumed authority over Scripture.

From Galileo’s work called \textit{The Assayer} (1623), he wrote concerning the Book of Nature that

\textsuperscript{118} Galilei, 115.
\textsuperscript{119} Ibid., 117.
Philosophy is written in the all-encompassing book that is constantly open before our eyes, that is the universe; but it [the universe] cannot be understood unless one first learns to understand the language and knows the characters in which it is written. It is written in mathematical language, and its characters are triangles, circles, and other geometrical figures; without these it is humanly impossible to understand a word of it, and one wanders around pointlessly in a dark labyrinth.  

Given that not everyone, especially within the hierarchy of the Church, had the depth of knowledge and understanding in mathematics that Galileo did, his comments raised himself above their authority over him and their authority over the interpretation of Scripture. In 1632, Galileo demonstrated his better knowledge of the heavens and understanding of Scripture in *Dialogue on the Two Chief World Systems*.  

After a preface to the reader which summarizes the edict which imposed silence on those who wrote of the earth’s movement and Galileo’s own part and opinion, he describes how he will address the experiments on the feasibility of the movement of the earth, the astronomical evidence that supports the Copernican hypothesis, and the motion of the tides through a dialogue form. The characters of his dialogue are Giovanfrancesco Sagredo and Filippo Salviati, both individuals of sharp minds and intellectual ability but both dead, and a third character, Simplicio, whose name also held the double-entendre of ‘simpleton.’ Their dialogue covered the hypotheses of Aristotle, of Copernicus, and of how Simplicio was on the side of Aristotle regarding the immobility of the earth. Simplicio may be seen as the Pope himself. Salviati challenges Simplicio in the dialogue saying, “So, Simplicio, come freely with reasons and demonstrations (yours or Aristotle’s) and not with textual passages or mere authorities because our discussions are about the sensible world and not about a world on paper.” Dixon points out that it is with this *Dialogue* that the real trouble started for Galileo, as in it, he wrote in  

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favour of the Copernican system versus the old earth-centred astronomy and that in doing this
Galileo was breaching the conditions of the 1616 injunction against his writing on the
Copernican model. The Simplicio character was named after a sixth century Aristotelian
philosopher and in addition, one of the arguments this Simplicio puts forth is one that Pope
Urban VIII had offered in 1624. This argument was that God could produce any natural effect
God chose and therefore it was wrong to claim physical hypotheses for causation.\(^{122}\) By putting
the Pope’s words in Simplicio’s mouth, Galileo was mocking the Pope; his writing was defying
the edict of the Pope as well.

Overall, Galileo was a Catholic layman who believed in God; he believed in the authority
of Scripture but also understood the importance of knowledge of the world offered by
experimentation and observation in the world itself and acquired through the senses and reason.
He attempted to harmonize the Book of God’s Word and the Book of God’s Works through the
principle of accommodation. Even so, conflict arose. Lindberg argues that the Galileo Affair
was not a simple science versus faith conflict.\(^{123}\) It was personal, political and religious.
Galileo’s findings and writings happened within a time of fears of loss of power, rivalries and
politics. Both those on the side of science and on the side of religion were offering rationally
defensible and informed beliefs, but it came down to who would have the authority (and
control?) over knowledge. In the Inquisition’s sentence of June 22, 1633, it was written that
Galileo held false doctrine that the sun was the centre of the universe and motionless, that he had
published some letters in which he had explained this doctrine as true, and that (like the
Protestants) he had interpreted Holy Scripture according “to your own meaning in response to

\(^{122}\) Dixon, 30.

\(^{123}\) Lindberg, “Galileo, the Church, and the Cosmos,” in When Science and Christianity Meet. 57.
objections based on Scripture which were sometimes made to you.”124 Galileo had crossed many lines. He was then suspected of heresy for having held and believed a doctrine which was false and contrary to the divine and Holy Scripture. He would be absolved if he recanted all things and “every other error and heresy contrary to the Catholic and Apostolic Church.”125 In his abjuration of 22 June 1633, Galileo said,

I, Galileo, …having before my eyes and touching with my hands the Holy Gospels, swear that I have always believed, I believe now, and with God’s help will believe in the future all that the Holy Catholic and Apostolic Church holds, preaches and teaches. However, whereas, after having been judicially instructed with injunction by the Holy Office to abandon completely the false opinion that the sun is the center of the world… I wrote and published a book in which I treat of this already condemned doctrine and adduce very effective reasons in its favor, without refuting them in any way; therefore, I have been judged vehemently suspected of heresy…and I swear that in the future I will never again say or assert, orally or in writing, anything which might cause a similar suspicion about me;126

Although Galileo believed in the truth of his discoveries by observation, reason and mathematics, he still had respect for and observed the authority of the Holy Office promising to never speak or write of them again.

The writings of Galileo demonstrate the challenges that were coming forward between science and the Church, around the authority of the Church and Scripture, interpretation and the role of science. His words and the events of the seventeenth century demonstrate the complexity of the century and how it might be seen as the final birth pangs for modernity. Moving through the fifteenth to the eighteenth centuries the Western worldview changed, the medieval symbolic and sacramental world view ended, and the modern mechanical view emerged. The eighteenth century Enlightenment and the writings of Thomas Paine provide evidence to the continued change in the relationship among God, humanity and nature as a result of the rise of Western

125 Galilei, “Galileo’s Abjuration (22June 1633),” 292.
126 Galilei, 293.
science, or scientific revolution, and the Protestant Reformation, or religious revolution, on which the eighteenth century stood.
Part Three - The Enlightenment and Thomas Paine

The Enlightenment

James C. Livingstone describes the period of European history from the close of the Thirty Years War (1648) to the French Revolution (1789) as the age “which brought together the humanistic spirit of the Renaissance and the scientific revolution of the seventeenth century and thereby ushered in what we call ‘the modern world.’”\(^{127}\) This period is known as the Enlightenment. During these years, there was a change in the world-view in the Western world, which has been already noted, a change from the sacramental medieval world-view to the mechanistic world-view of rationalism and reason. These years mark a significant change in thinking about the world, God and humanity which becomes the world-view of the present with very little in common with that of the Middle Ages. These years reveal the rise of individual rights and freedoms including the freedom to follow a different religious perspective from the monarch, and the rights of the individual and the people to be heard, to be taken seriously, and to be freed from the authority and control of institutions and governing bodies such as the Church and the monarchy.

Livingstone also suggests that between the Protestant Reformation and the French Revolution there were two revolutions which occurred: the scientific transformation demonstrated through the works of Copernicus, Galileo and Newton, and the philosophical change evidenced through Descartes in which he made doubt the first principle of philosophy.\(^{128}\) The Enlightenment years saw life no longer rooted in biblical revelation or the Church but derived from natural reason and experience. Reason came to supersede revelation and no


\(^{128}\) Livingstone, 6.
knowledge was to be accepted without rational evidence. The eighteenth century is known as the Age of Reason grounded in the empirical, experiential reason of science and in particular that of Francis Bacon and John Locke. In addition, that which was determined to be reasonable, discovered by reason, was also therefore natural and true. In these years, “Nature and her rational laws were reverenced, even divinized,” writes Livingstone, and humanity had the ability to unearth and understand these laws.\[129\] Livingstone describes this new age as a time of progress in which superstition had lost to reason and in which the Western world was freed from ecclesiastical and theological control and authority; this ultimately birthed the secular society.

Karen Armstrong writes that the rise of Western modernity from the fifteenth century through the Enlightenment was a change from a mythological world-view to a world-view based on *logos* (word, order or intelligibility) in which myth was deemed useless, false and outmoded.\[130\] Unlike myth, a world-view focused on words was also focused on facts, science and technology. She says that this meant “that intuitive, mythical modes of thought would be neglected in favour of the more pragmatic, logical spirit of scientific rationality.”\[131\] This created a wedge between scientific truths and faith truths because faith truths could not be empirically proved as scientific truths could. In the years of the Enlightenment, Sir Isaac Newton delved into the Scriptures and ancient manuscripts in search of proof of the Trinity, but he did not find it.\[132\] Yet he maintained that his work in science was “investigating God’s creation which was a religious duty because nature reflects the creativity of the Maker,”\[133\] and he argued that

\[129\] Ibid., 8-9.
\[131\] Armstrong, 121.
\[133\] Hannam, 341.
Descartes was a materialist and his philosophy of science “would undermine all religious belief.” Newton discovered the laws of motion and universal gravitation which would become the basis for modern physics. Others observed micro-organisms through the microscope and the first measurements for the speed of light were calculated. In space, the atmosphere of Venus, and then galaxies, star clusters, nebulae and Uranus were discovered as was oxygen. Antoine Lavoisier determined the law of the conservation of mass a basis for modern chemistry.

Benjamin Franklin discovered that lightning is electrical. In light of the emergence of this modern world, British theologians John Toland (1670-1722) and Matthew Tindal (1655-1733) suggested that Christianity needed to get rid of its claims to mystery and myth. It is in this time period that the old myths of Scripture were beginning to be interpreted as written factual stories which Armstrong says they were never intended to be and because these ancient stories and truths could not be proven scientifically, the authority and validity of their truths were diminished.

Roger L. Shinn claims the ideology of progress in secular thought was also part of the Enlightenment, including the idea that “if nature, including human nature, is uniform, then increasing knowledge means increasing superiority.” He adds that it was most dramatically seen in France where there came to be a true disdain for the past, for the medieval worldview, and where although unrecognized by the philosophes, they were lifting up Progress as the new deity, the Enlightenment rationality their new Word, the future the new Kingdom of God and

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134 Margaret C. Jacob, “Christianity and the Newtonian Worldview,” in God and Nature, 242. Also, Richard S. Westfall, “The Rise of Science and the Decline of Orthodox Christianity,” in God and Nature, 233. Westfall states that a turning point in the career of Newton was his conclusion that “Cartesian natural philosophy with its autonomous material realm was a recipe for atheism.”

135 Armstrong, 128.

posterity’s appreciation the Last Judgment.\textsuperscript{137} Carl Becker also wrote of how the \textit{philosophes} of the eighteenth century “demolished the Heavenly City of Augustine only to rebuild it with more up-to-date materials.”\textsuperscript{138} Becker noted how the \textit{philosophes} freed themselves from superstition, ridiculed the idea of a six day creation, believed the Garden of Eden was a myth, renounced the authority of the Bible and the Church, but kept their fear of God and respect for the deity, believed creation was designed like a machine by a Supreme Being, looked back at the golden age of Roman virtue, and held faith in the authority of nature and reason.\textsuperscript{139} Shinn noted that the idea of or belief in superstition was abandoned as they looked forward to Reason to create a new world free from the authority of the Church and priests.\textsuperscript{140} By the time of the French Revolution, the Goddess Nature would be made into a statue and the magistrate of the \textit{Parlement} of Paris would give a speech of invocation to the Goddess Nature saying that their great people were worthy of her and free, returning to her ways of liberty and equality.\textsuperscript{141} This changing worldview would have profound effects on the relationship among God, humanity and nature, and between Scripture and nature. It would include a revolutionary calendar that would begin with not the birth of Jesus but the birth of the republic of France. McManners also writes that the festival of Reason would be celebrated in the cathedral of Notre-Dame but known as the Temple of Reason and inside would be the Temple of Philosophy and the goddess Liberty; a month earlier at a festival vestments and confessionals were burned.\textsuperscript{142} This new religion of the Enlightenment of the French Revolution would be deist using the words Reason, Law, Truth,

\begin{thebibliography}{99}
\bibitem{137} Shinn, 105.
\bibitem{139} Becker, 31.
\bibitem{140} Shinn, 106.
\bibitem{141} John McManners, \textit{The French Revolution and the Church} (London: SPCK, 1969), 99.
\bibitem{142} McManners, 100-101.
\end{thebibliography}
Liberty and Nature, and at Beauvais, three goddesses were recognized, Reason, Liberty and Equality, and worship was to the Being who made all humanity equal. The Good News was now that Reason was God’s gift to humanity, no longer the gift of Jesus of Calvin’s theology.

At one end of the Enlightenment, as Livingstone wrote, was the Thirty Years War, a time of conflicts between Catholics and Protestants rising out of doctrinal differences, armies marching across Germany and nations’ and monarchs’ power and authority challenged by their subjects. Gregory claims that because of the violence of the early modern confessional regimes, the relationship among Catholics, Lutherans, Reformed Protestants and Western Christianity have suffered, that the conflicts led to an “unintended disaster that has fundamentally shaped the subsequent course of Western history in ways they could not have foreseen and which nearly all of them would have deplored. …ideological and institutional secularization.” A solution to the conflicts and wars was required and eventually faith would be moved into the personal realm from the public realm which would become secular, but the move would not be smooth. At the other end of the Enlightenment was the French Revolution with its denouncing of Christianity and all vestiges of it, and the Reign of Terror, yet maintaining the idea of a Supreme Being. It is in this Enlightenment period that Thomas Paine lived, wrote and made friends and enemies on both sides of the Atlantic Ocean, because of his political positions and his opinions that he projected through the written word, supporting and encouraging revolutions.

Thomas Paine

Paine was born in Thetford, England, in 1737. The beginning of his life included his search for a profession, the death of his wife in childbirth, the failure of a second marriage after

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143 McManners, 101.
144 Gregory, 160.
their business went bankrupt, and two attempts at being a tax collector. He was dismissed both
times, the second time for having left his post to advocate before parliament for wage increases.
His experiences in life shaped him, as it does us all. Jack Fruchtman Jr. writes that the event that
affected Paine the most was his meeting with Benjamin Franklin who was at the time an
American colonial agent for Pennsylvania.\textsuperscript{145} Through Franklin, Paine was exposed to and
travelled with the highest intellectual and social circles in America, England and France.
Through these circles, he voiced his political, social and religious views through his writings.
These writings demonstrate the move of religion to the private realm, the rise of science (natural
philosophy) to the public realm and the separation and resistance to the authority of the Church
and governing bodies. His writings demonstrate his belief in the right of the individual to
believe as he/she wishes, reminiscent of the early Protestant belief that individuals had the right
to read the Scriptures in their own language, interpret without the glosses of the clergy and
tradition, and be taken seriously, as seen in Calvin’s writings. Paine’s works demonstrate the rise
of the written word and its power, the demystification of nature and the growing separation
between science and faith that altogether were the products of a changing world.

Paine was a writer and editor for the monthly \textit{Pennsylvania Magazine} and through this
medium he expressed his reasons why America should separate from Britain. His work \textit{Common
Sense} (1776) was originally published anonymously but it would not take long for people to
make the connection with Paine. Fruchtman notes that George Washington, Thomas Jefferson
and many others “praised it.”\textsuperscript{146} In this work, Paine denounces monarchies and governments
claiming the more simple anything is the more unlikely it is to be disordered. He further stated:

\textsuperscript{145}Jack Fruchtman Jr., foreword to \textit{Common Sense, Rights of Man and Other Essential Writings of Thomas

\textsuperscript{146}Fruchtman, ix.
“Government, like dress, is the badge of lost innocence; … For were the impulses of conscience clear, uniform, and irresistibly obeyed, man would need no other lawgiver; … In the state of natural liberty, society will be their first thought.”

Paine believed that, according to Scripture, in the beginning there were no kings and therefore no wars, that God was opposed to the Jews having kings, and that “monarchy is ranked in scripture as one of the sins of the Jews, for which a curse in reserve is denounced against them.” Quoting from Scripture, he offered the stories of Gideon and Samuel to prove how the Israelites’ action of choosing a king was a rejection of God and God’s laws. He later concluded that the nearer a people’s government could come to being a republic, the less there would be a need for a king and hence a closer return to God. He further linked monarchs with popes saying, “a man hath good reason to believe that there is as much of king-craft, as priest-craft, in withholding the scripture from the public in Popish countries. For monarchy in every instance is the Popery of government.”

Paine also took the opportunity to interpret literally natural geography, God’s creation, as God’s intention and therefore divinely ordained. “Even the distance at which the Almighty hath placed England and America, is a strong and natural proof, that the authority of the one, over the other, was never the design of Heaven.” He added later, “The reformation was preceded by the discovery of America, as if the Almighty graciously meant to open a sanctuary to the persecuted in future years, when home should afford neither friendship nor safety.” Paine saw a need for a continental charter or Charter of the United Colonies that would secure “freedom and property to

149 Ibid., 16.
all men, and above all things, the free exercise of religion, according to the dictates of conscience” which demonstrates the move of faith and religion into the personal realm. He further added that he held it to be the duty of all government to protect all conscientious professors of faith, and that “it is the will of the Almighty, that there should be diversity of religious opinions among us.” Paine also saw the separation of America from Britain as an opportunity to begin the world over again; that the forming of a constitution for America would be the birthday of a new world, and that they would be the free and independent states of America. Paine closed his Common Sense giving thanks, not to God, but to “Nature and Providence for putting it in my power to be of some use to mankind.”

After the American Revolution and the Declaration of Independence (1776), Paine left America (1787) and returned to England and there became involved in European politics with the outbreak of the French Revolution (1789). In 1791, he wrote Rights of Man which was a response to Edmund Burke’s work that condemned the French Revolution. In his work, Paine wrote that, by reason, the rights of man come from divine origin at creation and that it is from the most ancient of records of antiquity that this truth is found. He believed that over the centuries governments took these rights away. He also believed from this that civil rights stem from the natural rights of man. He wrote that “the natural rights which he retains are all those in which the power to execute it is as perfect in the individual as the right itself. Among this class, as is before mentioned, are all the intellectual rights, or rights of the mind; consequently religion is one of

151 Ibid., 37.
152 Ibid., 48.
153 Ibid., 61.
154 Ibid., 127.
those rights.”\textsuperscript{155} This statement demonstrates the personal nature of religion as a right of man. But as a personal right, therefore, no one, no monarch, no Church nor government could hold the right to dictate religious beliefs. Paine elaborated his claim through his explanation of three types of government over people. The first was the Government of Priestcraft, or superstition, where the people were led by those who claimed to speak with the Deity. The second form of government came from power through conquerors such as William the Conqueror and the power of such governments was in the form of swords, and through this design came the claim for the Divine Right of kings, similar to the Divine Right of the Pope. This type of government, according to Paine, created a flawed shape where Church and State were combined. The third type of government for Paine was based on the common interest of society and the common rights of man which rested on a constitution, which came before the government itself.\textsuperscript{156} This was like saying government, especially simple government, was the first born son of the constitution of a people. Paine saw the relationship between the Church and the State as “a sort of mule-animal, capable only of destroying, and not of breeding up, [that] is produced, called the Church established by Law. It is a stranger, even from its birth, to any parent mother, on whom it is begotten and to whom in time it kicks out and destroys.”\textsuperscript{157} Through this understanding, Paine advocated for the end to titles and wrote, “It [the rank and dignity of society] must now take the substantial ground of character, instead of chimerical ground of titles; and they have brought their titles to the altar, and made of them a burnt-offering to Reason.”\textsuperscript{158}


\textsuperscript{156} Ibid., 172.

\textsuperscript{157} Ibid., 192.

\textsuperscript{158} Paine, “Rights of Man,” in \textit{Common Sense, Rights of Man, and other Essential Writings of Thomas Paine}, 185.
The changed relationship among God, humanity and nature is seen through Paine’s writings in that Nature (which comes before Reason) is now like God, or at least reveals knowledge of God, and as humanity has the power to understand Nature, and consequently God, by the power of Reason, is therefore god/god-like. God is the supreme being who set all Nature’s laws in motion and adheres to them without mystery. For Paine, individual rights and freedoms were paramount, and the writing of the American Constitution was as to Liberty herself recognizing the rights of man (humanity).

Later Paine wrote the pamphlet *The Age of Reason* (1794-1795) in which he explained his view and hatred of organized religion. The original pamphlet was entitled *The Age of Reason being an investigation of true and fabulous theology* and it was addressed to his fellow citizens of The United States of America. In this pamphlet, Paine criticized the Church, not God. He wrote about what he called the “total abolition of the priesthood, and of everything appertaining to compulsive systems of religion, and compulsive articles of faith.”¹⁵⁹ He believed that his words were necessary for fear that with the end of superstition, false governments, and false theology, people might lose sight of morality and true theology. Therefore he wrote:

I believe in one God, and no more; and I hope for happiness beyond this life. I believe in the equality of man, and I believe that religious duties consist in doing justice, loving mercy, and endeavouring to make our fellow creatures happy. I do not believe in the creed professed by the Jewish church, by the Roman church, by the Greek church, by the Turkish church, by the Protestant church, nor by any church that I know of. My own mind is my own church. All national institutions of churches, whether Jewish, Christian, or Turkish, appear to me no other than human inventions set up to terrify and enslave mankind, and monopolize power and profit. I do not mean by this declaration to condemn those who believe otherwise. They have the same right to the happiness of man, that he be mentally faithful to himself. Infidelity does not consist in believing, or in disbelieving: it consists in professing to believe what he does not believe.¹⁶⁰

Paine challenged the idea that God spoke to people, assigning special missions, like Moses to the Jews, Jesus Christ to the Christians or Mahomet to the Turks. For him, revelation meant something communicated immediately from God to a human and consequently was revelation only to the first person because after that it became hearsay. He further labelled the story of Jesus and his resurrection as fraud and imposition. He agreed it is probable that a man named Jesus lived and died by crucifixion but that Jesus was a virtuous reformer and revolutionist and it was the Church that devised the fable of the supernatural resurrection.\(^\text{161}\) His evidence was that Jesus Christ wrote nothing of himself and that it was the Christian mythologists who created the story for which he, like the disciple Thomas, wanted more evidence.\(^\text{162}\) He believed these early Christian mythologists deified Jesus and Satan too.

As for the authority and truth of Scripture, Paine wrote that no one could know who wrote the books, let alone believe that they are God’s words, and that given the different time period there was no way of knowing whether the words themselves had been added to, altered, or dressed up. Therefore the written books believed to be God’s revelation by the different religions, were false. He further concluded these thoughts by stating that indeed there is revelation from God but the revelation, the word of God, is the creation that we see, “and it is in this word, which no human invention can counterfeit or alter, that God speaketh universally to man.”\(^\text{163}\) In other words, this creation that can be discovered through the laws of nature cannot be added to, altered or dressed up. Creation, or nature, becomes its own authority and source of knowledge of God. Given this, there can be no miracles, no mystery, for anything that does appear so is simply a case of not yet knowing the full extent of Nature’s laws. Concerning

\(^{161}\) Paine, “Age of Reason,” 358-359.


\(^{163}\) Paine, “Age of Reason,” in *Common Sense*, 363.
mystery, miracle and prophecy, which he claimed was only ancient poetry, Paine added that “Upon the whole, mystery, miracle, and prophecy, are appendages that belong to fabulous and not to true religion. They are the means by which so many Lo heres! and Lo Theres! have been spread about the world, and religion been made into a trade.”164 He further reminded his readers that it was the early Church leaders who collected the writings of the Jews and then voted on which writings would be accepted as canonical. In part two of Age of Reason, Paine stated again that the purpose of his critical examination of the books of Scripture was to prove that “the Bible is without authority.”165 Paine summarized his position saying that the idea or belief of the word of God in print or in speech is inconsistent without a universal language; creation is the word of God in which humanity cannot be deceived as creation demonstrates God’s power and wisdom; and the moral duty of man is to imitate the moral goodness of God that is shown in creation toward God’s creatures.166

Paine’s beliefs and writings demonstrate the diminished authority of the Bible – that is, Scripture – the disdain for organized religion – in particular, the Church – and how faith or belief was to be a personal right, choice and freedom requiring no given creeds or controls. Paine believed “the only religion that has not been invented, and that has in it every evidence of divine originality, is pure and simple deism.”167 Concerning God, humanity and nature, Paine believed that

it is from the study of the true theology that all our knowledge of science is derived; and it is from that knowledge that all the arts have originated. The Almighty lecturer, by displaying the principles of science in the structure of the universe, has invited man to study and to imitation. It is as if he had said to the inhabitants of this globe that we call

166 Paine, 83-84.
167 Paine, The Age of Reason, 190.
ours, “I have made an earth for man to dwell upon, and I have rendered the starry heavens visible, to teach him science and the arts. He can now provide for his own comfort, AND LEARN FROM MY MUNIFICENCE TO ALL, TO BE KIND TO EACH OTHER.”

Thomas Paine’s creed and position on institutions and faith in this new world-view are very distant from the medieval worldview and the times of Calvin and Galileo. He represents the flavour of the modern world-view which carries into the present.

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Conclusion

The purpose of this paper has been to demonstrate the changing relationship among God, humanity and nature that might then afford a better understanding of why some people struggle with issues concerning science and faith. This thesis has taken the position that changes in biblical interpretation and the authority of Scripture rooted in both the Protestant Reformation and the rise of modern Western science in the fifteenth through to the eighteenth centuries effected changes in how Western Christians have understood nature as a source of knowledge about God and the relationship among creation, humanity and God, and that these changes have shaped their understanding between science and faith today.

The thesis rests on five interrelated claims. The first is that with the changes in the modes of biblical interpretation, towards reading Scripture in its literal historical sense, and denying the legitimacy of traditional allegorical interpretations, Protestantism raised the authority of the Bible above ecclesiastical authority with the principle of sola scriptura. This has been seen in the writings of Calvin, Galileo and Paine. Calvin saw the Scriptures as the true source of knowledge of God, not the Church. Galileo, a Catholic, living in the changing world of rising science and religious reformation, read the Scriptures with a literalism and, like Calvin, used the principle of accommodation when the literal meaning did not make sense with the discovered knowledge of the world. Galileo also challenged the Church’s interpretation and authority over the Scriptures. Paine’s reading was literal but he believed the Scriptures to be false. Each of the thinkers – Calvin, Galileo and Paine – challenged the authority of the Church, though with Paine, the Scriptures and the Church no longer held any authority for him at all.

The second claim is that the original sources were the best for learning; consequently, the Bible and nature became the best sources for knowledge of God. With the move away from the
accepted written authorities on nature to discovering nature itself through observation and experimentation and challenging earlier writers, the new knowledge of nature was raised above the Scriptures as the knowledge of the world. This new knowledge was now independent of a faith tradition and therefore became an authority unto itself. Modern science became an authority above the ancients, including the ancient writings of the Scriptures. This too has been demonstrated through the writings of Calvin, Galileo and Paine. Calvin claimed the knowledge of God is an inward knowledge aided by the creatures. Galileo believed that wise interpreters were required who could discover the true meaning of Scripture that would then agree with the physical observations. Paine claimed that the true revelation, the ‘word’ of God, was observed creation.

The third claim was that the Protestant demystification of objects in the Church and in nature led to the philosophical accounts of natural things to have more influence and authority for those exploring nature, just as the Bible, the written Word of God, came to hold more authority on the knowledge of God and salvation for people of faith. The medieval belief in nature revealing knowledge of God through signs and symbols in the Book of God’s Works ended. Whereas Calvin’s beliefs about God revealed in nature were still very close to that of the medieval world, Galileo came to see the Scriptures as the source of how to get to heaven and not how to understand heaven and the world. That the relationship among God, humanity and creation was becoming distant, and separated, was fully realized in Paine’s writings and deism.

The fourth claim was that the previous claims were rooted in the Protestant Reformation and were factors that contributed to the growing divide between science and religion. Each of the interlocutors described how nature revealed knowledge of God, but through these centuries, the knowledge changed from God’s being experienced through nature, to nature being the only
written evidence of the creator God. Over these centuries God was removed from creation and humanity, becoming a distant deity that created, but who was no longer known through nature by miracles and mysteries, like the sacraments, and even the mystery of the incarnation itself.

The final claim was that these elements that began with the Protestant Reformation led to the increasing divide between science and religion and were themselves products of a changing world. As Hannam pointed out, the knowledge of each century is built upon what has come before it.169 The Protestant Reformation came about as a result of the Renaissance, the challenges of life, new ideas and the abuses happening in the churches before the fifteenth century. It was a call for reform from the people in the churches that was never intended to be a full revolution. The call for reform also happened at a time of the rise of Western science when new discoveries were made in the world that challenged the authority of the Scriptures, the Church, the clergy and the relationship among God, humanity and nature as it had been known. Even as the philosophers like Galileo believed explaining nature was to acquire knowledge of God’s Works and therefore God, and was done for the glory of God, with Paine it became the glory of Reason and Nature that were lifted up in God’s place. As a consequence, God became distant.

Through these centuries, as demonstrated through the writings of Calvin, Galileo and Paine, God’s gift moves from being Jesus Christ revealed in Scripture, to Creation, and then to Reason. The Bible moves from being the first source of knowledge of God with Calvin, to the second source of knowledge after nature with Galileo, and finally, to the Bible being false with Paine. The authority of the Bible moves from having authority and being one of two sources of knowledge of God in one’s life, to being the authority for salvation, and finally to having no

169 Hannam, 1.
authority unless through personal choice by faith. Nature, once being a way through which God and Christ might be experienced, became the work of God that revealed God’s glory and then just God’s works, proof of the deity. Where once God was active in a world full of mystery and symbolism, God became inactive, and the world became that which could be understood mathematically, mechanically, and through the unchanging laws of Nature that God had devised and set in motion but did not override. Humanity came to have the ability through reason to discover the laws that God put in place and, where once dependent on God, became independent from God. As the worldview changed from sacramental to mechanistic the relationship among God, humanity and creation changed from being an interconnected trinity to being independent spheres.

Through these years, the Protestant call for the right to read Scripture and interpret it independent of the Church, and to eliminate allegorical interpretations, symbolism, and the sacramental aspects of nature, led to doctrinal conflicts and to continual divisions within Protestantism itself. Science, however, came to be perceived as the non-doctrinal alternative belief system in which everyone or anyone might believe. Consequently, as science was lifted up into the public realm, where religion had been, in the case of the Western world, Christianity and faith were pushed into the private realm where doctrinal differences would no longer effect conflicts such as those that had led to wars. With the new freedom of religion, Christianity as an institutionalized worldview would be subordinated, society would be secularized and science would gain a primary place over religion in the public realm. Religion was relegated to the emotions and was privatized, while at the same time, the growing body of knowledge about material objects in the natural world was the same for everyone regardless of one’s confessional beliefs. Faith and religion were no longer communal. They became personal; science became
public and the Church was pushed to the margins of society. Gregory refers to the present age as an age in which one has the right to choose his/her belief system including the right to reject religion altogether and that “now there were many different non-Roman versions of God’s truth from which to choose including whatever one might come up with oneself.”\(^{170}\)

As Livingston points out, the rise of Modernity, of Western science, and the intellectual and social reforms of the seventeenth century, caused varied responses from Christianity in the centuries that followed which are lived out today. According to Livingston, these responses were ways that Christians attempted to be Christian, and hold onto Christian beliefs and the authority of Scripture, in the changing world. Livingston states:

One response was a complete, or at least substantial, capitulation to these secular currents in the form of an accommodation of Christian thought and institutions to “modern” ideas. ...A second response was vigorous \textit{resistance} to Modernity or Liberalism, which frequently involved either a retreat into a cultural and intellectual ghetto, a “fortress mentality,” as we see in certain “fundamentalist” movements today, or highly sophisticated strategies of repristination or restoration of an older tradition of orthodoxy. …A third and rather more pervasive response was the effort to preserve most of the classical tradition of Christian thought but to reinterpret it in constructive new ways so as to ensure its congruence and coherence with the received knowledge of modern science, history, and social experience.\(^{171}\)

These responses included such nineteenth century efforts as the Oxford Movement, the Neo-Scholastic revival in Catholicism, the Princeton Theology and later evangelical movements including the roots of twentieth century fundamentalism. Gregory argues that the hyperpluralism in religious options, with the rights of individuals to read and interpret Scripture for themselves and personally choose their faith tradition, led to the privatization of religion and the move “to distinguish it from public life, ideologically as well as institutionally, through politically

\(^{170}\) Gregory, 212, 372.

\(^{171}\) Livingston, 2.
protected rights to individual religious freedom. Not subjective faith but objective reason, in
science and modern philosophy, would be the basis for public life.\textsuperscript{172}

This hyperpluralism in religious options with the rise of the authority of Western science
along with the challenges to the authority of Scripture and the Church is why some people think
they must choose between science and faith, that science and faith are mutually exclusive. Has
there been or need there be a war between science and faith? No. The relationship between
science and faith is not and need not be one of conflict. But in order for the wedge between
science and faith to be removed, it will require that people learn about the journey of the
relationship between science and faith and the history of biblical interpretation. It will require
that people understand that the Bible should not be read as a science book, which it was never
intended to be. Elements of the Protestant Reformation with the rise of Western science did
affect the relationship among God, humanity and creation, yet the relationship is being revisited
in the twentieth century and today with the concern for the environment, the web of life, and the
interrelatedness of all living things.

If there is one issue that truly divides Christianity and science, considering the changing
worldview over the fifteenth to eighteenth centuries, perhaps it is that question of the incarnation
of God in Jesus the Christ, the mystery, the way, the truth and the life. From the perspective of
science, even deism, how could the incarnation possibly happen? Perhaps this question points to
the crisis of faith of the people in the pews, and in society, that clergy hear even through pieces
of paper left in the offering plate. In a world of science, how might one understand and accept
the incarnation and what might then be the truth and authority of Scripture today? These
questions require further study.

\textsuperscript{172} Gregory, 21.
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