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## The Increasingly Overlapping Magisteria of Science and Religion

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The Increasingly Overlapping Magisteria of Science and Religion

Senior Project Submitted to  
The Division of Social Studies  
of Bard College

by  
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Annandale-on-Hudson, New York  
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Dedicated to  
Roger Bevan  
Beverly Bevan  
Ilaria  
Rupert  
&  
Olivia

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## Introduction

Religion and science have been closely related to one another for centuries with both being recent concepts in relative terms to human history. The relationship between the two is sometimes characterized as one of conflict, with the primary aspect of this conflict stemming from arguments surrounding the origins of life and the universe. Science was primarily regarded as the study of the natural world, with the term scientist originating in the nineteenth century and used to define those who study the natural world. As British Philosopher Bertrand Russell summarized, "Science is the attempt to discover, by means of observation, and reasoning based upon it, first, particular facts about the world and then laws connecting facts with one another... Religion, considered socially, is a more complex phenomenon than science. Each of the great historical religions has three aspects: (1) a Church, (2) a creed, and (3) a code of personal morals" (Russell, P.8, 1997). Religion has existed for several hundreds of thousands of years, with the first evidence of religion being discovered to have been around the Middle and Lower Palaeolithic periods (Peoples, Duda and Marlowe, 2016). Of course, this form of religion would have been nowhere near the level of complexity it is today. The rise in societal and scientific advancements and discoveries has resulted in many throwing doubt on religious claims, particularly on the origins of the universe.

To better show this conflict, American cell biologist Kenneth R. Miller states that "the perception of scientific hostility to religion... lies at the very root of the antievolution movement in the United States," (Miller, P.81, 2009). The meteoric rise of science and (arguably) atheism can be attributed mostly to the Renaissance. For example, the emerging Renaissance in Italy

explained: "nature's marvels in purely naturalistic terms, [which] threatened to explain way the truly miraculous" (Brooke, 1991). In this period of human history, there was a rapid cultural and intellectual development that challenged long-standing religious beliefs. Though a vast amount of worldwide religious leaders outright rejected these ideas, others attempted to restructure their own religious beliefs to reconcile them with the up-and-coming scientific ideas. Perhaps, the most prominent of these scientific ideas that challenged traditional religious beliefs was Darwin's theory of evolution. A study by the Pew Research Centre, a nonpartisan American think tank based in Washington D.C. performed a study on the religious differences on the question of evolution in 2009. In this study, it was found that eighty-one percent of Buddhists, eighty percent of Hindus and fifty-eight percent of Catholics believed that evolution is the best explanation for the origin of human life on Earth. However, Evangelical protestants only had twenty-four percent that agreed that evolution was the best explanation for the origins of human life (Liu, 2009). This study also included people of other religious beliefs but I omitted some of the results for simplicity's sake. As This study was also performed in 2009, it is not unreasonable to say that the percentages would have changed over the past thirteen years. Of course, such a huge study on different religions and their followers' agreements with Darwinism shows the level of conflict between traditional religious beliefs (creationism and similar creation beliefs) and new scientific findings. Further, the fact that some religions, such as the case with Evangelical Protestants, have so few followers who believe in evolution (just under a quarter with Evangelical Protestants), suggests further conflict between religion and science. Far more Evangelical Protestants do not see evolution being the best explanation for the origins of human life whereas more than eight out of ten Buddhists see evolution to be the best explanation for the origins of human life.

Many people, including those who will be mentioned in this thesis, have commented on this complex relationship and either attempted to patch up or further distance this relationship. One such attempt to argue against this conflict is the justification that religion and science are different fields of study. Primarily, this includes religion pertaining to the supernatural and/or human morality. Proponents of this view, such as American Theologian John Haught and cell biologist Kenneth R. Miller, also argue that science allows for multiple opportunities to find God in nature and to reflect upon their own beliefs. This is also known as natural theology. This separation allows supporters to argue that there is no conflict between science and religion. Or, at the very least, there cannot logically be one, as science seems to complement religion rather than contradict it. This means that science can support religious beliefs that cannot be verified on their own. While religion can make claims about existence and claim that God is the reason behind the origins of life, science can arguably support this claim by suggesting how this might be possible. On the other hand, many, including evolutionary biologist Richard Dawkins, argue that it is not logical to believe in both science and religion. Further, I argue that science is more rational. This implies incompatibility. But are the two fields of study truly incompatible?

In this thesis, I will examine Stephan J. Gould's NOMA (non-overlapping magisteria) principle and attempt to show how it is an unsupportable position. I will use chapter one to set up NOMA and present arguments both in favor and in disagreement with NOMA and show that NOMA is not a supportable position. I will argue that NOMA is fundamentally wrong with regard to Gould's criteria for religious and scientific magisteria. I will then use chapter two as a broader case study on theistic evolution. In this chapter, I will show that theistic evolution is indefensible and not a logically supportable position either. I will then look more closely at the

conflict between science and religion before linking the idea of theistic evolution back to Gould's NOMA. In this specific section, I will show that because of theistic evolution, NOMA remains an indefensible position and support my arguments from chapter one. I will then finish this thesis with a conclusion that will summarize both chapters and present any final thoughts.

## **Chapter I - Examining Non-Overlapping Magisteria (NOMA)**

### **Section 1.1- Explaining NOMA**

Stephen Jay Gould attempts to reconcile the existence of science and religion by introducing NOMA (non-overlapping magisteria) to suggest that perhaps the two schools can coexist in their separate domains without interfering with one another. Gould's definition of magisteria means the teaching domain of each subject, referring to what both science and religion teach humanity about the empirical and metaphysical world. Science's magisterium is more focused on the empirical world whereas religious magisterium is concerned with human morals. Before going deeper, Stephen Jay Gould must be understood contextually to show how NOMA fits into his larger body of overall work. Gould was an evolutionary biologist as well as a historian of science, possibly suggesting why Gould views religion as a means to teach morality rather than the origins of life. One of the most well-known stories of creation is from the Book of Genesis, which argues that divine power created the world in seven days. This example will be used many more times throughout this chapter. This idea comes from the fact that Gould believed in evolution, so classic biblical stories of creation, namely the Book of Genesis, would have most likely been disregarded or seen as moral teaching in some way. Gould even campaigned against the idea of creationism which further why he believes that religion's magisterium teaches morality only. However, one could equally say that Gould's religious magisterium is concerned with human morality because of some biblical teachings like the creation of the Ten Commandments as well to avoid the obvious overlaps in claims of universal existence. He is

most notable for his contributions to evolutionary biology, particularly with the theory of punctuated equilibrium, which is the theory that suggests that most evolution is characterized by long periods of evolutionary stability before infrequently and swiftly expanding into branching speciation.

NOMA is best explained by Gould himself in *Leonardo's Mountain of Clams and the Diet of Worms*, published in 1998, as seen in the fourteenth essay in this collection. It reads: "The net of science covers the empirical realm: what is the universe made of (fact) and why does it work this way (theory). The net of religion extends over questions of moral meaning and value. These two magisteria do not overlap, nor do they encompass all inquiry" (Gould, 1998, P.274). Gould perfectly explains his meaning for each respective school's magisterium while also arguing that the two do not overlap because of this definition. At first, this seems somewhat to be a valid definition, given that science is primarily concerned with three subdivisions, biology, chemistry and physics, all of which speak to different parts of the empirical world. Biology discusses the anatomy of both all species and our universe. Chemistry considers the substances and how atoms interact with one another under certain conditions. Physics examines the structure of matter and how the fundamental constituents of the universe interact. Each of these three subdivisions is clearly showing a unique aspect of the empirical world. Religion, on the other hand, emphasizes the importance of human morality and teaches humanity how an individual should act through the use of mostly supernatural stories.

Many people in modern society argue that religion is 'dead' due possibly to the modern society that emphasizes science and its magisterium over religious teachings on morality. However, Gould also underscores that:

Religion is too important for too many people to permit any dismissal or denigration of the comfort still sought by many folks from theology. I may, for example, privately suspect that papal insistence on divine infusion of the soul represents a sop to our fears, a device for maintaining a belief in human superiority within an evolutionary world offering no privileged position to any creature. But I also know that the subject of souls lies outside the magisterium of science. My world cannot prove or disprove such a notion, and the concept of souls cannot threaten or impact my domain... our decency, our care, and all the ethical and intellectual struggles that the evolution of consciousness imposed upon us (Gould, 1998, P.282).

As stated in the opening paragraph, religion has been around in human society since the seventeenth century, so to say that "Religion is important for too many people" is somewhat of an understatement. Something that is deeply ingrained in society could not be just merely pushed aside, so it is understandable that Gould is attempting to reconcile it with science by separating each magisterium. I would even go as far as to say that even though many people in modern society would not classify themselves as religious, they have at least been brought up surrounded by the practices of their religion. The primary point of this argument is to further suggest how religious magisterium does not overlap with the scientific magisterium. This can be seen while referring to how such a view by Catholics on souls cannot be interpreted by the scientific magisterium and therefore poses no threat to Gould's definition of either magisteria. This is because while science is unable to verify or falsify this claim of souls, this is exactly what makes it non-threatening to Gould, as such a claim remains only to be that, an assertion by Catholics. If Catholics, or indeed anyone, were able to verify or falsify such a statement by only using

empirical means then it would pose a threat to Gould's definition of the scientific magisterium, but this is yet to occur. To summarize the quote, Gould is showing how this claim on souls or similar religious-minded statements for that matter, that could be argued to present a hazard for NOMA do not. He is attempting to prove that his definitions of each respective magisteria are true when taken at face value.

Similarly, Gould claims elsewhere: "NOMA represents a principled position on moral and intellectual grounds, not a mere diplomatic stance. NOMA also cuts both ways. If religion can no longer dictate the nature of factual conclusions properly under the magisterium of science, then scientists cannot claim higher insight into moral truth from any superior knowledge of the world's empirical constitution. This mutual humility has important practical consequences in a world of such diverse passions [. . .] The net of science covers the empirical universe: what is it made of (fact) and why does it work this way (theory)." (Gould, 2007). If the religious magisterium is unable to make claims on the empirical world, it is arguably only logical to say that science is unable to make claims on human morality. It seems that Gould is trying to not undermine either science or religion's teaching domains and instead suggests that religion and science should not hinder the other's growth. In other words, science should not question the unknown, such as the existence of God, due to the lack of evidence and instead should focus on exploring what is known. Similarly, religion should not impinge on scientific matters, like evolution, and focus on the growth of morality. This further shows how such claims, like those surrounding the existence of a God-like being, cannot be used to refute NOMA, given that some would certainly argue that divine power is responsible for the empirical world, thus suggesting that religious magisterium encompasses that of scientific magisterium. Equally, science cannot

(arguably) fully comprehend human morality and how it is taught to people, therefore paving the way for religious teachings from the Bible or other means to be religious magisterium. I would like to highlight that this is historically speaking with regards to religious magisterium, as humanity has passed down this knowledge without the use of the Bible and other means to the next generation (at least in modern society), meaning that these teachings on human morality have stemmed from history but remain present and relevant.

Furthermore, the concept of NOMA is nothing new in terms of an idea but is new in terms of presentation. The twelfth-century Muslim philosopher Averroes used a very similar theory with a similar conclusion to that of Gould. He argued that science and Islam (but religion as a whole) represent two different truths, with science relating to the natural while religion relates to the supernatural, to fend off Aristotelian criticism. Gould's definition of the religious magisterium is morality, so there is a slight difference in the way that Averroes and Gould deliberate on religious magisterium. I have already established that biblical teachings use such supernatural means to explain human morality to its reader. As I reiterate, Gould believes that science represents the factual character of the natural world and religion represents human morals. Both Gould's criteria and Averroes's criteria for religious magisterium seem correct depending on how you look at it. One could argue that religion expresses the supernatural because of the many stories across religions that contain supernatural events or beings. Equally, one may perhaps claim that these supernatural stories are designed to teach the reader a moral lesson. To add further weight to this contextual knowledge and to signify its importance, one could argue that Averroes' work laid the groundwork for modern Christianity as well as allowed for such ideas as theistic evolution (which will be discussed in Chapter two) to be accepted and

argued in support of by a significant amount of the religious community. The American philosopher and sociologist Steve Fuller state that "While this view has kept Averroes a heretic within Islam to this day, it did not prevent his works from exercising enormous influence within Christendom... as the source of the idea that science might be used to reform religion in aid of a purer epistemic unity, to which scientific elites would come to lead the religious masses" (Fuller, 2010, P.38). Averroes's presentation of the compatibility between religion and science's magisteria is very similar to Gould's presentation, despite certain small differences that have already been stated.

Even great scientific thinkers such as Albert Einstein speaking before the conception of NOMA also agree with Gould's position and even redefined religion for the conflict between it and science to be impossible. Einstein views religion to be the evaluation of human thought and subsequent action. This is interesting considering Einstein admitted to not believing in a personal God, but rather classified himself as an agnostic (Einstein, 1950, p.340). While it might seem at first that Einstein and Gould's definition of the religious magisterium is almost the same, this is not quite the case. Human thought and subsequent action differ slightly from human morality, as one's morality appears to affect their thoughts, which in turn affects their actions. One example to clarify this could be the Christian teaching of adultery. The moral lesson here is to not commit adultery, but one might think about performing such an action and yet not go through with it. The moral remains consistent, that it is morally wrong, but there is a difference between knowing that it is wrong and thinking about it and subsequently acting upon these thoughts. Einstein also remains consistent with both Gould and Averroes by arguing that science's magisterium does not concern itself with this and rather seeks to understand the empirical world. He argues that:

a religious person is devout in the sense that he has no doubt of the significance and loftiness of those super personal objects and goals which neither require nor are capable of rational function. They exist with the same necessity and matter-of-factness as he himself. In this sense, religion is the age-old endeavor of mankind to become clearly and completely conscious of these values and goals and constantly to strengthen and extend their effect. If one conceives of religion and science according to these definitions then a conflict between them appears impossible. For science can only ascertain what is, but not what should be, and outside of its domain value judgements of all kinds remain necessary. Religion, on the other hand, deals only with evaluations of human thought and action: it cannot justifiably speak of facts and relationships between facts. According to this interpretation the well-known conflicts between religion and science in the past must all be ascribed to a misapprehension of the situation which has been described (Einstein, 1940, P.605).

In this quote, Einstein is saying that religious magisterium is subjective, which makes logical sense. Morality is not an objective thing. On the other hand, science is objective. It can only comment on what there is in the empirical world. Two individuals might possess differing opinions on a certain moral, but will state the same thing about an empirical claim. Of course, this makes evaluating the religious magisterium far more difficult than evaluating science magisterium. Einstein's views are indeed similar to Gould's but with this redefining of religion there seems to be a logical consistency between religion and science not overlapping. Einstein defined science using philosophy, particularly with Neo-Kantianism, which he viewed as an alternative to speculative metaphysics and materialism. This appears to be consistent with

Gould's definition of science's magisterium and surrounding the understanding of the empirical world and universe for that matter. Metaphysics and materialism are key to understanding Einstein's argument here, as he sees science as merely being able to conceptualize what already exists in our universe. By this, he means that science should only be able to explain the empirical world. Regardless of if humans are aware of an empirical piece of knowledge or not, it remains in the realm of the scientific magisterium because it is regarding the empirical world.

Equally, the National Academy of Science, which adopted a similar stance to Gould in its publication of 'Science and Creationism', argued "scientists, like many others, are touched with awe at the order and complexity of nature. Indeed, many scientists are deeply religious. But science and religion occupy two separate realms of human experience. Demanding they be combined detracts from the glory of each" (Steering Committee on Science and Creationism, 1997). The Steering Committee on Science and Creationism seeks to provide scientific guidance while also fine-tuning broader research themes defined by their Executive Committee. They then translate this research into 'cutting-edge' research topics and projects. Essentially, they provide the means for people to undergo research into a specific scientific field while not partaking in the study themselves, providing a non-biased research method.

I would have to say that Gould's definition of the magisteria of religion and science has merit. All facets of science tell humanity about the empirical world, although it is important to note that some scientific claims, particularly in physics and regarding the origins of the universe, are merely theories. Therefore, I agree with Gould's claim on scientific magisterium. Religion is slightly different, and although I will get into this idea later, briefly, while Gould is correct to say that religion does teach humanity about morality, through such justifications as the Ten

Commandments and general teachings contained within religious manuscripts, it does also attempt to explain the origins of the universe and life itself using supernatural beings and means. Herein lies the main question- how much of Gould's criteria for each magisterium are true?

## **Section 1.2- Defending NOMA**

NOMA is subject to many critiques by scientists and sociologists alike. Of course, any topic that is as highly debated as the relationship between religion and science is going to have main arguments (for lack of a better term), like NOMA, and those who subsequently debate these main arguments. As I began stating towards the end of section 1.1, religion does seem to make claims about the empirical world and thus is overlapping with the scientific magisterium. One common example is the Book of Genesis in which it is stated that God created the world in six days, using the seventh to rest. Naturally, this overlaps with scientific theories of the origins of life, namely the Big Bang Theory. This is only applicable if the Book of Genesis is making empirical claims, which seems to be the case if taken literally. The point as to how much evidence is for or against these two claims is irrelevant because the argument being made is concerned with the fact that religious magisterium is overlapping with the scientific magisterium. British evolutionary biologist Richard Dawkins strongly opposes Gould on the subject of non-overlapping magisteria. He explains "it is completely unrealistic to claim, as Gould and many others do, that religion keeps itself away from science's turf, restricting itself to morals and values. A universe with a supernatural presence would be fundamentally and qualitatively different from one without. The difference is, inescapably, a scientific difference. Religions make

existence claims, and this means scientific claims" (Dawkins, 1998, P.399). In line with Gould's explanation of NOMA, this shows that both religion and science attempt to explain the factual character of the natural world, albeit in different ways with religion suggesting that the universe was created by God-like being and science suggesting 'the big bang' to be responsible, thus showing that the two overlap as teaching domains. If both religion and science are making claims about either the empirical world (which is the case in this example) or human morality, there is a clear overlap in magisteria regardless of who is considered right.

Further, Gould's criteria for religious magisteria also does not consider the claims of many religious acts such as miracles. While many people worldwide regard these miracles to be fictional and merely serve as a religious story to teach morals, Gould does not seem to mention them. The bible and other religious texts might be using these stories to present a moral lesson to the reader and Gould might omit to mention them because of this thought. I mention miracles because they are an undeniable part of religion regardless of if we consider them empirical stories or if they are meant to be taken as a moral lesson. If we use the biblical story of Jesus curing a person suffering from leprosy, such a miracle makes more than a mere claim about human morality and is rather making claims about the empirical world. This is because leprosy, at least at the time, was an incurable disease. Jesus is said to have merely touched the man to heal him of this incurable disease, something that remains out of the realm of possibility to this day. This however does become more in line with Averroes' idea of NOMA, with religion being concerned with the supernatural (miracles) and science being more involved in the natural. Taking Gould's account of NOMA and religious magisterium, if such a story were true, then either supernatural beings like Jesus existed with the abilities described in the bible or the

witnesses of such a miracle were unable to comprehend the advanced medicine that Jesus was using, thereby appearing like a miracle to them.

Another argument that serves to show the invalidity of NOMA comes from The Official Roman Catholic Doctrine of Assumption, which was promulgated as recently as 1950. It suggests that Heaven has a physical location and thus must exist in a physical reality (Dawkins). One can also assume, using this logic, that Hell also possesses a physical location. Although, this location is yet to be discovered so I am left with two possible outcomes, each of which does not necessarily lend itself in favor of this claim. Either not a single person has found the physical location of heaven or it does not possess a physical location, both of which can be scientifically verified or falsified using technological devices such as radar or satellite imaging. If we agree that religion would fully embrace scientific evidence to support their claims, then NOMA cannot be logically correct, as, with regards to teaching domains, religion would be dependent on science to verify the existence of heaven, or at least in terms of how the Official Roman Catholic Doctrine of Assumption describes it. This infers that the two share teaching domains due to science teaching the world the physical location of heaven, or in other words is giving a religious claim about the empirical world supporting evidence.

Many religious claims also make declarations about the empirical world beyond the 'big' supernatural ideas of the existence of heaven and a divine being. The body of the Virgin Mary was said to have ascended to heaven in bodily form according to Roman Catholic teachings, meaning that the standard of a body decaying post mortem does not apply here. Once again, we see two possible outcomes that are empirically verifiable by theoretically anyone, either Mary's body decayed after death in her tomb or her body was removed from the earth and brought into

the kingdom of heaven. Lifting the tombstone of Mary's grave would either show the remnants of a decomposed body including her bones, which too would have decomposed over centuries. Richard Dawkins argues that "either Mary's body decayed when she died or it was physically removed from this planet to Heaven... the assumption of the Virgin transparently a scientific theory" (Dawkins, 1999, P.18-19). This claim by Roman Catholics can be argued to further show the overlap in magisteria between religion and science. This is because religion would gladly accept empirical scientific evidence that such an event transpired. Similar to how religious people would gladly accept scientific evidence supporting the physical location of heaven, the overlap in magisteria here stems from the fact that a religious claim of the existence of the Virgin Mary along with the heavy implications of divine existence that comes with it, requires science's magisterium to be verified. While true, one might say that regardless of if scientific evidence supports religious claims about the empirical world, science is still telling us about the empirical world. Logically, this would mean that Gould's criteria for each magisteria remain true. However, because religion is making these claims about the empirical world in the first place, then regardless of if scientific evidence supports such claims there is still an overlap in magisteria present.

In addition to these claims against NOMA, one might argue that the observable phenomenon of behavior is directly affected by the morals an individual possesses. I bring this up in order to suggest that science's magisterium can overlap with religion's magisterium and add weight to my arguments beyond just showing that religion's magisterium overlaps with science's magisterium. Behavior being an observable process is an undeniable fact, as if an individual has morals that say that 'stealing is ok', then they would be more likely to act upon

these morals and steal more than someone whose morals say otherwise. Morality is the primary principle between the distinction between right and wrong, or what one perceives as right and wrong and behaviors are the subsequent actions taken arguably due to one's morality. While morals affect behavior, it is the origin of these morals that can be used to question Gould's criteria for religious magisterium. Gould claims religion teaches humanity about morals, so assessing one's behavior that stems from their individual moral beliefs is irrelevant in this argument. Rather, we must examine the origin of these morals to determine the validity of Gould's claim on religious magisterium. The clear overlap is seen going in the opposite direction as to what has been argued thus far in this chapter, as here we can see how the scientific magisterium is overlapping with the religious magisterium, instead of vice versa. There is significant scientific evidence that morality stems from evolutionary origins. Through the utilization of Professor Simon Baron-Cohen's studies on the MAOA gene, which is linked to aggression and the lack of empathy. Professor Baron-Cohen, who is a professor of psychology and psychiatry at the University of Cambridge, argues, "the "empathy circuit," which runs through 10 different regions of the brain, goes down either temporarily or permanently, leaving the person with "zero empathy." The reasons may be partly innate, partly a function of early experiences such as birth trauma or parental neglect, or an interaction of the two" (Ridley, 2011). Of course, if the brain is unable to feel certain emotions, such as empathy, this will affect this individual's morality. As Ridley infers, they are incapable of feeling empathy for either a period or permanently. The Professor Patricia Churchland that Ridley mentions in the upcoming quote is a Canadian-American analytic philosopher, who is honorably noted for her extensive contributions to both neurophilosophy and the philosophy of the mind. Continuing, he goes on to

support this claim by showing that "Prof. Churchland is also "biological" about morality, seeing it as an adaptation that our brains have evolved to cement social ties. With a series of examples, she rejects the idea that morality is a set of rules and codes handed down from high, without which we would all behave badly. "Morality seems to me to be a natural phenomenon," she concludes, "constrained by the forces of natural selection, rooted in neurobiology, shaped by the local ecology and modified by cultural developments." (Ridley, 2011). This makes her a prime candidate to be used in such a discussion as this one. Therefore, it seems that human morality stems from an individual's neurobiology, which disagrees with NOMA and Gould's understanding of religion's magisterium, as one could provide the argument that morality instead stems from how an individual's mind is wired rather than from religious teachings on the same subject. It might also be a combination of the two, being that the 'hard-wiring' of the brain mixed with experiences/lessons taught from religion and other moral experiences result in an individual's morality.. Thus, it appears that Gould's understanding of religion's magisterium overlaps with scientific magisterium because one could argue that both science and religion lead to the same conclusion, is how human moral beliefs are formed, from different methods of understanding. On one hand, we have religious teachings on human morality that can be argued to be taught in a variety of ways and on the other we have scientific evidence that suggests that human morality is caused by the existence (or lack thereof) of certain genes in the human brain. Consequently, Gould's interpretation of NOMA is suggested to not be correct because it can be said that human morality is due to the evolutionary process and the lack of certain genes, such as the MAOA gene as Professor Baron-Cohen stated, results in a change in human morality due to the lack of certain emotions, such as the previously mentioned empathy. Therefore, science and

religion do overlap as teaching domains as the religious teaching of morality, as Gould explains, can arguably be explained by scientific evidence.

Gould is wrong to suggest that science has nothing to discuss the questions of ethics. He instead suggests that science is a significantly better method for determining moral principles over religion. The MAOA gene and other similar genes do offer a better explanation as to why humans possess or lack certain emotions and therefore act in certain ways. With something as subjective as moral beliefs, it would appear that something that all people possess in some capacity, the MAOA gene, is a more logically consistent reason as to why an individual has certain morals over religion. It is also true that more people possess the MAOA gene than those who do not, so the consensus on morals is largely consistent across the world. People who have never been exposed to religion and its teachings, in theory, should still possess morality that would be most consistent with the general human population of the world. This can be seen with real-world examples of feral children, who despite having little to no human contact from a very young age, still possess a basic understanding of morality. Robert Mayanja (1982), who lost his parents in the Ugandan Civil War at the age of three, was found by the soldiers of the National Resistance Army three years later. It was presumed that he survived in the wild with vervet monkeys (Masinde, 2013). Despite being away from human contact during part of the significant years of adolescent development, Mayanja still possessed some basic level of morality, he did not express many human characteristics though. He did not harm the monkeys who looked after him, seeing them as his family, which suggests that he did at least possess the morals for it is wrong to hurt others. Upon re-entering human society, Mayanja did not attempt to hurt any other humans either, further suggesting that he did possess some basic level of morality. This also shows that

the wiring of the human brain is arguably the origin of morality over religion. People appear to be able to express their moral beliefs regardless of if they have been exposed to religion and its teachings on morality or not, even if in the case of feral children this understanding of morals is basic at best. Moreover, animals lack any form of religious belief, at least to human knowledge.

Humanist philosopher Paul Kurtz, who has been called "the father of secular humanism" (Kurtz, 2007) argues "that there ought to be a separation between ethics and religion. I do not deny that religious believers have often espoused and supported moral behavior, including charitable and beneficent acts, love sympathy and peace... one needs to open ethical values and principles to examination in the light of rational and empirical considerations" (Kurtz, 2003 P.353). As stated earlier, it is possible that the combination of religious teachings that are handed down through generations by a variety of means and certain genes result in an individual's morality, or at least the ability to exhibit more or less of a certain emotion that is portrayed in their behavior. Moreover, one could also argue that social factors, such as one's upbringing in adolescence, can also be a reason, among others, why an individual lacks certain emotions. As a real-world example, serial killer John Wayne Gacy had what can only be described as a horrific childhood that involved significant verbal and physical abuse by his parents, arguably resulting in the depraved behavior exhibited in adulthood. While not scientific in terms of evolution, such evidence is concerned with social science, thus further evidencing that NOMA cannot be correct as once again we can suggest that science and religion overlap with regards to their magisteria, as by observing an individual's childhood it is possible to suggest why the individual exhibits certain moralities.

I agree with Dawkins' arguments against NOMA. I have shown that religious magisterium overlaps with scientific magisterium and vice versa, then Gould's definition does not work. As Dawkins blatantly points out, "it is completely unrealistic to claim, as Gould and many others do, that religion keeps itself away from science's turf, restricting itself to morals and values", thus leading me to the conclusion that NOMA is a flawed theory. The fact of the matter is that his definition of the religious magisterium is not entirely accurate as I stated earlier. The claim that religious magisterium is solely concerned with human morality is only somewhat true. Granted, while claims of the existence of the Ten Commandments explicitly present human morality as teaching, being in line with Gould's magisterium on morality, it also makes claims about existence. I agree that science's magisteria explains and studies the empirical world, that is certain, but religious magisterium also makes empirical claims using supernatural justifications while also teaching morality. It seems that Gould, as stated earlier as well, is ignoring these claims of existence from the religious perspective to fit his idea of NOMA. While I understand such an action from Gould, it is hard to deny that religion has made claims about the empirical world, particularly its origins. However, upon further research, I discovered that Stephen J. Gould was a "secular Jew who did not believe in God, but he had a soft spot for religion", (Anonymous, 2015 via <https://www.scientificamerican.com/article/science-religion-and-the-meaning-of-life/>), giving me a clear idea as to why Gould ignored any ideas of empirical claims coming from religions, as he did not believe in a God, making all claims of existence from religion a non-factor in his arguments. "To Gould, religion essentially is moral discourse... religion amounts to no more and no less than "looking into the heart of our distinct selves" (Allen Orr, 2014, via

<https://bostonreview.net/articles/h-allen-orr-gould-god/>). However, despite these personal beliefs from Gould, I still have to agree with Dawkins because one cannot deny that religion makes claims about the existence of the empirical world regardless of beliefs on the existence of a God. Additionally, Professor Baron-Cohen's work regarding human behavior and the theory that any exhibited behavior(s) by an individual makes for a compelling argument for me. Again, I have to say that NOMA is a flawed view to attempt to have religion and science exist in their separate domains. The attempt to prove that religion makes claims on the empirical world is a far more easy position to attack NOMA with over the effort to demonstrate that science provides assertions on human morality through the study of behavior; although necessary nevertheless because of how it diminishes the position of NOMA as well and further suggests why it is a flawed attempt to allow science and religion to exist in their domains beyond arguing that religion makes claims about the empirical world.

I would also argue that social factors, such as the example of John Wayne Gacy mentioned in the previous paragraph, seems to be a more logical and consistent reasoning behind an individual's actions over the ignorance of religious teachings on human morality. I also do not mention how some, particularly in the eighteenth century, would have viewed bad, or even evil behavior to be demonic possession or something along those lines. I did not mention this because Gould did not believe in a God. This implies he also did not believe in a devil or demons either, thereby claiming that people who exhibit such evil behaviors are the work of a demon or devil redundant. With that idea removed from the equation, it leaves us with two possible outcomes for the idea of evil human morality from NOMA's idea of the religious magisterium. Either some people lack human morality and therefore are evil because they ignore religious teachings on

human morality, or NOMA is false. Since, people who lack the MAOA gene as Professor Baron-Cohen stated, coupled with certain social factors resulting in individuals lacking certain morals due to not possessing specific emotions, such as empathy, I can only agree with the idea that science overlaps with the religious magisterium, therefore further solidifying the claim that NOMA is flawed to me.

### **Section 1.3- Critiquing NOMA**

Despite originating about a century before the conceptualization of NOMA by Gould, Andrew Dickerson White and John William Draper's conflict thesis further undermines NOMA. The term 'scientist' had not even been coined until 1834 (The Oxford English Dictionary, 2002). Due to the rise of the conflict, whose origins are not entirely clear, scientist John William Draper and writer Andrew Dickson White commented on the disagreement. Draper and White remark on the increasingly hostile relationship between religion and science because of the public hostility it was creating as well as the fact that religion was aggressively challenging new scientific ideas, examples of which will be explained further on. John Draper was an American scientist with a particular interest in physics and chemistry, making his decision to comment on this relationship clear- he wished to defend new scientific ideas and arguably saw these religious challenges as problematic to his and other scientists' work. Andrew White, who co-founded Cornell University, was an American historian and educator. While speculative, it is possible that White commented on the relationship between the two schools because he saw the scientific study as educational and beneficial in the progression of America, and the aggressive challenges

stemming from religion were seen as discouragement in the study of the field. White, in a publication of '*The Warfare of Science*', writes: "In all modern history, interference with science in the supposed interest of religion, no matter how conscientious such interference may have been, has resulted in the direst evils both to religion and to science—and invariably. And, on the other hand, all untrammelled scientific investigation, no matter how dangerous to religion some of its stages may have seemed, for the time, to be, has invariably resulted in the highest good of religion and of science" (White, 1876, P.8). While deprived of much philosophical discourse, White's argument attempts to show that science is harmed by religious interference as the explanation of the empirical universe is disrupted when assuming God(s) are the cause because there is no conclusive answer. If humanity focuses too much on an unverifiable claim, i.e. the existence of divine power (creator), then progress in discovering the origins of the universe is slowed dramatically.

Furthermore, Draper argues "the antagonism we thus witness between religion and science is the continuation that commenced when Christianity began to attain political power... the history of science is not a mere record of isolated discoveries, it is a narrative of the conflict of two contending powers, the expansive force of the human intellect on one side, and the compression arising from traditionary faith and human interests on the other" (Draper, 1874, Preface). With both religion and science being considered as "two contending powers" by Draper, this idea of "the compression" proposes the idea that the two do overlap, as one might argue that religion is having a clear impact on science and vice versa. This quote might be taken to show how one cannot allow for human interests, which in this case is regarding religious faith, to cloud one's judgment on objective statements. To give context to Draper's words, in this

publication he is chiding Roman Catholicism for interfering with science. These claims might interfere with science as, similar to scientists who believed that God is revealing truths to them, they warrant discussion and possibly even exploration, which seems pointless because they too are theoretically unverifiable.

Many, including Draper and White, see the trial of Galileo as being a perfect example of the conflict thesis. In this trial, Galileo was persecuted for his belief and support of heliocentrism and the astronomical model (the model that shows Earth revolving around the sun, which itself is the center of the universe). This belief caused some conflict between Galileo and the Catholic Church at the time, as the majority of educated people subscribed to Aristotelian geocentric views, which held the idea that the Earth was the universe's center, rather than the sun, due to God's design. We now know that Galileo was scientifically correct, but due to the overwhelming religious belief at the time, many did not agree with his theory. His scientific evidence was undermined by religious beliefs. The overlap here is the fact that both science and religion are making empirical claims about the universe. This shows once again that the religious magisterium is overlapping with the scientific magisterium, at least historically. One could say that this belief from the Catholic Church and its supporters was not necessarily verifiable due to the lack of understanding of the universe and the non-existence of suitable technology to support either claim, giving some logic to the claims made by the Catholic Church. Similar to the Catholic's view on souls mentioned in section 1.1, Gould might also argue that because of this shortage in understanding, it might not pose a problem to the overlap in the scientific and religious magisterium. Of course, upon both understanding and technology reaching a standard that proved that the sun was the center of the universe, not the Earth, the Catholic Church

rescinded its claims, albeit taking over three centuries (Jain, 2020 via <https://edtimes.in/back-in-time-when-the-catholic-church-refused-to-accept-the-sun-as-the-centre-of-the-universe/>). Therefore, it is questionable that Gould would have used such a defense to refute the argument that the trial of Galileo is another example of science and religious magisterium overlapping.

Further, Pope John Paul II, when re-examining the records of the trial and the conviction of Galileo in 1633, states that "the Bible does not concern itself with the details of the physical world, the understanding of which is the competence of human experience and reasoning" (Paul II, 1992). This quote seems to be agreeing with what Gould would argue to defend NOMA from the trial of Galileo. It is fully possible that the bible was never meant to be taken literally, which seems to be the case with this trial. It might be that its readers mistook its words and thus thought that the Earth was the center of the universe. If this is the case, then Gould very well might say that religious magisterium is still solely concerned with the origins of morality, as any such claim being made about the empirical world might have been a misinterpretation of religious texts, which we can argue were meant to be symbolic in some way.. If there were no overlap, there would be no possibility of even the apparent conflict that Pope John Paul II speaks of. In his own words, he explains that "it is therefore not to be excluded that one day we shall find ourselves in a similar situation" to that of the trial of Galileo (Paul II, 1992). If Gould were to use such a defense, it would appear that he is too quick to conclude that the Catholic Church would embrace his NOMA principle. Just because the Pope argues that the bible is not meant to be taken literally, it remains fully possible that future people will still see it as a literal text. The likelihood of another Galileo trial in the future cannot be excluded. Therefore, the overlap of scientific and

religious magisterium remains here. This is because even if the bible and arguably other religious texts were not meant to be taken literally, people still took them literally and this caused a change in their beliefs and actions. The overlap still occurs because of these people's understanding of the text, regardless of the fact that the religious organizations that published these texts did not intend for them to be taken this way.

I believe that the Draper and White's conflict thesis presents a new idea against NOMA, that being the fact that rather than just attempting to suggest that science and religion overlap with regards to their magisteria, as shown above, it also presents the idea that because of this overlapping, both, particularly science, suffer as a result. Of course, the idea of older scientific thinkers, such as Sir Isaac Newton, believing that their theories on the empirical world were revealed by a God to them is a fascinating proposition to me. I can only view this to be because of the deeply ingrained religious beliefs in cultures all around the world that result in great scientific thinkers truly having faith that a God was showing them truths about the empirical world. I would argue that some scientific theories, namely ones on the origins of life, were encumbered by religion's overlapping of scientific magisteria. To give an example, the theory of evolution might well have been theorized before Charles Darwin eventually proposed it in the nineteenth century. This is because older scientists from Darwin's time might have conceptualized the theory of evolution prior but never studied such ideas because they honestly believed that it was God's design to have created animals in the way in which they are/were. This is of course speculative, but fully possible. Further, even Darwin himself questioned this proposition due to his own beliefs, which to me further solidifies the idea that religion is overlapping with science's magisterium resulting in a hindrance to progress. I was a bit conflicted

over the trial of Galileo in particular, and the hypothetical defense from Gould that I stated. I saw that it could be seen in two different lights. One could argue that religious and scientific magisterium do not overlap because religious organizations did not intend for their texts to be taken literally. This could still mean that religious magisterium is only concerned with the origins of morality. One might also argue that the two magisteria overlap because, even if religious organizations did not intend for their texts to be taken literally, they were and these organizations did not actively seek to correct this. The fact that people's judgements and subsequent actions, as evidenced in the trial of Galileo, were not ratified until much after the fact says to me that this is the latter. The Pope might have been saying that the bible was not meant to be taken literally to condemn those involved while also absolving the Catholic Church's involvement in the trial and others like it. Again, to me, this says that science and religious magisterium remain overlapping, even if the Pope's argument is true.

## **Chapter 2- The Origins of Life**

### **Section 2.1- Introduction**

In chapter one, I showed that Stephen J. Gould's NOMA principle did not hold up to deep analysis. This was because Gould's criteria for religion's magisterium (and to an extent science's magisterium) were not entirely accurate. Upon suggesting that religion and science overlap, I will now introduce a case study to further put into question the compatibility between the two. I have chosen theistic evolution, which is a general term that essentially attempts to reconcile religion and science. This comes in the form of the reconciliatory view that regards religious teachings on divine power as compatible with the modern scientific understanding of biological evolution. In this view, divine power is responsible for the existence of every species (past, present and future), albeit not in a creationist view. The creationist view is the idea that God created the universe in seven days as told in the Biblical Book of Genesis. Of course, theistic evolution and creationism have conflicting views. Evolution already contradicts creationism so it would not be a stretch to say that theistic evolution also contradicts creationism. Theistic evolution does not deliberate on these origins. Further, I will argue that theistic evolution implies that scientific and religious magisteria overlap. The term theistic evolution is attempting to argue that divine power (a religious claim) is responsible for biological evolution (a scientific theory). Therefore, religion is attempting to argue about the empirical world, which according to Gould is only concerned with the scientific magisterium. This chapter will act as a case study for NOMA and will attempt to further show how NOMA is an invalid claim.

Humanity has always speculated about the origins of life in the universe. One theory that was agreed upon for centuries by a majority of humans were created through divine power. However, since the conceptualisation of the theory of evolution by Charles Darwin, the idea of creation via divine power has been challenged. Natural selection and other natural processes have been explained and supported by science, which seems sufficient when compared to the idea of divine creation. On one hand, we have a scientific theory and on the other, we have a religious one. It is important to note that Charles Darwin did not seek to have his theory of evolution challenge religious claims and was rather frightened by the idea that he might be outcast by the religious community due to his discoveries. One might think of White and Draper's Conflict Thesis with regards to the conflicting (overlapping) sides of the origins of life. However, some scientists and professors (including those that will be mentioned in this chapter) have attempted to argue that divine creation and evolution are compatible. Some notable examples are the nineteenth-century geologist John Dawson, professor of science and religion Dennis Lamoureux, American Theologian John Haught and American cell biologist Kenneth Miller. Each of these people have their unique arguments in support of theistic evolution that will be explained further on in both 2.1 and 2.2. Their arguments attempt to reconcile religion, or divine existence, with the modern scientific theory of biological evolution. This is more commonly known as theistic evolution. While Dawson did not have the same definition of theistic evolution as that which will be used in this chapter, Lamoureux and Miller's arguments seek to show that evolution is evidence of divine design.

Theistic evolution regards religious teachings about a God as compatible with the modern scientific understanding of biological evolution. It argues for the existence of divine

power while agreeing with scientific theories/evidence. Of course, evolution is seen as the universal counter-argument to creationism. In theistic evolution, it is clear that those in support of theistic evolution agree that the bible is meant to be symbolic. One such idea made by supporters of theistic evolution is that the seven days of creation are simplified units of time that are meant to represent millions of years. I mention this common counter by theistic evolutionists because it is important to show how supporters of theistic evolution defend themselves against claims made by creationists. Creationists argue that God did create the universe in seven days and creationists deny evolution as a result. However, I will not elaborate further on this argument because I do not see it as a viable attack on theistic evolution.

Taking Gould's NOMA into account, one can see that the two do overlap with regards to theistic evolution, or even the origins of life. All religions, although through their own respective God(s), weigh into the argument for the origins of life. This is done either through outright agreeing with divine creation or altering these religions' views to make them compatible with the theory of evolution. In both cases, we can see how religious magisterium overlaps with the scientific magisterium, as it is making claims about the origins of the empirical world. Therefore, even theistic evolution, which seeks to justify both the existence of divine power and evolution, throws doubt over NOMA as a valid argument. Theistic evolution, much like NOMA, creates an argument about the relationship between science and religion. While it makes claims about the empirical world, it also makes claims that the empirical world comes from divine creation. It is worth mentioning that theistic evolution is more in-line with Averroes' take on the non-overlapping nature of science and religion. As a reminder, he argues that science is concerned with the empirical world, but religion is concerned with the supernatural. This version

of NOMA (although not called NOMA, I will refer to it as Averroes' NOMA) would be better suited to theistic evolution than Gould's NOMA. This is because, in theistic evolution, the empirical process of evolution is dependent on supernatural guidance. Therefore, while Gould's NOMA is shown to be invalid by theistic evolution, Averroes' NOMA is seen to be valid. Theistic evolution's reliance on the supernatural makes Averroes' NOMA more viable than Gould's NOMA, at least in this instance.

This chapter will argue that theistic evolution is an incorrect theory about the origins of life as it must be argued that evolution and religion are incompatible and cannot be conjoined to satisfy both evolutionists and creationists. The first section (2.1) will present theistic evolution and explain not only its origins but also explain in as much detail as possible what it means. The second section (2.2) will present arguments in support of theistic evolution and then discuss these arguments in detail. The third and final section of this chapter (2.3) will argue against theistic evolution and similar to 2.2, discuss counter arguments that disagree with this.

The term theistic evolution was first used consistently in 1877. One of the first people to do so was Canadian geologist John W. Dawson. In his book, *The Origin of the World, According to Revelation and Science* (1877), Dawson discusses the fifth day in the Book of Genesis. concerned with the creation of animals, but not with human creation. He claims:

"The long-time employed in the introduction of the lower animals, the use of the terms "make, and "form, instead of "create", and the expression "let the waters bring forth", may well be understood as countenancing some form of mediate creation, or of "creation by law", or "theistic evolution", as it has been termed; but they give no countenance to the idea either of the spontaneous evolution of living beings under the influence of merely

physical causes and without creative intervention, or of the transmutation [evolution] of one kind of animal into another... if we ask whether anything is known to science which can give even a decided probability to the notion that living beings are parts of an undirected evolution... without intention, the answer must be emphatically no " (Dawson, 1890, p.225-226).

Dawson had several problems with the idea that species were capable of evolving into another species over the course of several hundred, if not thousands, of years due to natural selection and evolution. He was an opponent of human evolution and the idea of common ancestry from different species, a theory that was created a mere twenty or so years prior in 1839. He valiantly defended the bible and was very much against the theory of biological evolution. This means that Dawson's idea of theistic evolution is not the same as what one would consider it today. Rather than arguing that divine power is guiding evolution, Dawson's arguments are pro-creationist. Events such as those in the Book of Genesis were greatly exaggerated and instead of taking only seven days, each day is significantly longer according to Dawson (Cornell,1983). Dawson was not a believer in common ancestry and Christian fundamentalist (although Christian fundamentalism was later, historically speaking) views influenced this form of creationism.

The modern idea of evolution might also be questioned when one considers the idea of a 'limiter' set by a grand designer. This limit does not necessarily regard the physical changes of a being that is undergoing evolution, rather it is referring to the psychological changes, or instincts, of an animal. Take the instinctive behavior of dogs shaking themselves when their fur is wet. This leads me to infer that it might be true that there is some sort of 'designer' that is allowing for evolution to occur. It would seem logical to think that evolutionary changes in all living beings

are solely beneficial to them concerning their survivability. In support of this claim, Dawson's idea of a 'limiter' on evolution is more based upon the instinctive nature of all animals, rather than physical traits. He explains such traits as "the comb-building instinct of the bee, the nest-weaving instinct of the bird, are fixed and invariable things" (Dawson, 1890, P.212, as quoted in *Modern Ideas of Evolution as Related to Revelation and Science*). This remains logically consistent with ideas such as natural selection. These animals underwent physical and mental (as in Dawson's given examples) evolution to adapt and survive in a given environment. Yet, this suggests that a God set parameters that remain persistent in the psychological nature of animals, such as the desire to reproduce. These instincts, despite not necessarily being physical changes, are still considered part of the evolutionary process.

The idea of theistic evolution was not truly articulated in its modern form until Dennis Lamoureux, a professor of history and science at St. Joseph's College at the University of Alberta, proposed it in 2016. Prior to this, theistic evolution was more commonly known as evolutionary creation. From my understanding, it means the same thing. He believes that the bible and the empirical world complement one another and that science reveals how God created the world with its intricate design. This is similar to how some scientists of the 19th century and prior believed that God was revealing truths about the universe via scientific discoveries. He explains that "if the limits of both conservative Christianity and evolutionary biology are respected, then their relationship can be complementary. This view of origins is known as Evolutionary Creation. Concisely stated, it claims that the Father, Son and Holy Spirit created the universe and life through an ordained, sustained, and design-reflecting evolutionary process" (Lamoureux, 2008). Lamoureux is commenting on the relationship between science and religion

and particularly the conflict about the origins of life. Similar to that of Dawson, the idea that such complexity is explicitly shown throughout our universe points to some sort of intelligent designer. Lamoureux also attempts to make a connection between highly religious claims, such as the existence of "the Father, Son and Holy Spirit" and scientific claims such as the origins of life. Lamoureux attempts to reconcile the theory of evolution with the existence of the trinity, or divine power for simplicity.

An interesting point that I would like to focus on from the previous Lamoureux quote is his idea of "limits of both conservative Christianity and evolutionary biology". Upon an initial inspection, it does appear that this might be a new version of Gould's NOMA. However, I think that Lamoureux's understanding of limits is not a new version of NOMA in the slightest. He explains that "evolutionary creation emphasizes that the Bible is not a book of science. Instead, it is a God-inspired revelation that offers inerrant, life-changing, Messages of Faith. Holy Scripture does indeed refer to the natural world, but it features an ancient understanding of nature. In other words, the Bible has an ancient science" (Lamoureux, 2008). Gould's understanding of religious magisteria was that it served to teach humanity about morality. Lamoureux's understanding of religion, or at least the Bible, is that it comments on ancient science. I can see why he makes this idea of limits clear. Lamoureux is attempting to deflect arguments that take the Bible as literal. In doing so, he rather suggests that the Bible is not meant to be taken this way and rather is just an ancient understanding of scientific processes which are encapsulated in supernatural stories. This supports John Dawson's understanding of stories such as that within the Book of Genesis, with the seven days of creation rather acting as a simplified passage of time in which evolution occurs.

Lamoureux even states explicitly that the Bible is concerned with the empirical world, showing again that it is not a new form of NOMA.

Lamoureux's arguments are similar in important ways to natural theology. Natural theology is an ideology that attempts to show the existence of such a higher/divine power from reason and/or nature. However, it is important to note that theistic evolution emphasizes theology of nature over natural theology, at least to me. This is because the theology of nature assumes divine power exists and then seeks to understand the nature of the universe from this assumption. This emphasis stems from the fact that theistic evolution hinges on the claim that a divine power exists. This is rather than attempting to show the existence of this divine power as natural theology attempts to do. One could argue that theistic evolution emphasizes either theology of nature or natural theology. This is because, on one hand, it is assumed that divine power exists to understand evolution from a grand designer. On the other hand, theistic evolution could be argued to emphasize natural theology as one might take the design of the empirical world and attempt to use such design to argue for the existence of divine power.

Although theistic evolution does not emphasize natural theology over the theology of nature, the former's arguments remain relevant in support of theistic evolution. This is primarily because theistic evolution attempts to demonstrate the existence of divine power, including such attributes as omnipotence, omniscience and omnibenevolence from both reason and nature. The clear contradiction between any form of evolution, theistic or otherwise, and the literal reading of the Book of Genesis means that creationists refute it. This shows that natural theology and arguments made from it are not appealing to stories in the Bible or other religious texts. This allows for theistic evolution to work with natural theology.

Natural theologian William Paley's watchmaker analogy, as presented in his 1802 publication titled *Natural Theology or Evidences of the Existence and Attributes of the Deity* exemplifies natural theology. His analogy is used to infer the existence of a 'grand designer'. This could also be considered as creation through divine power. In this teleological argument Paley suggests that due to the complexity of humans and the entire universe, there must be some sort of designer who meticulously and miraculously created the universe and the laws within it that humans use science to theorize and interpret. One can argue that theistic evolution is based both on empirical science and metaphysics. If so, we must also ask how much the metaphysical origins and subsequent limitations of evolution matter in the process of evolution concerning the empirical sciences. Lamoureux argues "the belief that beauty, complexity and functionality in nature point towards an intelligent designer" (Lamoureux, 2013). However, he also notes that such a claim is metaphysical, or religious, rather than scientific from a natural theologian's view. This is because the empirical world is meant to suggest the existence of divine power in a natural theologian's eyes. This type of argument is necessary as the inference of an intelligent designer using nature is the key principle in natural theology.

However, this type of argument does not support the idea of NOMA as one might initially think. This thought might stem from the idea that Lamoureux is using this claim in a religious sense over a scientific one. I believe this is because he is viewing the empirical world through the lens of a natural theologian. Of course, a natural theologian sees the empirical world as a means to suggest divine existence. This is not an example of NOMA at work because Lamoureux is using the empirical world to suggest divine existence. In Gould's presentation of NOMA, there is no mention of divine existence and rather he uses religion solely in a non-supernatural sense.

I believe that by "complexity and functionality", Lamoureaux is referring to evolution and natural selection as well as other natural factors that allow for the existence of life such as the Earth being in the habitable zone in our solar system as well as Earth possessing enough water to facilitate life. After all, such complexities and functionalities are what allowed for animal species to remain in existence.

Theistic evolution is an attempt to reconcile the scientific theory of evolution and the existence of divine power. While not conflicting, this does further suggest that Stephen J. Gould's NOMA principle is invalid. Religion, or rather theistic evolutionists, are making claims about the empirical world. These claims are concerned with the origins of life, which theistic evolutionists argue is guided by divine power. Gould stated that religious magisterium was concerned with the origins of human morality, which is not the case here. Instead, it is making claims about the origins of the empirical world through the justification that all evolution is caused and/or controlled by divine power. Science's magisterium remains only concerned with the empirical world in theistic evolution. Science is less concerned with the origins of life with theistic evolution, as it has already established that evolution and common ancestry are the cause of modern life, which is an empirical claim. Theistic evolution is a mixture of both science and religion and therefore conflicts with Gould's presentation of NOMA and the criteria he establishes for the two magisteria.

## Section 2.2- In Defense of Theistic Evolution

The Book of Genesis and its story of creation across the seven days might be ancient science being unable to explain the changes people recorded in animals across centuries. In any case, one must at the very least doubt the truth of the Book of Genesis (if it is taken literally). This is because to say that all animals were created in the evolutionary state they are currently in, including humans, is to deny the fact of evolution and natural selection. I think that it might instead have been symbolic. The seven days might have served to represent time passing while the evolutionary process occurred in every species. Their society's limited understanding of such natural processes would logically lead to a supernatural explanation. This is similar to irregular weather formations, such as hurricanes. They might have simply regarded such weather formations as the wrath of God due to the lack of understanding in the geological field. Particularly given the thinking at the time, when people would have been more susceptible to such ideas over a scientific explanation. I mention this lack of understanding in science and the 'ancient science' contained within the bible because it might have been early human civilizations attempting to show the unexplainable creation of new species through theism. This might explain why the Bible should be viewed as symbolic rather than literal. Its contents serve to symbolically interpret ancient science. The supernatural explanations for certain events are a means to say that divine power is responsible for these events. Instead of divine power literally performing these events, it might be the case that these events were guided by divine power.

Of course, this thought spreads into the wider argument on the relationship between religion and science. On one hand, there is the problem that science and religion are competing

for the truthfulness of certain claims. One such example of these claims is the origins of life. On the other hand, there is an attempt to reconcile this relationship to be more complimentary instead of conflicting. This is the case with theistic evolution. Evangelical theologian John Polkinghorne writes:

This new natural theology differs from the old-style natural theology of Anselm and Aquinas by refraining from talking about 'proofs' of God's existence and by being content with the more modest role of offering theistic belief as an insightful account of what is going on. It differs from the old-style natural theology of William Paley and others by basing its arguments not upon particular occurrences (the coming-to-be of the eye or of life itself), but on the character of the physical fabric of the world, which is the necessary ground for the possibility of any occurrence (it appeals to cosmic rationality and the anthropic form of the laws of nature) ... [Consequently] the new-style natural theology in no way seeks to be a rival to scientific explanation but rather it aims to complement that explanation by setting it within a wider and more profound context of understanding. Science rejoices in the rational accessibility of the physical world and uses the laws of nature to explain particular occurrences in cosmic and terrestrial history, but it is unable of itself to offer any reason why these laws take the particular (anthropically fruitful) form that they do, or why we can discover them through mathematical insight.

(Polkinghorne, 2000)

The "old-style natural theology" Polkinghorne is referring to is Anselmo d'Aosta's ontological argument and St. Thomas Aquinas' five ways. It is worth mentioning that they both attempt to support the existence of divine power. In the eleventh century C.E., Anselm argued that "that

than which nothing greater can be conceived" (Novak 2006), which means that divine power must exist in the mind. If such a being exists in the mind, then it must exist in reality given the criteria for such a being (omnipotent, omniscient and transcendent). In the thirteenth century, Aquinas presented his five ways argument. In this, he argues that there must be an entity responsible for all the changes we see in the empirical world. The most significant of these ways is the first mover (or cause). This is because of the idea of cause and effect, which if tracked back far enough means that there must be a first cause. Aquinas argues that this must be a being that possesses the criteria of God. Of course, due to relatively new scientific evidence that suggests such events as the Big Bang can be considered the first cause, these arguments are considered outdated. There is no doubt in my mind that Aquinas would ask what caused the Big Bang in response to my argument. He might view it as not being the first cause and perhaps instead of the second cause. While I cannot give any solid answer, I would argue that the Big Bang is equal to his idea that divine power is the first cause (or mover). The creation of the universe either from divine power or the Big Bang was essentially the first point in the universe's existence. One could argue either way, as there is no certainty to either explanation. However, rationally I would have to argue that the Big Bang is the first cause. I would have to ask Aquinas why use the Big Bang to create our universe rather than using their omnipotence to simply will it into existence? I am aware that there are possible answers that would involve this divine power using the Big Bang to guide the universe, similar to arguments in support of theistic evolution. I merely am just proposing the idea that the Big Bang might be the first cause instead of divine power.

Continuing, Polkinghorne is arguing that if science is unable to explain why certain universal laws or natural processes exist and/or have occurred, then it is reasonable to suggest

that divine power is the reasoning behind them. The idea of divine power being the sole cause for natural processes such as evolution and natural selection is as valid as scientific explanations for the origins of life on Earth and the universe. Science uses the empirical world and universal laws to explain cosmic occurrences. Events such as our universe's sun eventually going supernova is only known because of similar occurrences that have been observed with other stars also going through this process. However, beyond speculation humanity does not fully know why these events happen. Why does a star of similar (or bigger) size to our own go supernova rather than just dying out, similar to that of a fire? I would argue that this is not Polkinghorne arguing that theistic evolution is true, but rather he acknowledges the fact that it exists in the realm of possibility because humanity is unable to explain most cosmic laws and why they happen the way they do.

Polkinghorne's position, when linked back to NOMA, also further suggests that religious and scientific magisteria overlap. Primarily, the overlap in magisteria stems from his assertion that science itself is unable to explain why the things in the world, and indeed the universe, are the way they are. The claim that divine power is responsible for the empirical universe is a religious justification for the empirical world, therefore showing that religious magisterium might be concerned with more than just morality. Moreover, it is clear how Polkinghorne regards theistic evolution, he sees scientific theories on most of the cosmos as unverifiable but equally unverifiable as the existence of divine power. Or rather, science can explain the how but not the why. This thought seems to be presented in the line: "but it (science) is unable of itself to offer any reason why these laws take the particular (anthropically fruitful) form that they do, or why we can discover them through mathematical insight." If science is unable to rationally offer any

explanation as to why these laws take place, then it stands to reason that a possible explanation is a divine power (or rather the guidance divine power provides over these universal laws). Thus, Polkinghorne offers the view that science must look outside its empirical explanations to find an answer. With regards to how these laws are "anthropically fruitful" and therefore comprehensible to the human mind, this is also explainable through intelligent design. The fact that the universe can be understood merely through the use of mathematics is perplexing, to say the least. It would lead many to believe in a grand designer of the universe, as to how could one rationally explain how humanity can comprehend the universe through mathematics? Humans can translate universal laws, such as a planet's gravitational force, through mathematics. Of course, this would suggest some sort of grand designer. This is because the universe is set up in such a way that allows for humans to use mathematics to translate these universal laws and humanity could not rationally have created mathematics in such a way that would allow for this translation. Therefore, these universal laws and the way that they are set up lead me to infer some sort of grand designer. The alternative would be merely coincidental.

To give a bit of context about John Polkinghorne, he was a mathematical physics professor at the University of Cambridge while simultaneously being a prominent voice advocating for the relationship between science and religion. As previously mentioned, he was also an evangelical theologian. In Polkinghorne's view, science and religion aim to benefit one another. He sees religion as a means to to broaden the understanding of the empirical world. Polkinghorne explains that the "remarkable insights that science affords us into the intelligible workings of the world cry out for an explanation more profound than that which it itself can provide. Religion, if it is to take seriously its claim that the world is the creation of God, must be

humble enough to learn from science what that world is actually like. The dialogue between them can only be mutually enriching." (Polkinghorne, 2006, p.117). Polkinghorne understood that someone with a scientific mind such as his own might be faced with theological problems. He postulated that there is a close relationship between the ongoing experiments and unexplained theories of empirical sciences and human understanding of natural theology and thus theorized that a reasonable explanation might be the combination of religious and scientific ideas on the creation of the universe as we know it.

I understand Polkinghorne's stance on theistic evolution. If science is unable to explain certain universal laws and claims, for instance, the origins of the universe or even ongoing theories about what will occur when/if the universe stops expanding, then it would not be irrational to say that divine power is responsible for these unexplainable universal laws and claims. This is particularly true when considering that science is equally unable to definitively answer these questions. I would also have to say that such an argument extends towards inferring that this divine power is also responsible for things such as evolution. After all, if science cannot explain the nature of certain universal laws, then scientific theories about such claims hold as much weight as religious claims on divine power in my mind. One argument that has me somewhat agreeing with Polkinghorne's proposition is the idea of why early animals, who share a common ancestor in the form of a worm-like bilaterian called *Ikaria Wariootia*, became so diverse over the course of millions of years. According to natural selection it was because, over the span of several million years, animals kept adapting to new prey, environments and other factors like the ability to lay eggs out of water. This would mean that it was merely scientific means that allowed for the variety of animals that have existed and become extinct and those that

exist today. Or perhaps it was due to divine power that allowed for such diversity to exist in the animal kingdom. It would not be irrational to say that there was some sort of divine guidance in expanding the animal kingdom into what it is today, especially given the evidence that all of these species possess one common ancestor. Either divine power's guidance or a scientific explanation possesses the same amount of weight behind them because of the lack of knowledge of a true ancestral tree (for lack of a better term). However, the scientific explanation of the origins of life seems more rational and logical than that of theistic evolution. This is particularly so when coupled with the discovery and research of the Ikaria Wariootia.

The universe's creation in its complex state met a very certain set of circumstances that allowed for life to exist. One such example would be the Earth being in the 'habitable zone' from the sun. One might argue that such an occurrence is a sign of divine existence as it might be more logical to say that divine power exists rather than to say that this circumstance being met was of mere coincidence. I mention the idea that our universe was created by divine power to argue that theistic evolution is true. While there are many arguments in support of the existence of divine power, I mention more scientific ones that might lead to the conclusion of divine existence. If we apply Ockham's Razor, which argues that the simplest answer is often the correct one, it might be more rational to argue that a designer (divine power) is responsible for these circumstances over being merely coincidental. The chain of events that would need to occur for even a planet to exist as humanity knows it is a fraction of a fraction. As Polkinghorne writes while quoting St Paul: "he held that no man can excuse himself on the grounds that he did not know that there is a God, for, "Ever since the creation of the world his invisible nature, namely his power and deity, has been clearly perceived in the things that have been made. .... God is the elusive hidden one, not

over-powering us by His unveiled presence, but it would surely be disconcerting if there were no signs of Him to be found in His creation." (Polkinghorne, 2006). St Paul's words do encourage the pursuit of natural theology. An artist leaves a signature on a work of art, so it is feasible to say that God would have left some evidence that He is the artist of our universe. The evidence to suggest that there was some sort of designer to our universe is not entirely clear, at least not as clear as an artist's signature on a painting. Rather, we must seek it out by arguing that occurrences such as the Earth being in the 'habitable zone' of our universe are the result of divine power. William Paley's watchmaker analogy is another example in which natural theology is on full display. While I will not dive too deep into this argument, it argues that the intricate design of the universe, down to the molecular level, does imply some sort of 'grand designer'. Similar to a watch's design, the universe has too many functioning parts to allow humanity to merely brush it off as coincidental. The design arguments that I presented in this paragraph are meant to serve the purpose of inferring the existence of a grand designer and therefore add weight to the validity of theistic evolution.

As mentioned earlier, the Ikaria Wariootia is considered to be the ancestor of all animal species, which might lead one to argue that divine power dictated evolution to allow for such a diversity in life to exist. If all animals possess one common ancestor, then it is possible that a God would ensure that natural selection (amongst other natural processes) would have evolved into different species and created the beauty that exists in our world today. One might argue that if it was not for divine power, animals would have not evolved into the wide variety that has, is or will exist. Catholic biologist Dr Ken Miller shares the view that theistic evolution is possible. This theoretically makes him more of an expert on evolution than most, at least at the cellular

level. He has done many debates and interviews regarding theistic evolution and his defense of it. In these interviews and debates, Miller, when responding to "Why do we live in a universe that is simply overflowing with evolutionary possibilities for life?" answered "We live in a world that was fashioned by an intelligent creator who intended to have a process of evolution that would give rise to the beauty and the diversity of life—our own species included." (Miller, Ken, Interview by Varg, Samuel). Of course, the idea is that every species has undergone some form of biological evolution to adapt to a certain environment that they live in (natural selection). I bring Ken Miller into this argument not only because he is well respected in this field and because his profession of being a cell biologist adds validity and weight to his arguments, but also because I think the final thought he has of "our own species included" warrants discussion as well. Humans were supposedly created in God's anthropomorphic image, at least this is what some religions believe, but theistic evolution does not concern itself with this idea. It does not need to because it is superfluous to argue that humans were made in God's image with theistic evolution. After all, the many different races and images of humans infer that humanity was not made in God's image but rather might have been shaped by God. By this, I mean that rather than God creating humanity as explained in the Book of Genesis, God used evolution to shape humanity into his image. Creationists will disagree with this idea as it makes humanity seem less special. On the other hand, Theistic evolutionists would argue that the universe was merely a stage set with the right circumstances that would allow for the diverse range of life that exists to live and evolve. Atheists and Christian fundamentalists also oppose theistic evolution, each for its unique reasons. The former because they claim that divine power to any extent or in any form does not exist, while the latter claim that biblical stories, such as the Book of Genesis, are absolutely true. This

presents a problem for theistic evolution in two major ways- the first being that without divine power, theistic evolution would not be possible, although evolution in an absolutely scientific sense would be true. The second is that if the Book of Genesis is true, then the evolutionary theory is invalid because divine power created the universe as we know it today. I would like to point out that at the very least, atheists seem to have a more solid claim in their argument against theistic evolution over Christian fundamentalists. This is because a purely scientific biological evolution is at least verifiable in the sense that we can observe evolution in species. Miller also points out the flaws in arguments that stem from either atheists or Christian fundamentalists. Both sides are quick to utilize the Book of Genesis to argue that divine power either does or does not exist, while atheists additionally use evolution to counter these Biblical claims. Miller argues that to fundamentalists and atheists this is "one of the reasons that... the story of natural history in the Book of Genesis must be true for God to be real... I think ultimately what that argument does for both sides is to ignore the very sensible middle ground, that is that the question of God is something that lies outside of the ability of science to answer". (Miller, Ken, Interview by Varg, Samuel). Again, I see the validity of such an argument, being that if science is unable to explain the origins of life, or indeed the universe, then this opens the possibility for the existence of divine power. However, what makes Miller's argument more significant in the overarching argument being made in this chapter is the inclusion of both sides, being Christian fundamentalists and atheists. He takes a stance that disagrees with both sides and comes to a reasonable explanation that reconciles that both sides are incorrect to some degree in their claims and that the middle ground, being that evolution occurred and that divine power exists, is a possibility.

### **Section 2.3- Arguments Against Theistic Evolution**

Now that I have examined some arguments that defend theistic evolution, I will now turn my attention to arguments that seek to invalidate theistic evolution. Theistic evolution has many flaws that make it seem to be an inconsistent position. These flaws primarily stem from the fact that it creates a significant contradiction between the actual process of evolution and the characteristics of God, namely omnibenevolence. While this is a significant flaw to those who support theistic evolution, it is pointless to argue because while it is unverifiable it is equally unfalsifiable. Therefore, I will not be criticizing theistic evolution using this flaw. Rather, I am going to argue that the most significant problem with those who support theistic evolution is the conflict between the process of evolution and the idea of God. This will include questioning the death required for the evolutionary process to occur (natural selection) as well as questioning the free will involved in evolution.

In this section, I will present arguments by American theologian John Haught, who defends theistic evolution and subsequently critique these arguments. I will ultimately attempt to show why the atheist position on theistic evolution is more rational and valid than the position in support of theistic evolution. I will summarize the atheist position in the next paragraph and continue from there.

John Haught summarized the atheist position on theistic evolution by stating that "Evolution is incompatible with any and all religious interpretations of the cosmos, not just with Christian fundamentalism. The prevalence of chance variations, which today are called genetic

'mutations,' definitively refutes the idea of any ordering deity. The fact of struggle and waste in evolution decisively demonstrates that the cosmos is not cared for by a loving God. And the fact of natural selection is a clear signal of the loveless impersonality of the universe." (Haught, 1995, P.52). It appears that this lack of care by God within the universe, coupled with the Christian definition of divine power, being omnipotent, omniscient and omnibenevolent, would suggest that theistic evolution is incorrect in favor of a more scientific-based evolutionary process, through natural selection. However, if theistic evolution were true then surely processes like natural selection would have been maximized to become its most effective and further any given species' evolution. If theistic evolution were correct, species that are undergoing the evolutionary process would arguably have these beneficial traits maximized to allow for the most benefit to serve the species' survivability. There would be no wasted steps, no useless evolution because this divine power should and would seek to maximize this process. Such inefficiencies in the evolutionary process may include the ability of a species to find a suitable mate or how a plant or animal species matures and develops. "Inefficiency also prevails in other ecological functions, including interception of light by photosynthesizing plants and phytoplankters, the capture of prey by predators, particle retention by suspension-feeders, securing mates, pollination, and other activities subject to adaptive evolution. These inefficiencies are important, but the emphasis here is on long-term loss of nutrients." (Vermij 2019). The survivability and adaptability of a species are critical in allowing for its evolution, perhaps into another species altogether, to occur albeit under very specific circumstances. Surely if theistic evolution were true, then an omnibenevolent God would rather have evolution be more about maximizing the potential of a species. Natural selection and evolution are born from the necessity to adapt to a certain climate to survive and

reproduce, which as Haught put it, "is a clear signal of the loveless impersonality of the universe." The wasted steps in the evolutionary process point toward the idea that biological evolution was not guided. If I use William Paley's watchmaker analogy again, a watchmaker would not add unnecessary (or wasted) steps in the process of designing and subsequently building said watch. Similarly, a designer of the universe who supposedly guided evolution would not want to add wasted steps to the evolutionary process.

I will now give a bit of context surrounding John Haught before continuing. He is a professor of Roman Catholic systematic theology, which addresses issues such as why the Bible teaches us about certain topics and/or what could be considered true about God and the universe. While teaching at Georgetown University he specialized in areas of biology and cosmology. From this specialization, he concluded that Thomistic metaphysics, the teachings of Thomas Aquinas, did not adequately contextualize the discoveries of evolutionary biology and Big Bang physics. Relating Thomas Aquinas and Thomistic metaphysics to theistic evolution, both inferred an intelligent designer based upon the empirical knowledge of animal species and how the "beauty, order and design of the universe testify to the greatness of its Author" (Chaberek, 2021, as cited in <https://aquinas.design>). This is similar to William Paley. Thomistic evolutionists (the ideology that is faithful to both the Bible and the latest scientific research) adopted theistic evolution and used this idea to support the notion that God intended evolution to aid in the production of the universe. Haught also conducted research to attempt and prove that science and religion might be reconcilable. This research was significant because of the topic's growing importance in the intellectual world and how claims, primarily from evolutionists and creationists, suggested that science and the belief in God are not compatible. Throughout this

research, Haught inquired about the existence of religious and scientific beliefs and concluded that the two have different explanations for the origins of the universe and life. He asserted that "science and religion cannot logically stand in a competitive relationship with each other" (Haught, 2005). This quote shows that Haught supports the idea of Gould's NOMA, something which I will expand upon in section 2.4. This is because he is a supporter of theistic evolution, which argues that science and religion are complementary to one another. Beyond evolution, theistic evolution argues the idea that divine power is responsible for the empirical world and seeks to show the existence of this divine power through the empirical world (natural theology). In the last quote I provided, Haught is arguing that both science and religion cannot compete with one another. It is logically impossible for both schools to make contradictory claims, albeit through different means. Haught is attempting to argue that both are rational and that one can believe both because they are not in competition with one another. Of course, this begs the question as to how they do not compete with one another. Initially, I would say that this is because religion is more concerned with the supernatural, and science, the empirical. This must be what Haught is referring to because it works perfectly with theistic evolution. I will discuss this further on in section 2.4.

Continuing, throughout the evolutionary process from the primordial soup to the current day, there have been some 'evolutionary wastes'. By this phrase I mean that some evolutionary adaptations of species have become redundant in time, or perhaps even are still possessed by these species but no longer critical to its survival, therefore making it a wasteful evolutionary step. One example might be that some arthropods still molt their exoskeleton as they grow. Besides giving the benefit that it allows the arthropod to grow exponentially bigger due to

growing a larger one underneath, for a period of time this ability comes with the disadvantage of being significantly more vulnerable to prey. At least to me, if given the criteria for a God, being omnipotent, omniscient and omnibenevolent, I would argue that the arthropod's traits suggest that the idea of theistic evolution cannot be true. This is because if theistic evolution were true why not rather have the arthropod not required to shed its skin to grow larger, thus removing the weakened state from the arthropod entirely? It is because of these wasteful evolutionary processes that lead me to disagree with the idea of theistic evolution. However, I do understand that perhaps a God might have given such a process, at least in the arthropod's case, to give its prey more of a chance to eat the arthropods, ensuring the continuation of the circle of life. Although, this then begs the question of why God would hinder animals with certain evolutionary steps to make them significantly easier for their prey to catch and eat.

From this, I must ask why there is so much sacrifice by animals in a certain species for evolution to occur. Natural selection is slow and gradual and during this process, a vast amount of a particular species that is ripe for the process of natural selection inevitably perishes. This can be because of many factors, such as not being suited to the temperature of a climate or perhaps even being unable to camouflage into the surrounding environment. It would appear that God cannot be guiding evolution. John Haught argues that "if there is any substance at all to the belief that God loves and cares for the integrity of the created universe as something truly other than God, then this universe must possess a degree of autonomy. Relative independence must be inherent in the universe from the outset." (Haught, 2005, p.242). In this quote, Haught is arguing in support of the fact that the evolutionary process requires a vast amount of sacrificial life to allow for evolution to occur. This is because of the autonomy that God has allowed the universe

to have. Haught is also not outrightly discussing the death required for evolution to happen but this idea of God loving the universe remains important to the argument. Haught's argument stems from a much larger claim surrounding the argument of free will, which I will not go into here. However, it logically follows that a loving God would not allow sacrifice on such a large scale for the sake of the potential evolution of a species. A significant problem arises when said species does not get the opportunity to undergo natural selection. Perhaps the genetic mutation that is being carried by a newly born organism dies out before reaching sexual maturity, thereby forgoing the chance to pass on its genes. This would suggest that evolution is a more random, loveless process than that which theistic evolution supposes it to be. This need for unimaginable death across all species makes me question theistic evolution entirely. I argue that if divine power existed and guided evolution, then such occurrences as the hypothetical one I have proposed should not occur, and yet they do. I understand that death is necessary for the evolutionary process. It cannot occur without death. Surely an all-loving God would not want such a necessary biological process to require so much needless death.

Theistic evolutionists make attempts to justify these sacrifices for the sake of biological evolution. It has to address this issue to maintain its validity as a supportable position. These arguments primarily argue that the universe has free will and while God is guiding evolution, it is the choices a species makes that will determine what sort of evolution they undergo. If a hypothetical species journeyed from the warm tropics of Brazil to a significantly colder environment, then of course this species would undergo some sort of biological evolution over the course of several years. As Haught mentioned in the quote I provided in the previous

paragraph, the universe must possess autonomy. Further, he continues this idea of universal autonomy by arguing that:

once we allow that God's creative and providential activity is essentially the liberation of the world to "be itself", then it comes as no surprise to the informed theist that creation would have its own autonomously operative laws (such as natural selection) ... the point is, there could be no genuine self-giving of God to any universe that is not first allowed to become something radically distinct from God. This means that in some sense the created world must be self-actualising, and even self-creative, though within the limits of relevant possibilities held out to it by its Creator. (Haught, 2005 p.242).

Haught is arguing that God is guiding the physical process of evolution, but God did not guide the species into a new environment that would allow for natural selection to occur. One might even argue that because God is enforcing the evolutionary process on species that autonomously (and arguably unknowingly) walk into the right set of circumstances for the said process to occur, God is showing His omnibenevolence. It can be argued that God is saving the species that will eventually die out because of this brand-new environment they are unequipped for. God does not necessarily want all this death to follow for evolution to happen. Instead, it is the free will of the given species that creates the need for the evolutionary process to ensue and God obliges and aids them to adapt to the new environment. However, I would have to disagree with Haught. I do understand what Haught is saying, that the universe must possess a degree of autonomy. Surely a God with the given characteristics of omnibenevolence would want the universe to have autonomy. While yes, this is an agreeable claim, I have to question why God does not save the species in the first place. By this, I mean the question of why God does not begin the

evolutionary process within the first generation to minimize the amount of death that will happen throughout the entire process. I will note that God cannot and should not miraculously perform a miracle and instantaneously have the entire species evolve. This would undermine the autonomy of the universe as any decision made would become meaningless if it is saved by God instantaneously. I mean to argue why God does not have the right mutations that would allow a new generation of a species to survive rather than having more generations suffer in a new environment just for the chance for evolution to begin occurring. While I understand the case for autonomy being able to justify some death in the evolutionary process, it cannot justify all of it. By arguing that it is a species' free will to journey into new climates and/or environments, one must also argue that evolution is not guided. This is because if God is guiding evolution, then God also guided the species into a new climate and/or environment. This would contradict the idea of the universe's autonomy.

Moreover, if God were guiding evolution, then the process of natural selection would become superfluous. If an omniscient (all-knowing) God controlled evolution to any degree then God would determine the goal of evolution. The idea of a species adapting to its environment should logically be unnecessary because if God controls evolution, then surely species would be able to undergo evolution without the need for natural selection. Charles Darwin ascertained that there is "no shadow of reason [that] can be assigned for the belief that variations, alike in nature and the result of the same general laws, which have been the groundwork through natural selection of the formation of the most perfectly adapted animals in the world, man included, were intentionally and specially guided. However much we may wish it, we can hardly follow Professor Asa Gray in his belief that "variation has been led along certain beneficial lines", like a

stream "along definite and useful lines of irrigation" (Darwin, 1887). For context, Professor Asa Gray was one of the first supporters of theistic evolution in the modern way. I have used the phrase throughout this chapter, unlike John Dawson. Gray believed that God had guided evolution, although he was also a Darwinist. According to Gray, God guided the available variation and therefore controlled the evolutionary process (Graffin & Provine, N.D). Of course, I cannot help but link this back to the overarching argument of why God would allow vast amounts of death to occur for natural selection. Gray is not correct in his line of thinking in two primary ways. The first and easiest to examine is Gray's idea that "variation has been led along certain beneficial lines". I do not agree with this as I have already established that some evolutionary steps are not necessarily beneficial. The arthropods shedding their skin is arguably more of a hindrance than advantageous. The second of these is the idea that if God were guiding evolution, then natural selection appears unnecessary. The whole process seems redundant if an omniscient being is shaping evolution. God has already determined the goal of the evolution of a particular species. Further, natural selection is an empirical claim, so one cannot deny the fact that it occurs in the evolutionary process. It seems to me that there is no need for countless members of a species to perish just for the chance that natural selection will happen.

Furthermore, I must question natural selection as a process with regards to how theistic evolutionists defend the sacrifices of vast amounts of a species for the sake of evolution. Not the process itself, but rather the question of if divine power has control over it. Natural selection, as I have already established, is the process by which organisms adapt to their environment. This results in those best suited to survive in an environment to endure and reproduce. I question this process because if divine power is guiding evolution, then is this same divine power letting

countless members of a species die for the sake of evolution? The main priority of natural selection is survivability. This could be seen in a variety of ways, such as the organism's camouflage ability or even the size of certain bodily features. Surely an omnipotent, omniscient and omnibenevolent God would not want to waste countless lives for the sake of evolution. As Charles Darwin concludes in his book, *The Origin of Species*, "Thus, from the war of nature, from famine and death, the most exalted objects which we are capable of conceiving, namely, the production of the higher animals, directly follows" (Darwin, 1859). That is to say if the species even have the chance to undergo the natural selection process before dying out due to the new environment. What if a species gives birth to an organism that is better suited to survive in a given environment and said organism dies before it reaches sexual maturity? Is the entire species than just left to suffer in this new environment before eventually dying out entirely? The lives of a species sacrificed in the name of natural selection are not necessarily the problem because I would agree that the species still lives on in a sense upon evolving into their environment. Haught attempts to justify the death and suffering involved in the evolutionary process by arguing that "Maybe the entirety of evolution, including all the suffering and contingency that seem to render it absurd, are quite consistent after all, with the idea of a Providence that cares for the internal growth and emergent independence of the world" (Haught, 2005, P.242). For clarity, Providence is another way of saying God. I took this quote to mean that Haught is arguing that death in the evolutionary process is a result of free will. It would be somewhat agreeable to say that this assumption is correct because the process of natural selection and the deaths that subsequently follow are due to the free will of the species in migrating to a new environment. Therefore, this might result in the species being unequipped for surviving in this environment

and ultimately undergoing natural selection. However, Haught justifies this death by claiming it is integral to the growth and development of the universe. He claims that the deaths and suffering of a species are consistent because it leads to the greater good of growth and independence of the universe. I can see Haught meaning growth to refer to the physical changes a species goes through during the evolutionary process. However, the only defense I can see Haught using with this quote is that the death and suffering of animal species in the evolutionary process serve the greater good. This greater good is the growth and independence of the world. This leads me to question how the growth Haught is discussing leads to the independence (and/or autonomy) of the world. Surely if God guides evolution, then there can never be true independence of the world? This change and growth seem to act oppositely to how Haught refers to it, at least to me. There can never be true independence in the world of God guiding its growth. One cannot rationally make the claims that Haught has made whilst also being a supporter of theistic evolution. There cannot be true world independence if God guides the process that creates growth. True independence and self-creativity can only come to pass if God takes no part in its growth and development. Therefore, I have to disagree with Haught on this claim.

Moreover, I would argue that humanity's lack of knowledge about the ever-expanding universe does not leave room for theistic evolution, or rather God's guidance over the empirical universe. It would be easy to argue that because humans do not have even a fraction of a percentage of knowledge of our universe that there can be belief in God's guidance of our universe. This links back to the unverifiable nature of theistic evolution or indeed any claims surrounding divine power. If it cannot be verified, then it would leave potential for claims

surrounding divine power to be at least believed in. The problem with these claims is that they are not properly thought through. Kenneth Miller speaks on this issue by stating that:

Committed atheists like Dawkins would attack and ridicule any suggestion that room for the work of a Deity can be found in the physical nature of reality. But Dawkin's personal scepticism no more disproves the existence of God than the creationist's incredulity is an argument against evolution. What matters is the straightforward, factual, strictly scientific recognition that matter in the universe behaves in such a way that we can never achieve complete knowledge of any fragment of it, and that life itself is structured in a way that allows biological history to pivot directly on these tiny uncertainties. That ought to allow even the more critical scientists to admit that the breaks in causality at the atomic level make it fundamentally impossible to exclude the idea that what we have really caught a glimpse of might indeed reflected the mind of God (Miller, P.213, 2007).

Miller is referring to Richard Dawkins' atheist mindset. Miller is arguing how just because of might not believe in God, it does not disprove the existence of a creator. This is similar to how a creationist's disbelief towards evolution does not stand as an argument against it. Miller goes on to argue that only the factual, empirical events are what matters in such a discussion and that involves the knowledge of the universe. Of course, Miller then argues that because of humanity's lack of knowledge in this area, it leaves open the door for divine guidance over the universe. However, I would argue that Miller has got this all wrong. To say that Dawkin's atheism is the same as a creationist's disbelief towards evolution is equivalent is not correct. Dawkins is an atheist because he argues that religion does not hold up to scientific scrutiny and that evolution is a more logical reason behind human origins whilst also believing strongly that the evolutionary

process cannot be guided by divine power (Dawkins, 2017). A personal belief is not a logical argument unless the said belief is rooted in empirical data and scientific backing. I would argue that Dawkins' atheism stems from a more rational belief that cannot be compared to a creationist's doubt of evolution. Evolution is a scientifically studied empirical process that is undeniable. To compare it to creationism is an insult to atheism. While I do admit that creationists are allowed to believe in whatever they choose to, I cannot say that Dawkin's atheism is the same as a creationist's skepticism about evolution. Moreover, Miller's argument here is that humanity's lack of knowledge of our universe leaves the door open for belief in God to exist. I will grant that this is true, it does leave the door open for such a belief to exist. I would argue that because humans do not possess a sufficient amount of knowledge of our universe that would allow us for certain to know how it works, that humanity should use what is empirically verified to make logical speculations about other processes in the universe. For example, just because humanity has never been to the planet Jupiter, we can estimate the gravitational forces of the planet based upon empirically verifiable events such as the orbit of Jupiter's moons. While humans do not have a one-hundred percent perfect value for Jupiter's gravitational force, humans can logically estimate based on empirical knowledge. This cannot be done by arguing that God guided the creation of the universe and/or evolution. While one can believe in God's guidance of the universe and/or evolution, it does not mean that such a belief is justified.

Because evolution takes multiple generations and requires death as part of the process, I cannot support theistic evolution. I cannot logically agree that divine power guides evolution given the two primary characteristics of omnipotence and omnibenevolence. An all-loving and all-powerful God would have the power and motive to prevent death. The wasted life needed for

the possible benefit of a generation that might still be multiple years away from being realized shows me that God cannot guide evolution and therefore theistic evolution is not a supportable position to me. This would indicate to me that the whole evolutionary process is merely coincidental. It is a happenstance that a species finds itself in a set of unfortunate circumstances that would allow for natural selection to occur. I use the adjective unfortunate because this process will lead to many deaths. The idea of the free will of a species to find themselves in such a set of circumstances only for the process to be guided by divine power seems contradictory. As Haught explained, a loving God provides the universe with autonomy. However, if God guides evolution, it is rational to say that God also guided a species into the right circumstances to undergo evolution. Not only is this contradictory to Haught, but it is also contradictory to the characteristics of God. I must argue that God does not provide the universe with autonomy if God also guides evolution. Therefore, I have to assume that God is not omnibenevolent, which goes against the idea of God's existence entirely. It is because of these contradictions, that I must argue against theistic evolution.

To round out this section I will compare the persuasiveness of the arguments I have presented in both section 2.2 and section 2.3. As a reminder, in section 2.2 I argued that intelligent design and the sheer variety of life on Earth at least made one question if there was a designer of our universe. This designer is God. The comparison between these arguments is if the idea of an intelligent designer is more persuasive than the logical contradictions between the evolutionary process and the characteristics of God. One might argue that intelligent design of our universe coupled with the autonomy of the universe would lead to the conclusion that intelligent design is the more swaying argument. After all, it is possible to argue that the

autonomy of the universe results in the deaths of vast amounts of a certain species. Further, the fact that the universe is so well put together and complex that one cannot help but infer some sort of designer would initially make the idea of an intelligent designer more convincing. However, I would argue in favor of the contradictions between the evolutionary process and contractions in the characteristics of God. While I will admit the complexity of the universe does lead me to question if there is an intelligent designer, the fact that it is unverifiable weakens it as a claim. This does not ruin the persuasiveness of the overall argument of intelligent design, but it diminishes it. Moreover, the complexity of the universe can be explained by a random occurrence of events. Although highly unlikely, it is not an irrational explanation for how the universe and its laws came to be. The idea of an intelligent designer is both unverifiable and has more rational explanations than a supernatural being, which leads me to consider that the idea of an intelligent designer is not a strong one. Rather, the contradiction between the evolutionary process and the characteristics of God is a significantly more credible claim to me. Evolution is an empirical process that is seen in all animals and the very nature of this process goes against the characteristics of God. The amount of death in a species going through the evolutionary process is undeniable. I am sure that most Christians would rather maintain that God is an omnibenevolent being rather than guiding evolution. While the fact that Christians would think this way is speculative on my part, I maintain that regardless of the autonomy of the universe the characteristics of God and evolution cannot both survive questioning. This is besides the fact that if God were to keep all the characteristics granted to Him by Christians (omnipotent, omnibenevolent, omniscient and transcendent) that universal autonomy is impossible. I would like to note that this is the argument of free will and is an entirely separate philosophical

argument that I will not cover in this paper but essentially because God is transcendent (exists out of time) and omniscient (knows all), it can be argued that free will does not exist if God does exist. Continuing, while the claims of an intelligent designer do hold some merit to them, I cannot say it is more persuasive than the contradictions between evolution and the characteristics of God. The fact that intelligent design has more rational explanations and is unverifiable, coupled with the undeniability of the deaths required for evolution to naturally occur leads me to the conclusion that intelligent design is not a plausible argument. Moreover, one must also question that if God did guide evolution, then at what point does this guiding of the evolutionary process begin? Does it begin when the animal species gets into a certain set of circumstances that would allow for evolution (or rather natural selection) to start? Or does God begin guiding the process beforehand? Again, if God did guide evolution, then surely processes such as natural selection would be superfluous. Being transcendent (existing out of time), God already knows what the animal species will evolve into as well as how long it will take? This would suggest that there is little to no autonomy in the evolutionary process. Further, such thinking would also add to my arguments surrounding the deaths in the evolutionary process. If God can control evolution, given His characteristics, it makes no logical sense that death would be such a prominent feature in evolution. At least, to the extent that it is. Deaths should be minimized to maximize the species' survivability rate and yet it is not. Therefore, I must say that the contradictions between evolution and the characteristics of God are the more convincing argument, leading me to agree with the criticisms of theistic evolution.

## Section 2.4- Debating NOMA Using Theistic Evolution

In this section, I will discuss and debate NOMA's validity as a position when under the lens of theistic evolution. It is important that I show how NOMA is affected by claims like theistic evolution. The obvious arguments that initially stood out to me were the fact that a religious claim (the existence of God) is combined with a scientific process (evolution). This suggests an overlap because it clearly shows that religious magisteria is not solely concerned with human morality. There is no moral lesson being taught in theistic evolution. It is making entirely empirical claims about existence. However, if theistic evolution is shown to be an invalid position, then it might be possible to argue that science and religion do not overlap.

Haught argued that there should be "no conflict between science and religion because they represent different levels of explanation for phenomena" (Haught, 2005, The Associated Press as quoted from <https://www.nbcnews.com/id/wbna9543398>). While not explicitly stating what each school represents, I cannot help but be drawn to the idea that he is thinking along the same lines as Gould or even Averroes. Perhaps he is arguing that science is concerned with the empirical world and religion is related to the supernatural. Although, this would be more in line with Averroes' line of thinking concerning the magisteria of science and religion. It would make sense that Haught considers religion as being concerned with the supernatural over morality. This is because theistic evolution hinges on the claim God exists, so it would be rational to assume that Haught considers religion to be about the supernatural over morality. As he supports theistic evolution, it would not make sense for Haught to consider religion's magisterium to be about human morality.

I must show that Haught is incorrect about this claim. It would be reasonable to argue that science is the 'how' and religion is the 'why'. When put with theistic evolution, science explains how life came to be while religion explains why evolution occurs. This would initially seem to show no conflict. However, even if this is the case (which it appears to be in the eyes of a supporter of theistic evolution), there is still overlap between science and religion. Theistic evolution is seen to be making claims about existence, or rather the origins of existence. Even if they "represent different levels of explanation for phenomena", there is still a consistent overlap in the magisterium. I will assume that Haught is regarding religious magisterium to be more in line with Averroes' idea of it, being supernatural. Science is still concerned with the empirical world in this instance. Religion is using a supernatural explanation to justify the empirical world. This is more in tune with natural theology. The existence of this just shows a clear overlap in the magisterium. Religion is attempting to make claims about the empirical world through the lens and justification of a supernatural being.

Further, if religion teaches morality over the supernatural, then theistic evolution also must be viewed as an indefensible position. This is because if religion teaches morality, then theistic evolution cannot be making claims about existence spawned from God (a supernatural being). No morals are being taught in theistic evolution, rather theistic evolution attempts to reconcile religion with modern scientific claims of existence. Theistic evolution does so through a supernatural justification, that God guides evolution. Of course, the clear contradiction is between NOMA and theistic evolution's argument for what religion's magisterium is concerned with. If theistic evolution is considered an unsupportable position, it gives hope to the supporters of NOMA and vice versa. While there is not an outright argument between NOMA and theistic

evolution, I can see how if one is indefensible, the other becomes slightly more appealing as a result.

However, regardless of if I can say that theistic evolution is valid or invalid, the fact that theistic evolution exists still suggests an overlap in the magisterium. These overlaps must be considered to be in contradiction to Gould's NOMA principle even if they are seen as false. Religion, or rather certain individuals, are attempting to argue about the nature of the empirical world through supernatural means. This is primarily suggested by the idea of an intelligent designer but also stems from the idea that evolutionists and creationists suggested that science and the belief in God are not compatible. This idea disagrees with NOMA because we once again see how religion is attempting to interpret the empirical world using the idea of existence and creation from divine power, even if theistic evolution is false. Gould claims that the empirical world is not part of religious magisteria, being more focused on morality. Haught even argues that "Historically, it is true, religious ideas have often played a quasi-scientific or prescientific explanatory roll, even while also providing ultimate explanations. But science has now-providentially, we must say- liberated theology from the work of satisfying the more mundane forms of inquiry. Yet, even today, scriptural literalists want religious ideas to fill explanatory spaces that have been assigned more appropriately to science." (Haught, 2004, P.231). Even if theistic evolution is false, it seems that because it exists, there also exists an overlap in the magisterium. Haught even refers to the idea that religion used supernatural and fictitious stories to interpret the empirical world. People who argue in favor of theistic evolution also present overlap in the magisterium. By "scriptural literalists", Haught is referring to creationists who take the Bible to be literal. They wish to use these religious ideas (divine creation) to make empirical

claims about existence. Thus, we see how regardless of the validity of theistic evolution, there remains an overlap. This is because these overlapping claims still exist. Further, Haught also argues that:

Science answers one set of questions, religion and entirely different one. Science asks about physical causes, while religion looks for ultimate explanations and meanings. If we keep science and religion separate, there can be no conflict. The ugly disputes between Galileo and the Roman Catholic Church, and later between Darwin and Christianity, could have been avoided if theologians had never intruded into the world of science and if certain highly visible evolutionists had refrained from making sweeping metaphysical claims about evolution as though they were scientific statements. (Haught, 2004, P.236).

Dissecting this quote, Haught's claims initially appear to not be dissimilar to Gould's. However, this is not the case. Of course, the obvious similarity stems from the fact that both argue that science is concerned with the empirical world, or "physical causes" as Haught states. However, the key difference in their claims is with regards to religious magisteria. By "ultimate explanations and meanings", Haught is talking on a universal scale. He is inferring the creation of the universe and is essentially arguing that religion provides explanations that science simply cannot. This also means that religion is teaching about the empirical world, albeit only pertaining to questions that science alone cannot answer. This contradicts Gould's concept of NOMA, as there is a clear overlap as both science and religion discuss different aspects of the empirical world. It appears to be more in line with Averroes' NOMA-like argument. Religion seems to be teaching the supernatural whereas science is teaching the empirical world. Science is unable to rationally explain the supernatural and therefore results in scientists making metaphysical claims

about topics like evolution under the guise of a scientific statement. This would be more in line with the idea of theistic evolution as well. Science is unable to explain the origins of the universe, let alone how evolution occurs. Therefore, it might not be entirely irrational to say that religion is concerned with the supernatural rather than human morality. That is assuming that one supports theistic evolution.

## Conclusion

In conclusion, I have argued that Stephen Jay Gould's NOMA principle is an indefensible position. Throughout both Chapter One and Chapter Two, I have shown that NOMA is a significantly flawed principle. This is because of Gould's definition of religious and scientific magisteria. I have shown that religion is not only asking questions and teaching humanity about morality. Rather, it also makes claims about the empirical world, thus presenting an overlap. Similarly, the scientific magisterium makes claims about human morality as well as the empirical world. Scientific and religious magisteria are not as distinctive as Gould suggests. There is a significant overlap. This is the case regardless of the claims made by science and religion. For instance, creationists claim that divine power made the earth in seven days. This is widely viewed to be fundamentally incorrect and yet it still shows an overlap in magisteria because religion is still making claims about the origins of the empirical world. There are many instances of religion overlapping with the scientific magisterium, but this is the most prominent in my eyes. The fact that religion is making claims about the empirical world once again shows that regardless of the truthfulness of such claims, they still show a clear overlap. Science also overlaps with the religious magisterium and conflicts with scientific claims. Studies into the biology of the human mind have suggested that human morality can be controlled by one's adolescence experiences (societal factors) as well as the lack of certain genes (the MAOA gene). The case I used was with John Wayne Gacy, as his abusive childhood left him devoid of any empathy, thus resulting in Gacy lacking morality. The empirical world, or rather Gacy's abusive adolescence, coupled with his lack of the MAOA gene resulted in his exhibited

behaviors. This once again shows that NOMA is an indefensible position because I once again showed that religion and science do overlap. This overlap is also not entirely one-sided, but I would say that this overlap is more weighted towards religion overlapping with scientific magisterium rather than the other way around. Religion does make more claims about the empirical world than science does about morality.

I also showed a case study for NOMA in theistic evolution whilst also commenting on the indefensibility of theistic evolution. I showed that theistic evolution was an unsupportable position based upon the fact that there is a contradiction between the actual process of evolution and the characteristics of a Christian God. Of course, the goal of theistic evolution is to show the existence of divine power through the justification of the beauty and diversity of the empirical world. While I do understand that the unverifiable nature of theistic evolution will always leave any arguments either in support of or in criticism of theistic evolution more open-ended than one would like, I found that the contradiction of the characteristics of God and death in evolution adds significant weight to the criticisms of theistic evolution. I argued that the amount of death that occurs in the evolutionary process is in direct conflict with God's omnibenevolence. This omnibenevolence is an undeniable characteristic of a Christian God. The fact that death in the evolutionary process is not minimized (at the very least) leads me to firmly believe that either God cannot guide evolution as theistic evolutionists say or the characteristics of God need to be altered to facilitate this. Given that most Christians and (assumably) theistic evolutionists would not want to alter the characteristics of God, I can only say that theistic evolution is an indefensible position. I also compared the supportability of the defense of theistic evolution (2.2) versus the contradiction of the characteristics of God and universal autonomy along with the

deaths that occur in the evolutionary process (2.3). From henceforward in this conclusion, I will refer to the contradictions between the characteristics of God, universal autonomy and the deaths in the evolutionary process as 'the contradictions', for simplicity's sake. The conclusion of the argument came down to the strength of arguments in support of criticism of theistic evolution. I argued that while the complexity of the universe does warrant some sort of questioning as to if an intelligent designer does exist, it remains an unverifiable claim, therefore my main focus of the comparison between sections 2.2 and 2.4 was the universal autonomy. By universal autonomy, I am referring to the freedom of choice that animal species possess and how much is controlled by God. This is coupled with the deaths that occur in the evolutionary process. I questioned at what point God began guiding the evolutionary process. I asked if it began when the species was in the right circumstances for natural selection to begin or if God started guiding it sooner. This resulted in me arguing that natural selection was an unnecessary process. I also argued that most Christians would rather maintain the characteristics of God over defending theistic evolution. This is because in the contradictions, either the characteristics of God must be altered to better suit the evolutionary process or God cannot guide the evolutionary process. This is because if God does guide the evolutionary process, then there cannot be universal autonomy as well as there being a direct contradiction between the characteristics of God and the deaths in the process. An omnibenevolent and omnipotent God would have both the power and motivation to minimize death in the evolutionary process. I did grant that it might take a generation because God would be unable to suddenly change the species to better suit an environment. This would be a miracle and God directly intervening with life itself. Overall, I concluded that theistic evolution is an indefensible position because of the lack of universal autonomy and the

contradiction between the characteristics of God and the vast quantity of death in the evolutionary process if theistic evolution was supportable.

Finally, I rounded out chapter two with section 2.4, in which I re-examined NOMA using theistic evolution. I found that there was a significant overlap in magisterium regardless of whether theistic evolution is supportable or not. This is because theistic evolution supporters are making claims about the empirical world using religious premises. This does not necessarily mean that science and religion conflict, as they are not with theistic evolution. They complement one another. Regardless, there still exists an overlap. Science explains the how and religion explains the why. Science explains how life came to be through evolution whereas religion shows why evolution occurs. It is supposedly God guiding the evolutionary process.

I also argued that theistic evolution is more in line with Averroes' idea of religious magisterium instead of Gould's. Averroes saw the religious magisterium as being concerned with the supernatural instead of human morality which, with regards to theistic evolution, makes sense. This is further shown by my quote from John Haught, which stated that they "represent different levels of explanation for phenomena" (Haught, 2005 The Associated Press as quoted from <https://www.nbcnews.com/id/wbna9543398>). Again, even if theistic evolution is considered valid or invalid, there remains a consistent overlap in the magisterium. So even if Gould is somewhat incorrect about the criteria for religious magisterium, religion is still making claims on the empirical world, albeit through supernatural means. In the end, I found NOMA to be an untenable position. There is an overlap in magisterium regardless of if one defines religious magisterium as either teaching morality or the supernatural. Of course, religion overlaps with the magisterium of science in both instances, which was most consistent with Gould's criteria for it.



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