

**UNDERSTANDING REALITY: EXPLORING THE INTERACTION
BETWEEN THEOLOGY AND SCIENCE, WITH SPECIAL
REFERENCE TO A THEISTIC PRESUPPOSITION TO CERTAIN
WORLDVIEWS.**

By

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PERSONAL STATEMENT

To begin this introductory section, the author would like to make a personal statement about his beliefs, and why he chose to take a specific stance in the writing of this thesis. He is an African influenced adult Caucasian male, whose specific theological tradition is charismatic, yet who is spiritually conservative in the Biblical tradition. Besides this, the author considers himself to be a Christian contemporary thinker, who affirms the power of human beings, including the authority of scripture, enlightening by the Spirit, and scientific knowledge and technology, to make, improve, deconstruct, and reshape ones built environment. In the author's view, the essence of the Christian contemporary thinker is both progressive and optimistic, and is therefore used throughout this thesis to further understand reality.

Further to this, the author is convinced that theism is a very Biblically viable world-view from which reality should be studied, and throughout this thesis, this is the viewpoint proposed. The author would also like to state that coming from a traditional charismatic background, all character references to God as He, Him, or any similar references have been placed in capital letters as a sign of respect to God, and all that He stands for in the author's life. Furthermore, all masculine references to God are only to be considered as a grammatical expression, and not sexist in any way.

SUMMARY

The question of reality has traditionally been answered from two broad and separate perspectives, namely natural science and theology. However, in recent times, there has been a growing realism and humility about the limits of the two disciplines, specifically in their pursuit of understanding what makes up reality. Indeed, many are openly speaking about “a new convergence” in the disciplines, opening the way to new insights and understandings about reality.

Because of this, many now see both disciplines as complementary ways of seeking to understand reality. As such, this research shows that there is justification to combine science and theology to further the general understanding of what makes up reality. However, the problem expressed, is that even though both disciplines accept their limits, both disciplines have conflicting world-views on what makes up reality. Nevertheless, the research shows that there is commonality, i.e. both study reality from a creation or natural viewpoint, although each differs on the method to use. Natural science basis its findings on empirically verifiable data, whereas theology, basis its findings on revelation and the “Wirkungsgeschichte” thereof.

Unfortunately, this research shows that the problem does not end there. Within the two disciplines there is what one could call *supplementary-worldviews*, meaning, each discipline has multiple world-views within its structures. Taking this into account, the research examines these various world-views, and then suggests a suitable solution to the difficulty of finding pluralism among these views.

The research begins with a clear understanding of what the different views consist of. It achieves success by setting up a common frame of reference between each view presented, and then researches each one individually, and where fitting, complementarity sought and explored. The research puts forth that

one can only come to a reasonably clear understanding of what makes up reality, if one understands the beliefs and views of each on this.

The research further examines world-views such as the open-theism argument for determinism, Darwin's evolutionary theory, and the different views about the end result of humanity and creation. It also examines God's providence and how one would connect it to miracles, prayer, personhood and sin. The objective being to show that other than a theistic world-view, none of the alternative views give satisfactory answers to these questions, and neither do they give answers to the purpose for creation and humanity? The research also shows and argues that evil in this present world must not be thought of as something God willingly planned as an instrument of human punishment and education, but rather as something He allows because of human freedom.

The research also asks questions such as "What is the Final End of Everything", a question that science and theology have been trying to answer ever since humanity became aware of its own existence. The research further expresses that as technology has increased, many of the issues surrounding eschatology have become obscure, and difficult to deal with. The research points out that at times, eschatology has become a topic of debate, resulting in accusations and acrimony among scholars. Yet the research shows that the Bible is clear about what the end entails, whether that is towards the believer or non-believer.

The research also makes a determination that any view that contradicts itself or destroys itself in the process or act of affirming itself, is self-defeating and false and only theism is actually undeniable. Thus, it is established throughout this work, that theism offers an argument with the undeniable premise that leads one to recognise the existence of an infinitely perfect and powerful Being, who has a purpose for humanity and creation. Indeed, the research shows that any

world-view that cannot prove to be true simply based on the premise that it is non-contradictory, must be false.

Finally, the research proposes and confidently states, that by implication, this would mean that *theism*, the only remaining non-contradictory world-view, would be true by the process of falsification of other alternate views, even in today's scientific and technocratic age.

Key Terms: Science, Theology, World-views, Metaphysics, Creation, Evolution, Open Theism, Providence, Miracles, Eschatology.

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CHAPTER 1

Introduction

1.1 Statement of the Problem: Different World-Views on Reality within Science and Theology

1.2 Background to the Research Problem

For many decades, science and theology have accused each other of arrogance in their claims to know the truth. According to Polkinghorne & Welker (2000:6), in Western cultures, public expectation relies mainly on scientific procedures and not much, if indeed at all, on theology. Furthermore, people tend to seek answers to difficult and critical issues through scientific inquiry, despite the current crisis in scientific epistemology and a growing suspicion as to the actual benefits of much of technological progress. The common assumption in Western societies is that the measure and model for truth claims is found in the sciences.

Unfortunately, this stance can have many ideological side effects. However, instead of expressing dissatisfaction about this, theology must rise to the challenge. It cannot give up seeking to make its impact on common sense and on contemporary mentalities. Christian theology, according to Polkinghorne & Welker (2000:6), has to expose and expound its theological truth claims in

public discourse, and it has to warrant its claims to truth. All efforts to develop greater legitimise for theology by simply opposing the sciences should be discouraged. At the same time, theology and science have to clarify the limits of scientific insights, acknowledging its own limits

However, despite this negativity, Barrett (2004:10) states that there is now a growing realism and humility about the limits of the two disciplines. Furthermore, science is now coming to be seen - at least by many philosophers and sociologists - as a far more relativist project. That is, one that is being culturally determined in many of its assumptions and choices of projects, which many view as just one of the ways humanity seeks to make sense of their world.

Theology has now also come to recognise that its language is much less scientific and much more metaphorical than previously realised. The two disciplines are also now often seen as complementary ways of seeking to understand the world by involving mental models of reality that are inevitably incomplete in their own representation. What would be the outcome, one could ask, if the two disciplines could combine into what one could call a scientific theology?

At this point, the author would like to place on record that this thesis will focus on *Christian theology* specifically, rather than the more generalised and elusive category of *religion*. According to McGrath (2004:31-32), there are two

main reasons why one should approach a study of reality from this focus. Firstly, no general theory of religion commands universal assent. Secondly, it is clear that there are major divergences between the religions on a number of themes of direct relevance to the natural sciences. McGrath (2004:32) gives a good example of this divergence by stating that Islam has intense misgivings concerning any idea of a “natural knowledge of God”, independent of the Qur'an. Thus, according to McGrath, a scientific theology is fundamentally Christian in its foundation and in its approach.

In stating this, a question that comes to mind is: Is there such a thing as a scientific theology? Besides this, can the recent developments in epistemology and philosophy within science fit the current reasoning within theology when it comes to understanding reality? One could also ask if there is any justification in complementing science and theology to further the general understanding of what makes up reality.

On the surface, this seems impossible. Natural and social sciences work with empirical data; called an *inductive approach* to research. Theology, on the other hand, works *mostly* from a standpoint of faith, or a *deductive approach* to research, with its foundations being a belief in a Supreme Creator. In all fairness, one has to say mostly, as there are many theologians who prefer to study using a practical approach to the Bible. This approach is more experiential, and inclines one to do a lot more empirical research to find

answers. This approach is called an *a posteriori* method of research, and according to McGrath (2002:271), is used effectively within the natural sciences. In this method, understanding of reality arises primarily in an *a posteriori* manner, meaning, research is chronologically and logically regarded as a consequent to the revealed evidence gathered. The question is: Is this the only effective way to study reality? Unfortunately, in the author's mind, it leaves out important questions such as the reason and purpose for creation. This can be seen in almost every major world-view outside a Biblical world-view. This includes religions such as Islam or Buddhism, for example, which concern themselves with the reality of existence, yet fail to adequately explain the *reason* and *purpose* for existence - only Scripture, in the author's view can. However, when it comes to the natural sciences, one should grant to them that they have attempted to find the natural cause of events. The problem, it seems, is the lack of limits natural science seems to impose on itself, by often refusing to accept a greater higher first cause. This in turn has limited them, in many cases, to study the lower causes of events on which it becomes difficult to build any knowledge of God. Unfortunately, the analogies they use are weak at best. The conclusion is, that one must have had a first cause, that goes beyond scientific explanations and analogies, which actualised existence; this first cause will then explain the reason and purpose for existence. This is such an important subject that it will be studied further on in greater depth.

However, while ignorance and bias persist in both fields, observers on both sides have realised that consonance between science and theology is desirable. The two disciplines have much to offer each other, but how to accomplish this is the question?

The answer, it seems, lays in the fact that both concern themselves with exploring human rationality, although from different viewpoints. The one is a personal encounter with only the physical world; the other, a personal encounter with the metaphysical world as well; two differing views of what makes up reality.

The question is: How does one bridge this gap? It seems that the answer would be to set up a framework, within which both can express their viewpoints, as well as common factors sought and compared. To do this, one would need to explore what the overarching frame of reference is between the two, and work from there. The answer to this question will be the outcome of this thesis. Therefore, the following research questions, as well as objections expressed by both disciplines, would be, in the author's view, the best way to begin.

1.3 Statement of the Research Question and how this Research Aims to Investigate it

This study will concern itself with the nature of the scientific dilemma, specifically regarding science's failure to recognise Divine concurrence in the structure of

the universe and creation itself. Although the study will centre on specific views, it will also engage the various positions taken by scholars on reality within the respective fields of theology and science. As such, the following research question captures the core intent of this research project. The world, according to Huntington (1993:22), is divided, not so much by geographic boundaries, as by religious and cultural traditions, by people's most deeply held beliefs - by *world-views*. Further to this, Borg (2003:62) states that, "Our world-view is our *image of reality* - our image or picture or understanding of *what is real* and *what is possible*. Colloquially, our world-view is our 'big picture' of the way things are. Philosophically, it is our metaphysics or ontology". This is the core of the research question. **It is the author's intention to show, that a *Theistic World-View* is the most Biblically viable world-view within which reality can still be understood.** In order to reach that outcome, it will be necessary to follow a rigorous and wide reaching analysis of various world-views – scientific and theological – as they relate to the research question.

As such, when one looks at what science studies concerning reality and what Scripture states about reality, it seems as if the two disciplines are poles apart when it comes to each ones understanding of what reality is. However, when one looks a little closer at the two conclusions on reality, one begins to see that there seems to be similarities between the two. Although the conclusions are different, there is a common thread that holds the two disciplines together; that thread is a pursuit to gain a deeper understanding of

reality. However, science needs to realise – and many scientists do – that although they are studying a secondary cause; they are in fact studying the primary cause of everything, which is God. In Barbour's words (2000:159),

Some authors claim that theological and scientific accounts cannot conflict because God's primary causality is on a completely different plane from secondary causes in the sphere of nature. Others maintain that science and theology are complementary languages, expressing differing but not competing perspectives on reality.

One would tend to be strongly supportive of the latter part of Barbour's statement, which maintains that science and theology are often complementary when it comes to expressing each ones perspective on reality; one just has to look for it. Reasons for this, is that although the two kinds of causes, primary and secondary are inseparable, they are on such different levels that theological and scientific accounts are seemingly completely independent of each other. The one way to find an answer to this would be to start with a deductive process as to the source of humanity's existence, and to work forward from there to a final purpose.

Although there is no doubt that science has achieved enormous success as a way of knowing the structures and processes of the material world, physical science, it appears, leaves no place for Divine action. One needs to say "appears" as usually modern science presupposes that the universe is a closed system and that interactions are regular and law-like. In their view, one can

trace all casual histories, and all anomalies will ultimately have physical explanations; it is only a matter of time.

Unfortunately, according to Polkinghorne (1998:9), many people portray scientific discovery as resulting from confronting clear and inescapable theoretical predictions and by the results of unambiguous and decisive experiments. The perfect matching of the two is then held to establish unassailable scientific truth. But is this true? Clearly, most of the great early scientists, including Galileo, were serious believers who saw little if any conflict between science and theology. However, for reasons too complex to explore here, the two disciplines have counter developed over the centuries, like twins trying to establish their separate identities. An example of this is the statement by Einstein concerning the divide between science and theology. Although contrary to some popular beliefs, Einstein was not a Christian, he did not believe in a personal God. Rather, he identified the religious sense, according to the scientific journal, *Nature* (1940:605), with recognition of “super-personal objects and goals.” Nevertheless, his 1941 remark, “Science without religion is lame, religion without science is blind” (Einstein 1941:II), is one of the most significant statements made by a scientist who did not believe in a personal God. Thus, both science and theology involve themselves in a journey of discovery, both seek answers, and both concern themselves with truth.

1.4 Background to the Research Question

There is no doubt that the relations between science and faith are complex, as the following will attest to. From a religious perspective, it does seem that science usually negates faith as a way of solving issues, thus, in a way, rejecting a theistic view to understanding reality. Their modernistic approach is that scientific knowledge represents the sole cognitive entrance into what is *real*; the sole course of valid statements about what is *the cause*. Their argument is that science and science alone defines reality. As such, nature is as science defines it, and reality equals nature as defined by science. Thus, in the view of science, nature exhaustively defines reality itself (i.e. naturalism). Literally, there is no room for other dimensions of reality, much less knowledge of them. By contrast, theology believes that faith is required to widen the picture, to search and gain answers to greater truths than science can now present. Although science *believes* that their way of describing and explaining the nature of reality is in essence correct, faith makes more of the world than the human mind often imagines. In creation and in the Scriptures, God's work and His Word are far richer than limited minds can fathom.

According to McGrath (2005:139) however, in recent years there has been wide agreement, including a growing interest, in exploring the relation between science and theology. Many are openly speaking about a *new*

convergence in the disciplines, thus opening the way to new insights and understandings (see Ruse 2001).

In contrast, Dawkins (2003:151), a vocal proponent against anything religious, has an admirably robust response to this: "To an honest judge," he writes - perhaps with himself modestly in mind, "the alleged convergence between theology and science is a shallow, empty, hollow, spin-doctored sham."

In all fairness to Dawkins' opinion, one of the major reasons for science rejecting theology as a way of knowing reality is because theology, in most cases, lacks verifiable data. Unfortunately, theology often basis the data it presents on assumptions (faith), not on experimental testing or empirical data. Regrettably, one cannot put God and all His attributes in a room and observe, record the data, analyse them and come to any rational conclusion. Furthermore, one cannot base their trust and belief in God on empirical knowledge alone; it is a walk of faith. It is only by His prevenient grace anyway that one can come to know Him (Rom 3:11; 12:3). Only God has all the answers to everything one sees, or cannot see. Science needs enlightenment by the Spirit, if they wish to have a deeper understanding of what makes up reality. Very few scholars will doubt that science has its usefulness in this world, but its overconfidence in believing that its epistemology are the only way to understand reality, is in effect, a limiting barrier. There is no doubt that the relations between science and theology are complex. However, as Galileo held, one

could learn from two sources, the book of nature, and the book of Scripture – both of which come from God and therefore cannot conflict with each other.

Nowadays, this quote might seem out of place, especially when one considers how much information science has contributed to an understanding of what makes up reality. But, as the author has previously quoted, science, in its overconfidence, has started to limit itself to the value that theology can still contribute to understanding reality.

A good example of why science needs theology is the controversy surrounding Darwinism. There have been several misunderstandings regarding his views, but, even Darwin himself believed, to a certain extent, that God had created the entire evolutionary process, but not the detailed structures of particular organisms. Darwin is on record as saying, “I cannot think that the world as we see it is the result of chance, yet I cannot look at each separate thing as a result of design” (Darwin 1860:312).

One could easily avoid the conflict between science and theology, by simply keeping the two fields in separate compartments, which Barbour (2000:2) calls the *independence view*. According to him, this alternative view holds that science and theology are strangers who can coexist as long as they keep a safe distance from each other. As such, one could then comfortably distinguish the two by the questions they ask, the domains to which they refer, and the methods they employ. In this way, both could tend to their own business, and not meddle

in the affairs of each other. The question is whether this is in the best interest of each field, and the whole of reality?

In a letter to the Reverend George V. Coyne, Pope John Paul II (1988) said, “Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each can draw the other into a wonder world, a world in which both can flourish”. These are sensible words which science will do well to heed, if they are to make more sense of the world they occupy. Therefore, the assumption they need to work from is to first acknowledge that they do not have the final word, as a “higher power” exists. Thus, the work presented in this thesis is written from the premise and conviction that *theism* is a viable world-view, able to explain the cause and end of reality as expressed by Scripture.

Although one might interpret the following statement as being subjective, the common ground for studying reality is firstly found in studying creation. In the author’s opinion, *creation has a purpose*. If there is no purpose for creation, what would be the point of studying it? The knowledge would be of no real value, except to a limited number of scientists whose data will lead nowhere. Therefore, the author believes that once the purpose for creation is agreed upon - which should be from a Biblical perspective - science and theology can then further their studies around these ideas, to bring more value to how one sees reality. However, those who study within the realm of natural science do not

necessarily have to be believers, for theologians to work with them, as both disciplines do have common ground to work within, which is how reality functions.

1.5 Research Methodology

In terms of the research methodology, the author has opted for a literary study of authors - past and present - combining this with a dialogical and complementary method of research. The author believes that this would further improve the productive relationship which has, as previously referred to, been taking place between science and theology for some time now. The author also believes that researching results between the various methods used by science and theology in their exploration of reality will provide a more integrated assessment of both viewpoints. This should also make it easier to reach consonance, where necessary, on the topic of reality.

Further to this, the dialogical method will also be integrative in nature. That is, the commonality found between the two disciplines will be, where needed, merged with the epistemological point of departure being complementary concerning reality. The study will therefore concern itself with qualitative research. For example, the basis for research will be a critical assessment on the opinions and insights of previous researchers within the same fields, directed by a strong presupposition to a *theistic world-view*.

In saying this, the author would like to place on record that this work is prone to subjectivity, as it is being written from a Christian perspective. This will result in the author being prejudiced to certain ideas and specific author's viewpoints, specifically those opposed to any form of *faith*, and those who are intolerant to any form of theology questioning their views. Although the author will dialogue with their viewpoints, as explained, it will be in a rather critical manner where necessary. At the same time the author will compliment sources, regardless of whom they are, who contribute to an overall understanding of what makes up reality. Reasons for using the above methods is that one can so easily get caught up in fruitless polemic discussions, that whatever the objectives set out in the beginning to achieve through the study, can become clouded, and even lost. Fortunately, this is not what this work is about, rather, each should be learning from the other.

Throughout this study, the epistemologies of both science and theology will be reviewed, specifically their views regarding ontology. In particular, the empirical data used by science will be reviewed and critiqued, once a world-view emerges concerning their view on evolution as the only way of understanding reality. A case study of Darwin's evolutionary theory will also be undertaken and reinterpreted to strengthen the case for theism. In this particular study, Darwin and others of the same persuasion will be critiqued on their epistemology. This will be achieved by using a deductive process, with the result being how they arrived at their conclusion, and how the latest data from science has affected the

Darwinian view of evolution. Further to this, the metaphysical nature of being will be broadly explored, i.e. how do evolutionists view the nature of being, and how does it conflict with the scriptural view found in Genesis concerning the nature of being. This will work in tandem with the Darwinian case study.

The study will also consider the deterministic view in the light of evolution and evaluate it specifically from the postmodern mindset. Some authors have suggested ways in which traditional ideas of God's role can be reformulated to recognise both law and change concerning reality. A challenge to *The Open-Theism* view will, for example, be undertaken within this particular study of determinism, as this is one of the more controversial modernistic views being proposed today regarding reality. Areas such as: whether God knew that when He created human beings it would lead to the fallen world as it is now seen will be explored.

1.6 The Objective of the Research Methodology

The object of the research method is to bring together the idea of reality and its relationship to the doctrine of creation, and combine it with the field of science regarding its idea of how one is to understand creation. The aim of these research models will be an attempt to bring together the commonality that both disciplines have concerning what reality is and how it affects humanities frame of reference. It will start with the theory of evolution and its struggle for

existence, and the Biblical view of what the purpose for creation is within the realm of reality. The final chapter will conclude with the differing views on the consummation of the world, and a case for theism will then be presented within this chapter. As such, one can sum up the two opposing forces as follows:

- A God world relation regarding its view of creation and reality in the light of Scripture;
- A science world relation regarding what evolution and reality should be in the light of empirical knowledge.

The intent of the study will also be to show that most major alternate world-views are self-defeating and inadequate and that theism is a most viable world-view, and in the author's view, stands the test for truth. An exposition of the following metaphysical systems will also be undertaken, namely, *Pantheism*, *Deism*, *Agnosticism*, *Rationalism*, *Evidentialism*, *Experientialism*, *Pragmatism* and *Atheism*. Their views on reality will also be explored, and they will be critiqued on how they view the existence of God, and how He interacts with creation. From this, the author will then further cement the hypotheses that theism is a valid viable alternative in comparison to other metaphysical views.

The major proponents of these specific views and the impact that they have on one's understanding of reality is a necessary study. One can only come to a reasonably clear understanding of what makes up reality from Scripture, if

one understands the beliefs and views of others. An example would be if one held to a belief in *rationalism* or *empiricism*, one would already be caught up into two contrasting ideas of what makes up reality. The former stresses the *mind* in the knowing process, and the latter lays emphasis on the *senses*, and both depart from man.

With its stress on the mind, rationalism holds to an *a priori* aspect to human knowledge that is something independent of sense experience. By contrast, empiricists stress the *a posteriori*, or what comes through empirical experience.

When it comes to a belief in God, one again gets two differing views on His existence. Rationalists tend to argue for the existence of God from an *ontological view*, whereas empiricists, who are deists, support their belief in God from a *cosmological view*; or from the world to a cause. Cosmologists, for example, use an inductive approach as their method to try to prove the existence of God.

Clearly, a study into how one perceives God will no doubt have a direct impact on how one perceives *reality*. The author has only used the first two views to show the differences and difficulties that one will face throughout this study. The purpose of this study will also be to find, if possible, commonality between the differing views, and use the information as a point of departure to

cement a study in later chapters regarding theism as being a viable choice, if one wants to come to a correct understanding of what makes up reality.

This study will also take the form of an exploration into what makes up the physical universe in relation to reality, as there are several differing views on how the universe was created. For example, Alberts (1996:10) states that three lines of answers are possible:

1. It all happened by chance. However small the chance may be is beside the point. An infinite number of universes may have started up spontaneously and among them this one. Alternatively, there is only this one universe and by chance it turns out the way it is, down to the last detail, including men and microbes.
2. The second answer is to stay with what can be observed and experienced, nothing is known beyond that. Based on this, there can be no conclusive answer to the question; where did it all come from?
3. Thirdly, one could say that it was all purposefully designed by a pre-existent being, called God. By pre-existence one simply implies that God was already there when it all started up, and His origin does not, and need not be part of the answer.

Although the above three approaches broadly represent the religious beliefs of atheism, agnosticism and monotheism, as embodied in the faiths of

Christianity, Judaism and Islam, the important point to recognise is that all three views start off with an initial step of sheer unproven belief, yet a belief that is not confuted either.

The difficulty in showing the scientific world that theism is a necessary step in furthering their understanding of reality, is that science deals with facts. However, facts themselves do not necessarily make up science. In the view of Barton (1999:17), facts are the way that the natural scientist builds a coherent framework for understanding the world. But, as this framework has developed, it has now conflicted with another framework for understanding the world, that of theology. Thus the thrust of this research is to bridge this gap, and find complementarity through presenting a theistic view of the world, in which science and theology can comfortably work to further each ones understanding of reality. As the following research points out, there was a time when science and theology were very much in dialogue with each other.

According to the historians of science (i.e. Hooykaas 1972; Jaki 1980; Pearcey & Thaxton 1994), modern science arose in the context of a Christian world-view, and were sustained by that view. But even if that was once so, argues Poythress (2003:111), modern science seems to sustain itself without the help of clear *theistic* underpinnings. In fact, he further argues, many in the scientific world consider God to be the *God of the gaps*. Meaning, where empirical data fails to answer a specific theory, God is the convenient plug to stop the theory from bleeding to death. The situation looks different if one

refuses to confine God to *the gaps*. In the view of Poythress (2003:112) God involves Himself, according to the Bible, in those areas where science does best, namely, areas involving regular and predictable events. For example, areas such as those that involve repeating patterns and sometimes those that require exact mathematical descriptions. Thus, although the scientific world will not, in many cases recognise this fact, it is the theistic God of the Bible that is involved in those areas they are studying.

It is therefore irrational for science to confine God to the gaps, and then to try and explain the so-called unexplainable. Science should realise that God also orchestrates the regularities that science studies. These regularities go by various names such as, natural law, scientific law and theory. One can safely say that all naturalists are positivists, meaning; they believe in and rely on the existence of scientific laws. What science needs to recognise and acknowledge if it wants to make any further inroads into the laws that govern the world, is that it is transcendency speaking, acting, and showing in time and space.

The real misunderstanding of science though, is its refusal to acknowledge that God is the creator of these laws that govern existence. When science studies the laws, for example, that govern quantum physics, they will, in all likelihood, lead the scientist back to a transcendent source: God. Although many might refute this view that one can come to an understanding of God through an inductive study of nature, Martin (1997:71-75) states that a method

called *The Transcendental Argument for the Existence of God* or TAG is the argument that logic, science, and objective ethical standards (an inductive study), presupposes the existence of God? The basic idea of TAG, when used against natural science, is easy to understand and state. It maintains that certain things that science assumes are true, can only be true if there is a God. Primarily, these scientific assumptions are the beliefs that logical reasoning is possible. It thus states that scientific inference is justified, and that objective moral standards exist. So if an atheist uses logic to refute a theistic argument, or uses scientific evidence to undermine some Biblical position, or even argues that God's omnipotence and moral perfection are incompatible with evil in the world, and thus that God does not exist, TAG maintains that he or she is implicitly assuming God's existence. Thus one could infer that logic and science would be impossible without God. As such, the laws that govern the world cannot be incompatible with the One who created them, and natural science needs to come to this realisation. As previously referred to, this realisation can only be found in accepting theism as a valid viable alternative in comparison to other metaphysical views

1.7 The Context of the Research Problem

As presented throughout the preceding work, what distinguishes world-views is their acknowledgement or denial of an intelligence and purpose beyond all manifestations of perceived reality. The acceptance or denial of a personal God,

thus divides all world-views into basically the scientific and theological. However, one could also regard supplementary world-views such as the agnostic and ideological views and those of a similar belief as separate from the science theology debate, and thus would warrant a separate discussion? But, in the author's view, these beliefs would rather fall within the broader category of *World Religious Beliefs*, and therefore would fall outside the scope of this research.

Understandably, according to Gilkey (1989: 284), theology and science represent a relation to reality that is cognitive or believed to be so. Therefore, since science and theology are interdependent, the issue of the truth of science and that of theology, and the relation among these sorts of truth, represent a central issue to each of them. It is this issue of knowledge concerning the truth of reality that the author seeks to address throughout this work. The main thrust of the argument will be science's failure to answer questions surrounding humanity's journey of life and their final destination, life after death. Therefore, the following is a breakdown of how this will be accomplished.

1.8 The Goals of this Research

The dialogue between theology and science, according to Weder (2000:291), can only make sense if they share a common subject. This implies, however, a certain epistemological disposition in both theology and natural science as both

produce a construction of reality that can and must be distinguished from reality itself. The scientific character of an approach establishes itself by defining the rules and axioms according to which the construction of reality is to be achieved. Therefore, one should not understand the term construction in a merely constructivistic sense. On the contrary, one should rather judge every single construction of reality by the criterion of its adequacy to present a model of reality itself. There is an inescapable degree of circularity here. Different sciences can take multidimensional approaches to the same reality. The aim of dialogue is therefore to broaden the notion of the real by considering as many dimensions as possible (see Polkinghorne 1994:9). There are, of course, considerable differences in the composing accounts of reality. This is most prominent; firstly among the different natural and social sciences, and then between theology and all other sciences.

Science constructs its reality assuming a uniform secularity. That is, understanding the reality of the world without any extra worldly factors. It is a closed system with a continuous chain of cause and effect (see Troeltsch 1913:729-753). Theology, on the other hand, has to respect that alternative approaches to reality, do discover God amid their secular experiences, and therefore might describe reality by using words evoking transcendence. Dialogue would be impossible if either were to claim the following:

1. If natural science were to claim a secular character for reality itself instead of sticking to the secularity of its construction, or
2. If theology were to claim that transcendent reasons are indispensable for describing reality, so that any secular approach would be excluded as false and inadequate.

According to Weder (2000:291), two conditions are necessary for dialogue to avoid these pitfalls:

1. Natural science has to keep in mind the limits of its construction of reality and has to recognise the basic openness of reality to a deeper (and eventually religious) dimension; and
2. Theology has to use the word *God* in such a way that transcendence is not an indispensable factor in explaining reality, but rather a dimension enriching perceived reality (see Schweiker 2000).

Theology must therefore not use religious ideas in such a way as to exclude secular explanations. Its religious interpretation of reality must fully respect the possibility of secular explanation. An example could be the conversion of Paul, which one can determine as a work of the Spirit with full respect for psychological descriptions. Besides, one can imagine that the

interpretations of theology are in reality improved, if one does not exclude secular explanations. *To sum up, theology has to use the word God, not as the counterpart of secular opinion, but as the opportunity for deeper insight: to discover the enigma of reality amid riddles solved as well as unsolved.*

Concerning this, it is a human moral trait to seek explanations. In science, one could claim that they are doing research simply for the sake of understanding how nature performs. Science may argue that it studies nature to make sense of the surrounding world; to give a name to phenomenological activities, or unexpected happenings. One can argue that science is, to a large degree, having much success in explaining the unexpected, but is it enough? Science should accept that to achieve breakthroughs in the dialogue between science and theology, scientific methods, as advanced as they are, hold no intrinsic guarantee that it can lead to ultimate truth, specifically when it comes to unexpected happenings. A classical case, in the eyes of science, is the contingency of the universe. Once this question is addressed, it then leads one to then query the age of the universe, the age of the earth, and the age of humankind, and then questions, just keep leading to more questions. One then has to contend with the many differing views as well, e.g. those who hold to an old earth creation, and those who hold to a young earth creation. Further to this, it is not only scientists but also theologians who differ in this but one of many particular areas of dispute.

The author believes that the most important reason in finding mutual understanding is commitment to a shared goal, as previously expressed. Dialogue is unfortunately impossible without two sides, and yet in some sense all the participants seem to be on the same side. The richness of so many discussions that have taken place arises, not from the clash of opposites, but rather by the contribution of variant views. Science and theology see things from different perspectives, but both focus on reality. Put positively, partners in dialogue must have room to manoeuvre while remaining in their proper roles. An example of this is the dilemma between Determinism and Divine Cause. The arguments from both sides are convincing, yet the result can lead to different endings for the believer; therefore, these differing issues need to be addressed and consensus reached at some particular point in time. Thus the following three goals are the objectives of this thesis:

1. An important aim of this research is to gain critical insight into *how* the differing world-views affect how one understands or perceives reality.
2. A secondary aim of this research will be to demonstrate that God is the source of all creation, through a study of Determinism and Divine causality
3. The primary goal will be to show that a *Theistic World-View* is the most Biblically viable world-view within which reality can be understood. The

primary aim is thus to make a novel contribution towards the science/theology debate, by presenting a Biblically accepted world-view that contributes to a better understanding of reality within the disciplines of science and theology.

1.9 The Effect of the Research Question on Science and Theology

Many accept that science affects how people view reality. The reason is the credible data they produce to explain and make sense of existence. In contrast, a religious faith that does not take account of what is seen to be the discoveries of science seems out-of-date, irrelevant, and incapable of providing credible direction and value to life. When one presents God as Creator and one who sustains life, and a God in which one must believe exists and must trust by faith, one confronts a view that projects annoyance, doubt and even anger. The reason being, the pictures portrayed by theology regarding the world unfortunately fails in many cases, to match the empirical data produced by science and considered to be true by those who need physical evidence in which to place their trust. Therefore, eminent scientific arguments will be evaluated and where possible placed within a viable understanding of how one believes Scripture views reality. Throughout this work, these views and conflicting ideas will be evaluated for their credibility and viability regarding reality.

The author is confident that by engaging the different viewpoints proposed by namely, science, philosophy and theology, one would be in a much better position to argue and present a theistic view as the most acceptable view, whether from a scientific or Biblical premise. Accordingly, from that premise then, to present a view of reality from a theistic point of view. The following is a few common arguments presented by science, theology and philosophy for and against a belief in a Divine Creator, thus affecting how one views reality.

1.10 Can one argue for the Existence of God from Nature and Science alone?

The following presented views, are wide-ranging world-views accepted by scholars, with the methods they use to explain what they believe makes up reality. Throughout this thesis these views will, in one-way or another, be referred to in a general sense, as the argument for a theistic world-view as the most Biblically viable world-view emerges.

1.10.1 The Epistemological Argument

Regarding this view, Frame (1994:102) states the following;

Epistemological arguments traditionally start with the phenomenon of human rationality and ask how that can be. If the world developed by pure chance, it would be highly unlikely that human experience would mirror the

reality of the world in the way one usually assume it does ... The theory of evolution, of course, tries to show (usually on a non-theistic basis) the likelihood of human rationality developing into a reliable interpreter of the world.

Lewis (2002:38) however, argues that “nature is quite powerless to produce rational thought. Rational thought is not part of the system of nature ... It is when you are asked to believe in reason coming from non-reason that you must cry halt, for if you don’t, all thought is discredited”. In response to this Frame (1994:104) states, “If evolution seeks to ensure the preservation of species, then it would seem to have personal characteristics or to be the tool of a person. If it is entirely impersonal with no personal causes, then it has no power to make logic normative.”

Further to this, Frame (1994:103) reasons that, “the hypothesis of absolute personality i.e. God, explains the data far better than the hypothesis of ultimate impersonality i.e. chance. An absolute personality can make a rational universe, because He himself is rational and His plan for creation and providence is therefore rational”. As Lewis (2002:62) puts it, “the rational and moral element in each human mind is a point of force from the Supernatural working its way into nature ... Reason is something more than cerebral biochemistry”. Thus, according to Frame (1994:104), “When unbelievers use logic to raise objections against Christianity, they are using something which manipulates it, how they may. However it points in the opposite direction i.e. to the existence of absolute reason or God”.

1.10.2 Metaphysical Arguments

According to Frame (1994:105), metaphysical arguments, “begin with some fundamental reality in the universe and try to show that reality presupposes, implies, or somehow requires God”. A preliminary review of the following three metaphysical arguments will be undertaken:

- Teleological argument;
- Cosmological argument; and
- Ontological argument.

1.10.2.1 Teleological Argument

The teleological argument reasons that to say the universe is so ordered by chance, is unsatisfactory as an explanation regarding the appearance of design. It is far more reasonable, and far more probable, that the universe is the way it is because God created it with life in mind (Holt 2005).

Although Stephen Hawking, the author of *A Brief History of Time* (1988), is no proponent of this view, he did state that, “It would be very difficult to explain why the universe should have begun in just this way, except as the act of a God who intended to create beings like us”. Although one would view this as nothing more than a deistic view of God, it is nevertheless a profound statement from

someone who is reputed to be atheistic. Indeed, Hawking (1988:127) further stated regarding the intricate design of the universe:

if the earth were ten percent smaller or larger, it would be unable to sustain the atmosphere we breath; if it were a little nearer the sun, we would fry; a little further away and we would freeze; if it were not on a twenty-four-hour spin cycle, no life could exist on it; if it were not tilted at exactly 23.45 degrees we would not be alive to discuss it; if our ozone layer were a tiny fraction thinner, no living matter could survive.

Thus, according to Frame (1994:106), one cannot but be impressed by the intricacy of micro-creation. Accordingly, one begins to get a sense (albeit a very inadequate sense) of the Creator-creature distinction.

As such, Frame (1994:108).writes:

The teleological argument like the epistemological argument begins with the observation that the universe is a rational order, accessible to the human mind. It is built on the premise that truth and rationality are moral values. He continues that, the epistemological argument is reduced, in turn, to the moral argument, and the two arguments yield the same theistic conclusion ... Once again we must answer: from the absolute personality, the Biblical God.

However, on the other side of this thinking is Immanuel Kant (see Kant 1965), who, influenced by David Hume's questioning on cause and effect (see Hume 1946), stated that one's knowledge of the world comes from ones mind interacting with it through observation. Kant further inferred that conclusions

which go beyond observation are invalid. Therefore, such arguments as the Teleological and Cosmological arguments do not hold up, because they go beyond space and time. In other words, according to Kant and Hume, one usually gains knowledge of cause and effect through observing and interpreting things *within* the world, from a specific frame of mind.

1.10.2.2 The Cosmological Argument

The cosmological argument, argues from the existence of the world or universe to the existence of a being that brought it into existence and sustains it. In the view of Holt (2005), it takes the suggestion that the beginning of the universe was uncaused, to be impossible ... Nothing comes from nothing; the cause of the universe was by something outside it.

In line with this thought, Frame (1994:110-112) says

Belief in causes is an aspect of a commitment to reason ... and that all events in the world have causes. To deny that is to claim that some events are irrational happenings. But if some event took place without a reason, how could reason know it? If reason does not find a cause, it does not conclude that there is no cause; rather, it looks further. Once reason finds what it regards as the complete cause, the final and ultimate explanation for the phenomenon under consideration, then it must cease its inquiry.

Every event in the world has a cause, meaning, that everything in the world happens for a reason. But suppose there is no first cause ... then there is no

‘cognitive rest’. But the world is not self-existent and self-explanatory; it is not causeless; it is not an ultimate reason. We know this by the reasoning of our moral and epistemological arguments. The ultimate source of moral norms is personal, i.e. God. The ultimate source of rationality is the ultimate reason for everything.

Lewis (2002:42) takes this a little further:

What exists on its own must have existed from all eternity; for if anything else could make it begin to exist then it would not exist on its own but because of something else. It must also exist incessantly: that is, it cannot cease to exist and then begin again. Absolute reason must exist and must be the source of my own imperfect and intermittent rationality.

The cumulative philosophical and scientific evidence for an origin of the material universe provides strong reason to conclude that there must have been a non-physical originating cause of the physical universe according to Jastrow (1982:17), an agnostic astronomer. He admits that this is a clearly theistic conclusion.

1.10.2.3 The Ontological Argument

The ontological argument is an argument that attempts to prove the existence of God through abstract reasoning alone (see Holt 2005). Frame (1994:114) believes that, “the ontological argument is in some ways the most fascinating – and exasperating – of all the classical arguments”.

The classic formulation of Anselm's (1968) ontological argument first proposed by him in Chapter 2 of the *Proslogion*, goes as follows: "God is that-than-which-no-greater-can-be-thought, and He must, therefore, exist, i.e. He is necessary, for otherwise He would not be that-than-which-no-greater-can-be-thought". Kant's (1987-76) objection to all the other traditional arguments centred on this ontological argument, because He saw that they all depend upon the concept of a necessary being; a being that must exist.

Frame (1994:114 -115) formulates "the ontological argument as follows:

- Premise 1: God has all perfections;
- Premise 2: Existence is a perfection;
- Conclusion: Therefore, God exists".

Although most twentieth-century philosophers reject this type of *proof* (see Allen1985:215), many highly competent and distinguished philosophers have accepted versions of it.

Frame (1994:116) continues to state that, "the term 'perfection' ... presupposes an already known system of values. What is perfect to a Christian might not be perfect e.g. to a philosophical naturalist". He states that the term *perfection* in Anselm's *proof* is perfection in Christianity, where God saw all He had made and declared everything to be *good* (Gen. 1:31; 1 Tim 4:4). In other

words, the ontological argument proves the Biblical God only if it presupposes distinctively Christian values and a Christian world-view of existence ... This is why ontological arguments have been used to defend so many different kinds of gods". Frame (1994:116) concludes that, "either the ontological argument is a Christian presuppositional argument - and thus is reducible to our earlier moral argument - or it is worth nothing".

1.10.3 Religious Experience Argument

The argument from religious experience is the argument that personal religious experiences can prove God's existence to those that have them. One can only perceive that which exists, and so God must exist because there are those that have experienced Him. While religious experiences themselves can only constitute direct evidence of God's existence for those fortunate to have them, the fact that there are many people who testify to having had such experiences constitutes indirect evidence of God's existence even to those who have not had such experiences themselves (see Holt 2005).

1.10.4 Miracles Argument

According to Sproul (2003:170), this is an important argument which has far-reaching implications, since if miracles are true they, "authenticate by giving

outward credentials, as it were, to those who claimed to be speaking the word of God".

Further to this Lewis (2002:160) writes, "The ordinary procedure of the modern historian, even if he admits the possibility of miracles, is to admit no particular instance of it until every possibility of *natural* explanation has been tried and failed. That is, he will accept the most improbable *natural* explanations rather than say that a miracle occurred". In the view of McDowell (1991:136):

In theory, it is the job of science to observe the natural world and seek to understand the natural world through that observation, i.e. empirical research ... In practice scientists often overstep science's domain and attempt to deliver pronouncements on subjects with which science by definition is unable to deal i.e. philosophy and religion.

Dostoevsky (1990:21) states that, "the genuine realist, if he is an unbeliever, will always find strength and ability to disbelieve in the miraculous, and if he is confronted with a miracle as an irrefutable fact he would rather disbelieve his own senses than admit the fact. Faith does not spring from the miracle, but the miracle from faith".

Blanchard (2002:24) correctly puts forth that science must come to the realisation that theology can contribute to their work of explaining nature and the phenomenon that many times supersedes nature. Therefore, one also needs to ask, can theology and science learn from each other?

1.11 Can Theology and Science Learn From Each Other?

Although science believes that their way of describing and explaining the nature of reality is in essence correct, God's Word makes more of the world than the human mind often imagines. In creation and in the Scriptures, God's work and His word are far richer than limited minds can fathom.

Science can argue concerning what reality is from as many realms and ideas as they choose, but clearly they base this on a limited understanding of how the cosmos was formed. By contrast, the Word of God widens the picture, and gives deeper meaning to the purpose for creation and causes one to search for answers to greater truths than science can produce.

Further to this, the reality as perceived by the world is marred by sin. Not only is humanity limited in its understanding of reality by its senses, but their senses are also largely controlled by the sin nature that came via the fall of Adam. There is a huge gap; a *diastasis*, between ordinary reality and reality as revealed by the Scriptures. This gap, which science has been trying for centuries to bridge, albeit it from a holistic pretence view, can only be bridged by the Spirit, as experienced in an overarching frame of reference.

The Bible claims that God knows everything (1 Sam 2:3, Job 21:22; 36:4), He has all knowledge. If this is true, then the Bible is the word of someone who knows everything there is to know. If one wants to come to conclusions about anything, the only sure way would be to start with the word of the One who has all knowledge.

Ham (1987: 40) rightly states; “we Christians must build all our thinking in every area on the Bible. We must start with God’s word, not the word of finite, fallible man. We must judge what people say on the basis of what God’s word says – not the other way around”. Too many people, unfortunately, have started with the word of humans and then judged what the Bible states. In the view of Tillich (1963:17) this is false; he writes-

A phenomenological description is one which points to a reality as it is given, before one goes to a theoretical explanation or derivation. Often, that encounter of mind and reality that produces words has prepared the way for a precise phenomenological observation. In other cases such observation leads to the discovery of a new dimension of life, or conversely to reducing two or more assumed dimensions to one.

One can already see from this brief statement, that the problems which are seemingly normal within the study of reality, is the many conflicting ideas of what the study should consist of, and what the outcome should produce. This is not only from a scientific view but also from a theological view as well. There

seems to be no general consensus or single premise that one can work from, other than pluralism, placed within a theistic world-view.

Thus, one is able to come to a reasonable understanding of *why* one exists if the accepted premise is that there is a Divine creator who has created for a purpose. Without first settling this premise, reasons to explain existence become futile, and will invariably lead to theories that contradict the Biblical account of creation.

Although a brief study has been undertaken on certain metaphysical arguments, in the following chapter the different models and systems within metaphysics will be evaluated. Their positions will be researched on their practicality to explaining reality, including their views on a Divine creator and creation itself. The aim of the study, as previously discussed, will be to show that theism is a valid viable alternative in comparison to other metaphysical views. Reason for this is that most alternative views to theism either fail to explain the purpose for creation, or fall short of the Biblical account of creation.

In succeeding Chapters then, the author proposes to accomplish the following.

Chapter 1: The differing world-views related to the disciplines of science and theology on reality will be introduced, and where fitting, commonality sought and explored.

Chapter 2: The author will undertake a case study of Darwinism, to start the process of showing that theism is a very viable Biblically legitimate view on creation from where reality should be studied, as opposed to the evolutionary process that is many times proposed by science to study and understand reality.

Chapter 3: The research will then turn to the deterministic view in the light of evolution, and assess it specifically from the postmodern mindset. This will be achieved through a case study of *Open-Theism* and its deterministic view of God and reality, to show that even some academically accepted postmodern views on reality, fail as a viable theistic world-view.

Chapter 4: Further to this, a study of God's providence and its relationship to miracles, prayer, personhood and sin will also be examined. In the process the question will be asked: If God has settled His plans, and He will do what He is going to do, then does it really matter whether one prays or not? The purpose of this chapter is to show that a theistic God is intimately involved with His creation, and that Christians are able to live in the assurance that God is present and continuously active in their lives.

Chapter 5: Finally, it will be established that as technology has increased, many of the issues surrounding eschatology have become obscure, and difficult to deal with. The author will show that at times, eschatology has become a topic of

debate, resulting in accusations and acrimony among scholars. Yet it will also be established that the Bible is rather clear as to what the end entails, whether that is towards the believer or non-believer, strengthening the case for a theistic world-view as a very Biblically viable world-view.

To conclude this section, Murphy & Ellis (1996:18) rightly say: "Presently agreed upon understandings of the nature of reality are seriously incomplete..." Thus the author's central proposal to the debate is to present the view - as continuously put forth throughout this introductory chapter - that a theistic world-view should have a major role in the theology-science dialogue today, if anymore headway is to be made in furthering and complementing science and theology's understanding of reality. A theistic world-view is thus still a very appropriate understanding of reality.

This introduction to some of the themes, has laid the groundwork for the first major topic to be explored in depth. To begin, the following chapter will deal with the differing systems and models used within science and theology to explain reality. Unfortunately, the natural sciences continually assume that God is no necessary hypothesis; therefore it is imperative that theology puts forth counter-claims to these assertions, which so easily undermine basic Christian beliefs in a loving and purposeful God, who has a definite plan for humanity.

CHAPTER 2

Differing World-Views Regarding Reality

2.1 Introduction

In many spheres of the natural sciences, specifically in the Western world, strong continuous suggestions go forth for the non-existence of God. Take for example the late American astronomer Carl Sagan, whose opening line in his book *Cosmos* reads: "The Cosmos is all there is, there was, or will ever be" (1984:4). This claim of Sagan obviously raises the question: How does he know? The remark clearly expresses scientific rationalism, the attitude that science is the solution to all problems. From a Christian perspective one has to ask: Is there a valid science that theology could dialogue with, and if so, *should* they be in dialogue with them?

Firstly, theology should not reject natural science, seeing as both natural science and theology seek to understand something of the world in which they live. Generally, both assume the universe is understandable, thus any discoveries made will always have meaning. Hence, one could say that good theology will always find an affinity with good science.

As such, Erickson (2001:74) clearly agrees with this statement by putting forth that while the Bible is theology's primary source for information, it is not the only one. Although one should carefully evaluate alternative sources, they can play a significant part in helping to clarify difficult issues in the Bible. For instance, Scripture teaches that God has created human beings in His own image; but what does this image consist of? The Bible, unfortunately, says very little about the image of God in humans, but it is clear from Scripture, that this image is what distinguishes humans from the rest of the creatures God has created. Since the Bible and the behavioural sciences intersect with one another at this point of common interest and concern, the behavioural sciences may be able to help identify what is unique about the human. Thus, it could yield at least a partial understanding of what this image of God is. Another area would involve God's creation. If God's creation involves the rest of the universe, both living and inherent, then the natural sciences could help one understand what He has done. There are many other such areas that theology could merge with in the natural sciences, but the idea behind the preceding statement is to recognise that they can.

One also has to realise that God is in reality unknown apart from the Word and the Spirit, because God and life are blurred through sin. It is only through the death and resurrection of Christ and the Holy Spirit indwelling in a person, that life becomes real. Barton (1999:11) rightly states that confusion surrounds many scientists and ordinary people, about whom the God of the

Bible is, and what He can do. They do not see God as Creator, Redeemer and Guide in life, but rather as a remote figure occupying a strange private world of half remembered Bible stories and beliefs. Therefore, it is time - and it is already happening in many areas - for science and theology to dialogue with each other. Each field should realise that in their own unique way, they can contribute, no matter how small, to a better understanding of reality. But, before one can successfully do this, an understanding of what constitutes a world-view needs to be explored.

As stated in the introductory chapter, the world, according to Huntington (1993:22), is divided not so much by geographic boundaries as by religious and cultural traditions, by people's most deeply held beliefs - by *world-views*. So argued this distinguished Harvard scholar in a celebrated article a few years ago. And many Christians would agree, because Christians are religious creatures, their lives are defined by their ultimate beliefs more sharply than by any other factor. Clearly, it seems, the drama of history is moved along the frontiers of great belief systems. But if this is so, what does it tell one about the divisions in the world today?

Although Huntington is correct in what he says, it goes a little deeper than that. A persons belief system not only has the ability to move or change history, it can cause divisions that split groups, organisations, and even religious institutions, as will be explored further on in chapter 3.

Regarding this, the author would like to present a holistic and overall view of what one may regard as the three basic structures that make up the differing world-views. This will specifically be related to reality within science and theology.

2.2 Categorising World-Views on Reality

The three basic world-view structures are:

- The first world-view is one that recognises both an ordinary and an ultimate reality, with God being the architect of both; this is a *Biblical world-view*.
- The second world-view holds that there is a reality which lies beyond the physical space-time universe; this is a *Quantum Physics world-view*.
- The third world-view holds that there is nothing beyond this reality, and that everything merely interacts in such a way as to form a whole; this is an *Evolutionary world-view*.

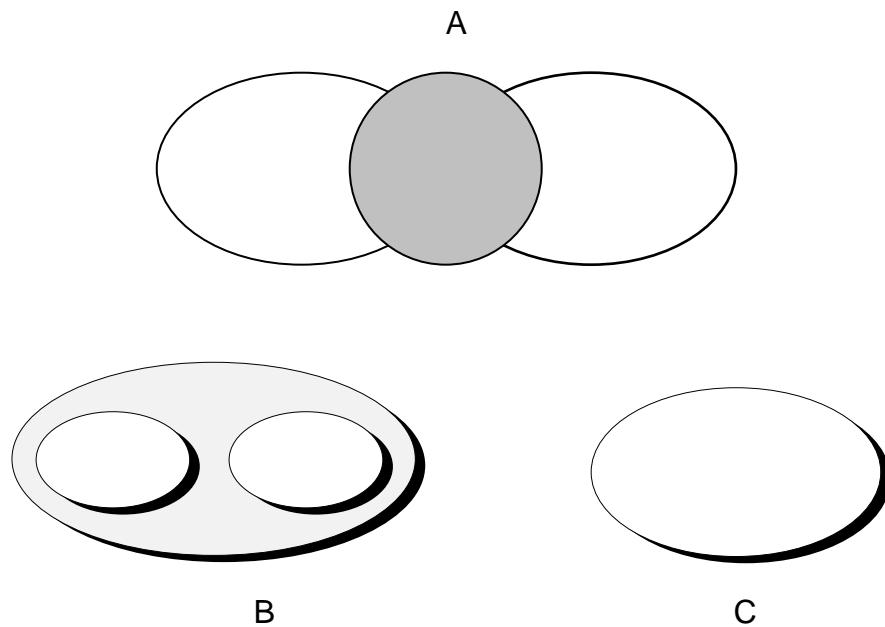
Further to this—

- The first view establishes itself on the belief that God is the sole Creator who sustains everything spiritually and physically.

- The second view, founded on a “Meta” - from the Greek word meaning behind or after view of reality, does not acknowledge a Divine purpose.
- The third view establishes itself on a belief in a purposeless wholeness believing that the various parts interact in a sort of cosmic dance of reality; for example Darwin’s evolutionary theory.

If one had to draw a simple diagram depicting these three ideas of reality, one would have a better picture of the seemingly conflicting ideas of reality between natural science and theology.

2.3 The Basic Structure of World-Views



'A' depicts the Biblical world-view in which God interacts with both the physical and spiritual realms, i.e. a transcendent God.

'B' depicts them as essentially unified although containing their own distinctive, i.e. an Immanent God.

'C' depicts a purposeless wholeness, i.e. an absent God.

2.4 The Context of the Problem

As presented in the introductory chapter, the real difference between these world-views is their acknowledgement or denial of an intelligence and purpose beyond all expressions of perceived reality. The acceptance or denial of a personal God thus divides all world-views into two categories; the scientific and theological as depicted in the above diagrams. Thus, a question one should ask is: How can science bring value and understanding to theology?

2.5 The Value of Science to Theology?

For Knudsen (1979:8), scholars like Herman Dooyeweerd and Abraham Kuyper (1943), believed there is a legitimate place for science in the way God has ordered things. Many believe science to be a God-given means for disclosing the potentialities of the cosmos and that science is a good gift of God and thus

one should use it to His glory. In the view of Knudsen, science is one of various spheres ordained by God, thus a divinely ordained activity.

Yet faith and science, according to most people, are two incompatible terms. For centuries, both disciplines have struggled to decide how to correlate the two views. Again, one may ask: Can science bring value to theology? To take this one step further, one may ask: Is there an authentic science that authentic Biblical theology could and should be in dialogue with?

In answering this, the first problem one confronts in dialoguing with the human, social and natural sciences, is their use of the word *God* in their writings. Fischer (1994:188) states that the word *God* often appears in the writing of scientists, especially those who are more philosophically inclined, or who write for more popularised readerships. He further says that it is not unusual to find the word *God* used over and again in popular books and articles. This is specifically prevalent, he says, in areas of cosmology, fundamental particles and forces, including the origin of the universe and significantly in that of scientific methods and knowledge. The question is: Are they accurately reflecting in their writings the true sphere of what makes up reality by invoking the name of *God* in their work?

For example, the word *God* appears in “A Brief History of Time” by Stephen Hawking, five times in the first chapter, and eight times in the last four

pages of the final chapter. Thus, one could ask: Who or what is the god that these frequent usages by science refer to?

2.6 Religious Gaps

Many scientists, philosophers and so-called *post-modern* theologians argue that in the face of scientific advances, a belief in intelligent design is becoming less of an alternative than ever before. For example, Christians hold that the existence of the world or the existence of life can best be explained by acknowledging a Divine Creator. The Christian believes that this constitutes evidence for a belief in a Divine Creator. When the religious critic says there is no evidence, he or she does not mean to deny the existence of the world or of life, but is rather serving notice that the background principles that give evidential status to a belief in a Divine Creator are not acceptable as there is no evidence. By claiming there is no evidence, the critic is in effect saying, the background principles that a believer holds to, e.g. that there could not have been a world had it not been for a Creator, are false.

Another challenge is that natural science has consistently taken over more and more of the territory once occupied by religious beliefs. For instance, it was once thought that stars and planets moved by supernatural agency, now, science has given a naturalistic explanation.

Humanist Chris Brockman (1978) wrote a children's book entitled, *What about the Gods?* In this book one reads, "We no longer need gods to explain how things happen. By careful thinking, measuring, and testing, we have discovered many of the real causes of things, and we're discovering more all the time. We call this thinking". In their review of this book, the *Journal of Educational Change* (1990) stated, "An excellent book ... The approach is open, clear, and totally non-prejudiced."

One might or might not accept this view, but a central ingredient of most religious faiths is a God who acts in human affairs. Therefore, a belief in a deity who is *personal* is a major principle of the Judeo-Christian heritage. Remove this reality, and the belief system collapses. Goriuch and Smith (1983:340) argue that for a person believing in God, events with an extreme or unlikely outcome may be viewed as caused by God. This is especially likely to happen when no naturalistic explanation exists, for if such an explanation existed, then the outcome would seem more likely, i.e. seeing God as responsible only when no other causative agent is present.

Drees (1991:643-644) puts it bluntly, "if we appeal to God when our technology (including medicine) fails, we assume a 'God of the gaps'". He further states that in conversations on theology and science, there is the critical expression *God of the gaps* referring to the tendency to focus on holes in one's

knowledge or limitations in current understanding and assuming that such gaps are where God is at work.

Science should realise that with an increase in knowledge and power, ones responsibility increases as well. No one can doubt that technology influences one's understanding of reality. If technology and the advances made in natural science and theology are not responsibly handled, a distortion in understanding reality will lead to a distortion in understanding who God is, and His purpose for creation. Within the ambience of Christian thought, one finds reference to humans as stewards and as co-creators. Humans must therefore take responsibility for their actions. In the view of Hall (1990), stewardship has become prominent when one reflects on the ecological damage that human beings have done. Stewardship is therefore seen as taking up what God has entrusted to humans, i.e. humanity must work for the good of all creation, and be guided by the Holy Spirit.

2.7 **The God Who Intervenes**

Whether one chooses to believe or not, God does provide a deeper explanation of the physical universe through His Word, than scientific explanations. But, the word *God* is not merely a name for that deeper explanation. The God of the Biblical Christian world-view transcends scientific explanations, and is in no way dependant on it. Neither is it a mere extrapolation from scientific knowledge.

Therefore, it is a distressing reality that many *religious* people speak only of God when human knowledge has ended, or when human resources fail. Bonhoeffer (1968:142) sarcastically stated, “it is always the *deus ex machina* that they bring on to the scene, either for the apparent solution of insoluble problems, or as strength in human failure ...” Bonhoeffer (1968:187) further argued that the search for the strength of God only in the weakness of man, can have no other effect than to destroy the reality of God for humans.

Although Bonhoeffer is correct in what he says one must conclude from a Christian perspective, that God is bringing humanity to the point where they will have the ability and knowledge to respond to more and more human needs. If this is the case then not only is it possible for better decisions to be made by humans than ever before, but it becomes wrong for them to shirk this responsibility.

The question one may now ask is: How is God with humanity, and how does He help humanity today? Bonhoeffer (1968:188) replies that humanity has the key to the power of God in the world, i.e. in the cross of Jesus Christ. Concerning the world; the cross is a sign of weakness, evidence of the world pushing God out, yet this is the way that God brought salvation to humanity. God brought salvation by suffering, not by His omnipotence. Thus, by falling victim to the world, God remains Victor over the world.

In the view of Pannenberg (1991:8) the word *God*, in the context of western culture is almost exclusively used in the singular. One may or may not believe in God or “a” God; one may refer to “God” as a human protector or myth; but it is always - or almost always - the one God talked about. His reason for saying this is that the word “God” implies as its semantic minimum the idea of power on which all reality depends. In another way, the same idea is expressed in the minimal description that the word “God” refers to a power that determines everything, but this minimal description does not provide a full idea of God.

Although Pannenberg’s view is in essence correct, it does fail on closer examination. As previously stated, in many scientific writings, contemporary scientists usually invoke the name “God” to fill in whatever gaps may exist in their scientific knowledge, at any particular point. The problem with this method is that as scientific knowledge develops, the *gaps* may appear to become smaller and smaller, and the need for God diminishes. However, it will not vanish.

The question is: What conclusions may one draw from the readily observable fact that the word “God” is commonly used in writings of contemporary scientists and science writers? The most obvious one is perhaps how the meaning of this word varies from one usage to another. Thus, one should rather be careful in gaining understanding of each usage to insure that one understands just what the author means by it. One should realise that the

idea of God cannot be exchanged for other ideas. Although it needs interpretation, it is not a metaphor for something else, or a symbol, as expressed by many science writers to evidence the changing needs of human hearts.

In any event, the word “God” refers to a power. Even those who believe in the gods of polytheism refer to them as powers. In the case of the one God, there is only one such power, and one then regards all finite reality as dependent on this power. One cannot understand finite reality in its depth according to Pannenberg (1991:9), without reference to God. The very idea of the one God implies that all finite reality depends on Him. The God of the Bible is sovereign, and nothing is free from His sovereignty. He permeates all reality, whether that reality is explainable or not by the present state of scientific knowledge. Therefore, in the view of the author, one needs to think and ask the important question of whether (natural) science has anything to offer theology. Thus, before any meaningful dialogue with science can take place, an answer to this question is needed, and the following considered before deciding.

- Both science and religious beliefs concern themselves with facts and opinions and both rely on evidence. Facts therefore have value only when correctly interpreted.

- Both science and theology are interpreted in the context of a community, not in isolation.

- Both science and theology are open to change when provided by new insights about the way things are.
- Both science and theology realise the world makes sense, and both want to ask why it does.

Although several scientists are conservative, and are usually unwilling to give much time to the unexpected unless they have good supporting evidence, there is a paradigm shift that is beginning to take place in the scientific world. This is especially true, if the results suggest that they need to make radical changes to their understanding.

One also needs to be realistic and say that scientists do, and always will look back, to authoritative experimenters setting the foundations of science. In contrast, Christians will always look to the Bible as a witness to the consistent revelation of God in Christ. Yet, despite these differences, there is no doubt that there is room for dialogue, it just depends on which partner one uses for this dialogue.

In concluding this section, one may say that in the past, it was possible to retain a religious interpretation of the physical and mechanical structures of the world, and to look directly to God as the cause of everything which humanity

was unable to understand or even describe. The problem is, as humanity has advanced in their understanding of the physical and mechanical workings of the world, a religious interpretation of the unexplained has become irrelevant. Unfortunately, science now only invokes the name of God to those unexplained areas in their research. The God of the gaps is the immediate answer for the scientist still searching for answers. Although one can recognise that God has allowed the increase of knowledge, scientific writing has largely removed God out of the physical and biological context, especially when answers discovered are natural. Science no longer looks for a scientific theory based on God as the sole mechanism. Rather, they rely on their limited knowledge as the primary source of explanation, and they do their physics and biology without God, yet before God. Science will do well to realise that the spiritual realm coexists with the realm of the natural. Similarly, these realms are not only interrelated, but also within the sovereignty of God and both realms are dependent on Him. The God of the Biblical Christian world-view transcends scientific explanation and God is in no way dependent on it for His existence - rather, they are dependent on Him for their existence. Finally, a scientific investigation of these realms cannot prove the existence of God. Instead, such observations and studies can and do provide evidence in support of the Biblical Christian faith.

2.8 The Dialogue Partners

Barton (1999:24) argues well for the need of the correct dialogue partner when it comes to the interaction between the two disciplines. He suggests that while many scientists believe that they can provide reliable hypotheses, some scientists claim much more. To them, there is no truth but scientific truth. These particular scientists follow a form of philosophy called *positivism*, a philosophy that dismisses all metaphysical and religious ideas as meaningless - sometimes termed *logical positivism*. This particular group are insistent that only insights gained from scientific experiments have any meaning, whereas those gained from metaphysics - a form of philosophy which explores the nature of ultimate reality - are invalid. Accordingly, science then becomes the sole method of deciding truth, and the only relevant means of discovery. One could term it a modern "religion" in itself, as it becomes - in a sense - the object of worship. Often this is termed *scientism*, or science separated from society.

2.9 Critical Realism

Natural science and the Christian faith must both trust that the universe favours the critical realist whose view is that models of reality can only ever make good guesses as to what really exists. Expanding on this, Leplin (1984: 260) says "progress towards truth requires constructive thought; the building of metaphors

and models to emit growing insight". He further puts forward that "our theological theories do indeed refer to a reality beyond and greater than ours".

To clarify Leplin's statement, Barrett (2004: 10) suggests that the approach known as *critical realism* has become the working assumption of by far most scientists and theologians. At least, he states, those within the community of the Christian faith, rather than, according to Mooney (1991:310), the *naïve realism* of past ages which claimed direct correspondence between knowledge and the reality to which it refers.

Clearly, both groups appear to accept that absolute and certain knowledge is simply not attainable since many cultural, personal and conceptual filters intervene between the knowing subject and the object known. In the view of Barrett (2004:10), at all levels, the enterprise of understanding reality has turned out to be continually open to correction and refinement. Unlike the popular stereotype of closed minded ideologies rigidly defending propositional statements, theologians have, as a group, been experiencing for some time now a genuine modesty on what they know and how they know it. Their enterprise of understanding reality has turned out to be as corrigible as that of science.

To bring a balance to this, Peacocke (1993:4) argues that critical realism in theology, maintains that theological concepts metaphors and models should be regarded as partial and inadequate but necessary, and thus, the only way of

referring to the reality that is named as “God” and to God’s relation with humanity. Case-Winters (1997:357) believes, that both science and theology do provide models that exercise intense influence on human behaviour. One could present it as follows:

- Science provides models of the way things are or how the world works.
- Theology provides metaphors of ultimate reality, or that which is the highest, best, and most valuable. These metaphors intend to present a true picture.

The difficulty one faces is the “how” of merging this interaction between science and theology? As previously stated, interaction between the two is not only desirable, but necessary. Both believe that models are essential and provide the soundest ground to interact from, but how?

Accordingly, Barbour (2000:7) proposes four ways one could conduct this: *Conflict*, *Independence*, *Dialogue*, and *Integration*. He believes that each type has several variants that differ significantly, but the variants have features in common that allow various groupings of them, for example:

- *Conflict*: Is scientific evidence for evolution incompatible with any form of deism? Can the natural sciences and theology believe in both God and evolution?
- *Independence*: The view holds that science and theology are strangers who can co-exist, as long as they keep a safe distance from each other. Accordingly, there should be no conflict, as science and theology refer to differing domains of life or aspects of reality.
- *Dialogue*: Within this method, one may show similarities between science and theology, even when admitting differences. For example, science has boundary-limited questions: Why is the universe orderly and intelligible? Theology on the other hand can use concepts from the natural sciences to explain God's relationship with the world, i.e. the scientific creation of the world including all its intricate and interwoven relationships within itself. Scripture does not give all the details, but natural science can. Both scientists and theologians are engaged as dialogue partners in critical reflection on such topics, while respecting the integrity of each other's field.
- *Integration*: Within this structure a more systematic and extensive sort of partnership occurs, especially with those who seek a closer integration of the two disciplines. For example, astronomers have argued that the

physical constants in the early universe appear fine-tuned as if by design
- theology confirms the design by Scripture.

Others like Polkinghorne (1998:22) add two other categories to this namely,
Consonance and *Assimilation*.

- *Consonance*: In this view, science and theology retain their due autonomies in their recognised domains, but the statements they make must be capable of appropriate reconciliation with each other in overlapping regions.
- *Assimilation*: Here there is an attempt to achieve the maximum conceptual merging of science and theology. Neither is totally absorbed by the other - that would be to turn back to the picture of conflict, with a clear winner - but rather, they are brought closer together.

Based on these proposals, the author believes that the complementary model or as some call it, *the complementarity of science and theology*, is the most preferred when dialoguing with natural science. Barbour (2000:77) argues though, that the complementarity model cannot be used in science and theology as they are practiced in differing situations and serve differing roles in human life. The author disagrees with this view, as natural science and theology do share common ground, that of creation. Barbour (2000:77) further states that the

complementary model provides no justification for an uncritical acceptance of dichotomies. Unfortunately, this seems in contrast to his previous statement where he argued that complementarity does not rule out the search for unity, nor does it support the claim that scientific and religious assertions are totally unrelated and independent. However, in the author's opinion one can find common ground between natural science and theology when trying to understand reality. The reason being, the epistemology used by each discipline to achieve a correct understanding of reality is open for critique, especially the view of ontology held by both regarding what reality is. Thus, when one realises that the two views are working from different premises to achieve a common goal, one concludes that the one overriding factor is that God creates and sustains everything, whether science chooses to recognise this or not. Therefore, the complementary model, which the author has opted for as a working method will, for all intent and purposes, show that science and theology are not mutually exclusive, but do offer complementary perspectives on the universe and creation.

One could argue the positive and negatives of all the models referred to, but what is needed is a framed proposal on a unified system that both natural science and theology can work from. Indeed, a system that could incorporate - when and where needed - more than one of the mentioned models, would be the ideal system to work with. Thus in the following section, a proposed model will be presented which will be suitable, in the authors view, for both disciplines.

2.10 An Alternative Model from Theology

It does seem that within the subfields of theology, one group, the systematic theologian, has taken the lead in developing a working relationship with the natural sciences. It has been the systematic theologian who has carefully examined scientific methods or models and adopted them into scientific methodologies. From there they have advanced in certain cases to incorporate knowledge gained from science into formulating doctrinal beliefs. On the side of science, one has to also acknowledge that there are many scientists who have turned to the discipline of systematic theology in order to systemise the interaction between the two disciplines.

One only has to read the creative works of scientists like John Polkinghorne (1994, 1998, 2000), Alister E McGrath (1990, 2004, 2005), Ian Barbour (1997, 2004) and Arthur Peacocke (1984, 1993, 1998) - to name a few - who have successfully dialogued and brought consonance to the two disciplines, by bridging knowledge into works that have had a profound effect on each discipline. Although some of these authors have made alternative proposals on methods of interaction, they have all, in one-way or another, incorporated systematic theology into the flow of their work and made it into one dynamic unit. A unit that incorporates one or more of their own mentioned models or systems

of interpretation. This consonance of knowledge has led many to a greater understanding of how creation and the Bible work together.

There is no doubt that this rethinking and systemising of the natural sciences with theology has led to more questions about God than answers. Theology paints a picture about God which is mysterious, indescribable and transcendent, i.e. God is beyond human comprehension. Further to this, the special revelation of God in Christ Jesus only further heightens this mystery of a Divine God in total control of the universe and all that occupies it. Yet, as Peacocke (1984:101) rightly states, that mystery is by no means confined to theology alone - what characterises twenty-first century science is a new appreciation of the mystery of existence. Quantum physics, with such things as *indeterminacy* and *vacuum fluctuations*, has increased knowledge, while it has humbled previous hubris for assuming that causal explanations would soon be understood. In many spheres of study, science has come to the realisation that the foundations of physical reality are more elusive than once thought.

If natural science and theology are, as claimed, partners in the great human quest to understand reality, then they are capable of interacting with each other. Whatever model or system the scientist or theologian chooses to use for his or her research, should always be to the benefit of understanding creation. Besides this, it should also lead one to a greater understanding of who God is, and what He has created existence for.

In the first half of this chapter, ideas were presented about both the meaning and the potency of systems and models in working towards finding a solution that would benefit both natural science and theology in its search to understand what entails reality. In the following section, the concentration will be on how an understanding of the different categories that make-up reality impacts both science and theology in their search for truth. This particular study will be presented under the banner of metaphysics - a branch of philosophy that studies the different categories of reality. One could expand this definition a little by saying that it deals with a very general picture of what the world is like, what things there are in it, and what one can know about it. It engages in the attempt to know reality, not a mere appearance of it.

2.11 Introducing Metaphysics

Firstly, *what is there* and *what is real?* The answer according to Quine (1963:1) is simply “Everything”. Obviously this is correct; whatever there is, is included in “everything”, while whatever does not exist is really “nothing”. But obviously both questions need much more explanation than this. What is needed is to break down the question “what is there”, into more specific questions; questions to which metaphysics will probably give detailed answers to.

Therefore, the first rule in understanding metaphysics is this: *One may take as premise for a metaphysical argument anything one knows or has good reason to believe to be true.* This would certainly include ordinary perceptual beliefs such as “I believe that I am now seeing a tree”, as well as the many sorts of beliefs justified through sense perception, including beliefs about historical facts and well-established results of science. Another broad category of beliefs can be classified under the heading of logic, for example “no statement can be both true and false”. One can also relate this to mathematical equations: “If one adds equals to equals, the result will be equal”. Justification here seems not by sense perception, but by some sort of rational insight or understanding. One can therefore define logic as the theory of reasoning, proof, thinking or inference.

Further to this, there are still other beliefs which do not readily fit into any of these categories. For example: “Nothing begins to exist without a cause”, this is something all believe, but what are the grounds for accepting it? Another example is: “Nothing we do now can change the past”. These examples are things one learns by experience and accept as a given fact and are not open to debate, as the argument will lead nowhere. No amount of research will find a solution to the question. The only logic answer one can come to, is that there really is no answer to these questions. This does not mean that one ceases from searching, it simply means that instead of searching for answers, one should rather be studying the statements. This is the goal of metaphysics, and usually

falls under the subcategory of epistemology, the study about knowledge, including how and to what extent one possesses different kinds of knowledge.

2.12 An Approach to Problems of Knowledge

Every philosopher, theologian and scientist, seeking to interpret an infinitely complex reality and universe, chooses from it elements which seem to him or her to be of most worth as principles by which to organise the rest of it.

Scientists are scientists because they believe that their way of finding truth is the most beneficial way and his or her object of search the most important. The theologian does the same about the apprehensions and expressions found in Scripture. One could therefore carry this type of thinking to many other spheres of study as well.

Consequently, scientists and theologians are cautious about the varying aspects of post-modern thought. This is especially so when the tendency is to embrace varying points of view as equally valid, and to deny the existence of an objective reality with which one has to deal with. For example, many post-modern thinkers incline themselves to dismiss the notion of absolute truth or reality and reject any claim to absolute foundational knowledge. Polkinghorne (1998:14) elaborates on this by stating that many see their disciplines as engaged essentially in a quest to know and understand aspects of reality. Thus inferring reality, material or Divine, from the way their models and theories make

sense. This is especially so when dealing with great swathes of physical data on the one hand or great swathes of spiritual experience on the other, and indeed from the explanatory power displayed by these models and theories.

Doubtless, science, especially physics, has achieved enormous success as a way of knowing the structures and processes of the material world. It has done so by limiting its realm of inquiry to that which can be empirically examined. But, as will be further explored through metaphysical models, this is an inadequate way to try to obtain a holistic picture of reality.

Thus, according to Barrett (2004:11):

For a genuine theory of everything, a meta-narrative which brings together the unfolding world through human experience and theology and considers the insights and knowledge derived from other disciplines is the ideal model for a theory of reality.

In the following section, several metaphysical theories concerning how the world is perceived, will be considered and evaluated.

2.13 The Question of God

According to Bracken (2000:362), while there are multiple images to describe the infinite and strictly incomprehensible reality of God, relatively few of these images can be employed as the governing idea within a systemised theology

claiming to describe the God-world relationship. With respect to his own metaphysical scheme, Whitehead (1978:343) points out "God is not to be treated as an exception to all metaphysical principles, invoked to save their collapse. He is their chief exemplification." Thus one could say that only a few images on closer scrutiny could be incorporated into a metaphysical scheme, as an exemplification of its basic principles.

Some might say that this statement limits the infinite reality of God, as this renders Him finite by incorporating Him into a human metaphysical scheme. But, the obvious reply is, one is not dealing here directly with the reality of God, but with the more limited concept of God which is working within a given metaphysical scheme. Therefore, one could say that the metaphysical scheme as a whole, functions as a model or extended metaphor for the God-world relationship. Barbour (1997:117) notes with respect to the use of models in both theology and natural science, that models "are neither literal pictures nor useful fictions, but limited and inadequate ways of imagining what is not observable. They make tentative ontological claims that there are entities in the world something like those postulated in the models".

Although Bracken (2000:362) agrees, he does state that provided one respects the analogical character of the metaphysical system as a whole, one has every right to insist that the idea of God within the system be governed by the same metaphysical principles as every other concept within that system.

Thus, if one chooses not to be governed by these same principles, the system then removes the idea of God and the system is consciously or unconsciously atheistic. One could say that it effectively *prescinds* from the reality of God in working out a theoretical scheme for understanding the world. One could then rightly state that an atheistic viewpoint will then emerge from the study. Besides, while this is a perfectly legitimate methodology for the use of models within natural science - since scientists *ex professo* are seeking a naturalistic explanation of events within this world - it is definitely a paradoxical procedure for theologians supposedly seeking a rational explanation of the God-world relationship.

Rightly, one could state that there are a limited and exclusive number of ways to not only explore the reality of God, but reality as a whole. The following section will review these systems and decide which system best fits into the Biblical world-view of God and reality.

Before beginning with this study, it would be sensible to review what Pannenberg (1990:xiii) suggests concerning metaphysics. He writes:

In recent years we have heard from many sides that it is necessary to return to metaphysics, the field of study once taken to be 'first philosophy' as the object of our intellectual attention. It cannot be a matter of indifference to theology when philosophers again take upon themselves these themes that have been neglected for so long. Christian theology is dependent upon the conversation with philosophy, especially for the clarification of its discourse about God, and

also for its work on the relationship between God and created reality. Moreover, theologians have repeatedly made their own contributions to the development of philosophical thought within the history of metaphysics.

2.14 Differing Metaphysical Systems

There is no doubt that the teaching of Scripture about the relationship between God and creation is unique among the religions of the world. The Bible teaches that God is distinct from His creation. He is not part of it, for He has made it and rules over it. The term often used to say that God is much greater than creation is the word *transcendent*. Very simply, this means that God is far “above” the creation in the sense that He is greater than the creation and He is independent of it.

However, God is also very much involved in creation, for it is continually dependent on Him for its existence and its functioning. The technical term used to speak of God’s presence in creation, is the word *immanent*, meaning “remaining in” creation. The God of the Bible is no abstract deity removed from, and uninterested in His creation. The Bible is the story of God’s involvement with His creation, and particularly the people in it. Job affirms that even the animals and plants depend on God: “In His hand is the life of every living thing and the breath of all mankind” (Job 12:10). In the New Testament, Paul affirms that God “gives to all men life and breath and everything” and that “in Him we live and move and have our being” (Acts 17:25, 28). Indeed, in Christ “all things hold

together" (Col. 1:17), and He is continually "upholding the universe by His word of power" (Heb. 1:3). God's transcendence and immanence are both affirmed in a single verse when Paul speaks of "one God and Father of us all, who is above all and through all and in all" (Eph. 4:6). In the following section, the different views by scholars regarding God's transcendence and immanence will be explored, and a conclusion reached as to the most viable view regarding God's involvement in His creation.

2.14.1 Pantheism and Panentheism

As an alternative to models or systems of the God-world relationship, McFague (1987:72) offers the metaphor of the world as God's body, i.e. a *pantheistic* view of God. However, she does though admit the unavoidable limits of this line of thought, and does concede that the world is literally not God's body since God is not a physical entity like humankind. But, she states, thinking of the world as if it were God's body allows one to overcome the distance between God and the world which is imposed by the monarchical model of the God-world relationship. Similarly, Clayton (1997:47) says that the fear of pantheism has led theologians for far too long to separate the world too severely from God. This, in his view, leads to an excessively strong doctrine of the transcendence of God that is incompatible with the fundamental insights of a Biblical creation.

In defence of McFague's view, she does say that the danger within pantheism is that it seems to make God dependent on the world for His existence much as humans are dependent on their bodies for existence. Therefore, McFague (1987:72) proposes that this metaphor for the God-world relationship should rather be understood as a form of *panentheism*, as opposed to *pantheism*. She goes on to state that God is a personal agent apart from the world even though internally, God associates to everything in the world (1987:78-87). Only in this way, as McFague sees it, can the God-world relationship represent "a destabilising, inclusive, non-hierarchical vision of fulfillment for all of creation."

In reference to panentheism, Geisler (1976:193) says that it is not to be confused with pantheism, although they do have things in common. Panentheism is the belief that God is *in* the world the way a soul or mind is in a body; pantheism is the belief that God *is* the world and the world is God. An example of this thinking is given by Mander (2000:199) a confessed pantheist who stated "I am a pantheist. To be more specific, I believe that the universe contains just one substance which, as a being both spiritual and infinite, we should call 'God' or the 'Absolute'." However, when one considers pantheism and panentheism as metaphysical systems, there are many problems.

According to Grudem (1994:269), Pantheism denies several essential aspects of God's character. If the whole universe is God, then God has no

distinct personality. God is no longer unchanging, because as the universe changes, God also changes. Moreover, God is no longer holy, because the evil in the universe is also part of God. Another difficulty is that ultimately most pantheistic systems (such as Buddhism and many other eastern religions) end up denying the importance of individual human personalities: since everything is God, the goal of an individual should be to blend in with the universe and become more and more united with it, thus losing his or her individual distinctiveness. If God himself (or itself) has no distinct personal identity separate from the universe, then we should certainly not strive to have one either. Thus, pantheism destroys not only the personal identity of God, but also ultimately, of human beings as well.

On the other hand, while attempting to avoid the extremes of some other views of God, the panentheistic world-view does try to develop a positive metaphysics of its own. It also provides some important insights, such as its arguments for the existence of God, and its rejection of the pantheistic identification of God and the world. However, as a total world-view, the God of panentheism is inadequate. The basic dipolar idea of God as an eternal potential seeking temporal actualisation is self-defeating. No potential can actualise itself; and if there is some pure substance outside the panentheistic God that actualises it, then one must assume a theistic God of pure act to account for the panentheistic God.

2.14.2 Agnosticism

As previously expressed, there are various approaches or methods to the question of God, some positive and some negative, of which perhaps the most widely held in the latter category is agnosticism, which literally means no knowledge.

Although the term agnostic was coined by Huxley (1889) in his writings “Agnosticism and Christianity”, it was the writings of David Hume, and Immanuel Kant that laid down the philosophical basis of agnosticism. Regarding this view, Huxley (1889) wrote:

I took thought and invented what I conceived to be the appropriate title of ‘Agnostic’. It came into my head as suggestively antithetic to the ‘Gnostic’ of church history who professed to know so much about the very things of which I am ignorant, and I took the earliest opportunity of parading it to our society to show that I, too, had a tail like the other foxes...”.

According to Geisler (1976:26), there are two kinds of agnosticism; *limited* and *unlimited*. The former is no threat to Christianity but is compatible with its claim of finite knowledge of an infinite God. Unlimited agnosticism however, is self-destructive, for it implies knowledge about reality to deny the possibility of any knowledge of reality.

In a lightly worded defence of agnosticism, Raman (2004: 953) writes that like the words faith and doubt, agnosticism is often misunderstood. One may reject it, he states, because it hesitates to affirm a reality beyond the concrete world of appearance or as some call it *commonsense reality* in which one normally functions. Some have argued that agnosticism leads to meaninglessness because it insistently refuses to attach long-range significance to anything. Therefore, many believe that it further leads to hopelessness because it confesses that one is totally lost as to what life is all about. Thus, this leads to an atheistic outlook because it says, directly or indirectly, that there is not sufficient evidence for one to believe in the existence of God. Cantore (1977:172) succinctly expresses this view by saying “Science leads to agnosticism, and agnosticism breeds desperation”.

Finally, in the view of Geisler (1976:26) agnosticism is a subtle form of dogmatism. In disclaiming the possibility of all knowledge of the real, it stands at the opposite pole from the position that would claim all knowledge about reality. Agnosticism is negative dogmatism, and every negative implies a positive. Thus, total agnosticism is not only self-defeating but it is self-deification. Only an omniscient mind could be totally agnostic, and finite human beings confessedly do not possess omniscience. Therefore, the door remains open for some knowledge of reality. Reality is not unknowable; therefore, according to Raman (2004:954), agnosticism can lead to paralysis of action, meaning that if one is

not sure of heaven and hell, of punishment or a rewarding God, one cannot choose between moral options.

The following three metaphysical systems can be grouped as they are similar in thought patterns and outlook, and all three require, as the heart of their belief system, logic, experience and evidence as tests of truth.

2.14.3 Rationalism

According to Steenmark (2000:187), a central concern in modern philosophy of religion, is the question of whether it is rational to believe in God. A particular area within philosophy of religion that deals with this and similar questions is sometimes called *Religious Epistemology* or *Epistemology of Religion*. Roughly, it may be defined as the attempt to understand and explain how one conducts belief formation and regulation within religion. Reason for this, is to assess whether these belief formations and regulations are acceptable and successful ways of carrying out one's cognitive affairs in this life. If this is not acceptable, to then propose other ways in which religious belief formation and regulations should be conducted. One could say that the heart of rationalism is the thesis that the rationally inescapable is the real.

Rationalistic theism holds that the existence of God can be explained with logical necessity. Geisler (1976:29) contends that what characterises rationalism

is its stress on the innate or *a priori* ability of human reason to know truth. Basically, rationalists hold that what is knowable or demonstrable by human reason is true. With its stress on the mind, rationalism holds to an *a priori* aspect to human knowledge, that is, something independent of sense experience. By contrast, empiricists state the *a posteriori*, or what comes through empirical experience. Geisler (1976:29) further states that in like manner, rationalists argue for innate ideas or principles, whereas empiricists believe the mind is a *tabula rasa* or blank slate on which sense experience writes its impressions.

2.14.4 Experientialism

Experientialism offers *experience* as the final court of appeal. The experience may be special or general, private or broadly available, but it is the self-attesting character of experience which verifies the truth-attached claim.

One just has to look at Jung's metaphysical framework (see Jung 1975), to understand the hidden dangers of this particular system. According to Kotsch (2000:229), Jung accompanies his psychological epistemological and his empirical and hermeneutical methods by a meta-theory of experience. This experience centres on a belief in the psyche as a *potentially* experientiable realm in contrast to a non-experiencable realm where spirit and matter co-mingle.

Thus, Jung's entire psychology is pragmatic, and is based on experience.

In "letters to Werblowsky" (see Jung 1975) he stated:

The realm of the psyche is immeasurably great and filled with living reality. At its brink lies the secret of matter and of spirit. I do not know whether this schema means anything to you or not. For me it is the framework within which I can express experience.

As a source and basis of truth, Jung's claim may be correct, but as a *test* or warrant for the truth of that claim, Jung is decidedly wrong. According to Geisler (1976:80), no experience is self-interpreting and there are conflicting truth claims built on experience with no purely experiential way to adjudicate between them. Experience is merely a condition of persons, whereas truth is a characteristic of propositions.

A retreat to mystical and inexpressible experience as in Jung's case, is inadequate because it is both self-defeating to suggestively describe the indescribable and impossible and to recognise or distinguish it from anything else unless it is describable. Jung's metaphysical framework and experientialism as a metaphysical system for understanding religious truth, is unfortunately either meaningless or self-defeating.

2.14.5 Evidentialism

In the view of the evidentialist, truth is based on facts or events, or as Geisler (1976:93) puts it, in experiential or empirical data. It calls one to the basic facts or events of the world, or at least to some of them. Truth must be based on facts, not in ideas or theories, or else it is not grounded at all. Many evidentialists place strong emphasis on the objective and public nature of facts. When it comes to religious beliefs, Cantens (2004:772) states that

Some philosophers consider belief in God to be rational if and only if there is sufficient evidence to support the belief and the strength with which one holds the belief is proportional to the evidence that supports it. This view is called evidentialism.

Evidentialism, like experientialism, do offer some contribution to ones understanding of events and facts regarding religious truth, but like experientialism, it fails to adequately answer questions surrounding God and the world.

In defence of evidentialism, Christianity is, according to Geisler (1976:83) a historical religion, and it is common for Christian apologists to appeal to the historical evidence of the life, death, and resurrection of Jesus Christ as a verification of its claim to be true. However, the appeal to evidence alone is by no means limited to the past or historical evidence. No meaning is inherently

and inseparably attached to a given set of facts, and no one can assign ultimate meaning or truth to facts unless it is from the overall perspective of a world view.

2.14.6 Pragmatism

The basic view of a *Pragmatic* or *Pragmatist* is that one cannot *think* or even *feel* truth, but one can discover it by trying to *live* it. A more detailed illustration of this is given by McFague (1987:196) in which she argues that the main criterion for a true theology is pragmatic. In other words, one should use metaphors about God that are most helpful in the praxis of bringing about fulfilment for living beings. One should therefore ask, not whether one (image) is true and the other false, but which one is a better portrait for today. One cannot really doubt that indeed there are some important insights provided by pragmatists that are not foreign to Biblical Christianity. For example; Jesus said “by their fruits you shall know them” (Matt 7:20). Christians need to display a strong practical application of God’s word in their lives if they are to win over the sceptics and atheists.

While all these are good, and all truth must work, not everything that works is necessarily true. In the view of Erickson (2001:43), pragmatism emphasises that there is no absolute truth; rather the meaning of an idea lies solely in its practical results. The goal then, is not metaphysical truth, or statements about the nature of ultimate reality, but rather the meaning or the

truth of a proposition is its experienceable consequences (see also Pierce 1955:23-41 & James 1955:192).

One could ask: How can a person passionately believe *in* God when he or she has no evidence to support a belief *that* God is there? Many differing views work for many different people, but often these results do not relate to truth. Also, who can know what the long-run outcomes or results of belief will be? The Christian apologist believes that truth will work in the short run and in the long run, but he cannot hold that what works is true, for, many false and evil things have worked for many people for many years. No finite can see the distant future, thus pragmatism fails as a sufficient test for truth in the present.

2.15 A Theistic World-View; the only Likely Alternative?

In the preceding section, several views were briefly assessed on their theistic beliefs. In each case the views were shown to be inadequate and self-defeating in testing a world-view of God and reality. In the following section, the claim that theism is a satisfactory Biblically viable world view will be offered, in opposition to the world-views of *Deism* and *Atheism*.

2.16 Theism Gainsays Deism and Atheism

2.16.1 Deism

Unlike Deism, which holds that God created the world, but denies His supernatural intervention in it, *Theism* is of the belief that there is a God both *beyond* and *within* the world. That is, a Creator who sustains and sovereignly controls the world and supernaturally intervenes in it. Strong (1977:414) defines deism as, "the view that represents the universe as a self-sustained mechanism from which God withdrew as soon as He had created it". On the positive side of deism, they do hold, like theism, that God created the world. Erickson (2001:504) writes that deism also has little difficulty with the scientific data related to evolution. The departure comes by deism's denial that God supernaturally intervenes in it. They argue, in short, that God is *beyond* the world but He is not active in the world in a supernatural way. According to Geisler (1976:152), deism is not presently a major world-view but its significance is both historic and lasting. The deistic movement arose during the seventeenth-century and although it flourished in the eighteenth-century, it largely died out by the nineteenth-century. It does still represent however, one of the major metaphysical positions about reality that conflicts with theism. The central tenets of deism can be summed up as follows:

- They do state that there is a God who created the universe, and He is the author, architect, and the first cause of the universe.
- The second tenet is that miracles do not occur today. Some argue that this would be contrary to God's nature as it would then imply an imperfect universe made by a perfect God, which would then be contrary to each other.
- The third tenet is a denial of the doctrine of the Trinity. Their argument is that no supernatural events take place today and because the birth of Christ is regarded as a supernatural event, Christ in essence was not a supernatural being. A denial of the deity of Christ is a denial of the presence of the Spirit.

Dulles (2005) takes these tenets one step further, he argues that deism also suffers from grave philosophical weaknesses. He further argues that many of its proponents, specifically those in England like John Toland to Matthew Tindal (1657-1733), lacked the metaphysical principles needed to build a viable natural theology. According to Dulles (2005:25), the deist system also suffers from some internal tensions:

If there is an omnipotent God, capable of designing the entire universe and launching it into existence, it seems strange to hold that this God cannot intervene in the world He had made or derogate from the laws He had

established. He might have good reasons for bestowing some added benefits not contained in the work of creation.

A deist believes that God made the world but has no dealings with it. God created the natural world but never interrupts it with supernatural events. This view of deism is also contrary, according to Williams (1996:117), to the doctrine of providence. It portrays God as someone disinterested in the world He created. Therefore, He has neither need nor intends to involve Himself in it. Despite the many helpful emphases and prods to Biblical theism, the deistic position is decidedly inadequate. For once one admits the miracle of creation, the possibilities of other miracles follow. Indeed, the very concept of a deistic God is one that is not reducible to a purely mechanistic model that would allow for no personal intervention in the world. Therefore, according to Williams (1996:120), a doctrine of creation without a doctrine of providence readily becomes deism. In line with this thinking, Grudem (1994:271) rightly states that while deism does affirm God's transcendence in some ways, it denies almost the entire history of the Bible, which is the history of God's active involvement in the world. Many "lukewarm" or nominal Christians today are, in effect, practical deists, since they live lives almost totally devoid of genuine prayer, worship, fear of God, or moment-by-moment trust in God to care for needs that arise. Thus Deism is defunct both historically and philosophically.

2.16.2 Atheism

Atheists claim there is no God. They contend that there is no God in the world (as pantheism holds) and there is no God beyond the world (as deism claims). Significantly the twentieth-century has seen a marked increase in departure from God. According to Williams (1996:247), this departure can be directly attributed to the thoughts of such men as Karl Marx, Charles Darwin and Sigmund Freud. Through their views on political revolution, evolutionary science and psychological analysis, all served to view God, at best, as expendable or often as a liability. Thus atheism has come to be the compelling philosophy in all such systems.

One might single out in particular the attention paid to knowledge and wisdom in atheism. In the words of Paul, these idols take the place of God. In Rom 1:22 Paul writes that “Claiming to be wise they became fools”. When God is no longer glorified and given thanks, according to Williams (1996:247), the result is that true knowledge fades. When this occurs, there is the tendency to seek after worldly wisdom, or the wisdom of philosophers which then becomes the ultimate way of truth. Many may still use the word “God”, but more, unfortunately, as an intellectual idea and not as a living reality.

Of course, atheism is not merely a negative position. Most atheists do not view themselves as antitheists but simply non-theists. According to Geisler (1976:215) atheists, as non-theists, offer a positive view of their own which they may call humanism, materialism, naturalism, or positivism. However, these views will not be explored as they are basically all connected to the view of a non-existent God and do not really warrant an explanation.

In the view of Berkhof (1958:22), one can classify atheists into two groups namely the practical and theoretical atheists. The former, in his view, are simply godless people, who in their practical life do not reckon with God, but live as if there was no God. The latter are, as a rule, of a more intellectual kind, and base their denial on a process of reasoning. They seek to prove by what appears to be convincing rational arguments, that there is no God.

However, according to Geisler (1976:234), this category of atheism provides some valuable correctives to and modifications of theism. Many of its arguments either correct misconceptions some theists have of God or of His relation to the world, or else they expose contradictory theistic concepts. Atheists have been active as well in contributing to humanistic causes and earnest in scientific endeavours.

But, as a total world-view atheism does not measure up. Firstly, its arguments are invalid and often self-defeating. Secondly, many atheistic

arguments are really reversible into reasons for believing in God. Finally, atheism provides no solution to basic metaphysical questions regarding the existence of the universe, or the origin of personality and the actualisation of the world process. Atheists must believe that something comes from nothing, that potentials actualise them and that matter created mind. It seems much more reasonable to believe in a God who made something where there was nothing, who actualised the potentials that could not actualise themselves, and whose mind formed matter.

2.17 Conclusion

In the beginning of this chapter it was proposed that strong suggestions are continually put forth for the non-existence of God. It was also suggested that God is in reality unknown apart from the Bible, and it is only through the death and resurrection of Christ and by the infilling of the Holy Spirit that life becomes real.

It was also stated that from a scientific point of view, it does seem that science is confused about whom the God of the Bible is, and what He can do. This has lead to several differing world-views on what makes up reality, which was then briefly explored concerning the problems related to them.

A question was also asked if science, in its confusion of what reality is, could bring any value to theology and its study of reality. A concern was then raised as to the use of the word “God” in scientific writings. It was established that the use of the word god was merely a word used to fill in the gaps of scientific knowledge where they have failed to adequately answer their own questions. It was clearly stated that when “technology” fails, science conveniently assumes a “God of the Gaps” hypothesis.

It was further argued that even though science invokes the name of God as a convenient stop-gap, there is room for interaction between the natural sciences and theology. It was stated that both groups need to realise that absolute and certain knowledge is simply not attainable, and that dialogue between the two groups must be pursued.

Because of this statement, several areas of interaction were presented and evaluated which would or should still respect the integrity of each field. An alternative model from theology was also explored as a bridge between theologians and scientists who have each others interests at heart.

The chapter then moved into the second half where an introduction of what makes up a metaphysical world-view, and how it can be used to study the problems of knowledge was presented. Within this study the question of God was briefly explored and the differing metaphysical systems were introduced

and evaluated for their consistency in presenting a viable world-view on what is reality in the light of a theistic world-view. It was then concluded that any view that contradicts itself or destroys itself in the process or act of affirming itself, is self-defeating and false and only theism is actually undeniable. Theism offers an argument with undeniable premises that leads inescapably to the existence of an infinitely perfect and powerful Being beyond this world, who is the current sustaining cause of all finite, changing, and contingent beings. It was further argued that a world-view, that is, a philosophical position about all that is, cannot be established as true simply because it is non-contradictory, since every major world-view might be internally consistent. One could then confidently state that by implication, this would mean that theism, the only remaining non-contradictory view, would be true by the process of elimination.

CHAPTER 3

Historical and Biological Deism

3.1 Introduction

If, as argued in the previous chapter, theism is a Biblically viable world-view, then creation from a theistic world-view must naturally follow from this argument.

In this chapter, an exploration on the different scientific theories on creation will be undertaken, and compared to the Biblical account found in Genesis chapters 1-11.

Most people, writes Evans (1996:35) find the actual character of the universe even more mysterious and impressive than its bare existence. The existence of a universe in which one experiences “might-never-have-been” is surprising and mysterious.

Thus, the experience of a purposive order is so powerful that even philosophers, who are sceptical of the value of arguments for God’s existence, cannot but acknowledge its force. Hume (1946:214), for example, who was a renowned critic of all the standard philosophical proofs of God’s existence, wrote “a purpose, an intention, or design strikes everywhere the most careless, the

most stupid thinker; and no man can be so hardened in absurd systems, as at all times to reject it".

In a strange passage, Kant (1965:20), often credited with having decisively refuted the argument from the order in nature to God's reality, nevertheless confessed, "by one glance at the wonders of nature and the majesty of the universe", reasons that, "at once aroused from the indecision of all melancholy reflection, as from a dream".

3.2 Creation and Evolution, the Great Divide

For many centuries in the western world, the accepted beliefs surrounding the idea of creation were taken from the Christian world-view, and required little from Christians regarding the defence of this view. However, with the post-modern era and new millennium, many pluralistic views now govern aspects of life leading often to criticism of the Christian view on creation. Thus, Christians have had to think carefully about stances on many present-day issues surrounding these views. The technological and scientific advances place increasing demands on society to provide an ethical framework about the existence of humanity. Although the Christian world-view is increasingly in conflict with the broader society, its world-view must remain that as revealed in Christ. Although the ethical challenges facing the church have grown over the

last decades, the approach by Christians has and should always remain consistent with the Biblical view of creation.

Therefore, one could say: If it is true that God is sovereign and righteous, then any approach to an ethical world-view on evolution must consider, according to Davies (1993:3), "Divine revelation, as found in the canonical Scriptures of the Old and New Testaments. This would then constitute the minimum requirement of the decision making process". Thus, if the Christian approach is to be different from the current world-view on evolution, then an indication of that place can only be by starting from the ethical ideal embodied in Christ. One can then safely work out from that point, a code of morality for practical guidance of the Christian life regarding its view on evolution. However, the approach should be from a different starting point, and the initial and central reference of this Biblical ethic should be directed to God as the source of all moral requirements and as the highest value. A Biblical ethics world-view regarding anything begins with God and ends with Him (see Beach and Richard: 1973).

Unfortunately, the problem one immediately faces in developing an appropriate Biblical stance towards an evolutionary world-view is that the world is continually putting pressure on theologians to find answers. These specifically concern areas such as ways of conforming the evolutionary theory of humanity and the findings of science, to the Biblical accounts of creation. Thus the

realisation is that there is a great divide that has developed between the two disciplines on this issue, and if anyone hopes to reach consensus, dialogue must take place.

3.3 Theology and Science, the Great Divide

Given this, Green (2004:168-169) correctly states that the pressures on the modern theologian in academic life are very powerful, and he lists several areas where this is taking place.

Firstly, the astonishing advances of the natural sciences and the technology deriving from them have in recent decades upstaged many arts subjects and none more than theology. Consequently, there are at least four attitudes in the successful world of science and technology. Firstly, there is optimism about humanity in scientific circles, which is induced by the success of the natural scientist. This stands in sharp contrast to the pessimism of humanity found in many circles, including the Christian doctrine of humankind both as creature and as fallen... Secondly, there is, at best, agnosticism about God. He is no longer needed to plug many of the *gaps* in scientific knowledge as previously suggested. Thirdly, there is impatience with miracles; this is unfortunately a world of observed and reliable uniformities where direct Divine intervention cannot be detected. And fourthly, in regard to the many disastrous debates with Darwinism in the last century over Genesis and evolution, it is

commonly held in scientific circles that the Bible is discredited, and is a farrago of myths which has now been outgrown by science. All of this, often uncritically assumed, rather than clearly stated, makes life difficult for theologians today.

Although the statement is very direct, all is not lost. There are many scientists who study nature and its impact on humankind, who are rethinking many of today's proposed evolutionary views, especially those being written in academic journals worldwide by natural scientists. Fortunately, there are many positive paradigm shifts taking place on both sides of the science and theology continuum about the reality of evolution. The need now is to bring these views to the fore, so that a correct world-view by both sides can be reached.

3.4 The Creation Evolution Dilemma

Understandably, in the view of Peterson (2000:221), paradigm shifts are difficult yet stimulating experiences for those who endure through them. In the framework of Kuhn ([1962]1970), a paradigm shift occurs as a result of a crisis, when an old established theory becomes increasingly difficult to argue and must be overthrown by a newer, more intellectually discerning competitor. Although Kuhn limits himself to the fields of astronomy, physics and chemistry, one sees rivalry of this nature in almost every scientific discipline. In fact, within the last century, one has seen an *eternal steady state universe* give way to a *big bang model* in astrophysics. Further, the static continents have been replaced by

plate tectonics in geology, and cold-blooded models of dinosaurs now compete with newer, warm-blooded versions in palaeontology. Peterson (2000: 222) correctly submits that whether one adheres to the details of Kuhn's philosophy of science or subscribes to later variant versions, conflict is an important staple of scientific discourse and development. Through such conflicts new theories are born and old ones die, although it may take decades for the transition to take place.

Clearly, the historical emergence of modern science has marked a paradigm shift from a focus on the metaphysical question of being, to the epistemological question of knowing. In its descriptions of its knowing, modern science has claimed rational objectivity for its knowledge, and has developed a dualism that separated humans from non-human nature in the view of Clifford (1994: 64). According to modern science, theories were said to be objectively formulated from data derived from observations; an understanding that has proved to be inadequate. Thus, the post-modern understanding of science is now critical of a depiction of science which ignores the subjectivity of scientists. What has now emerged is a new form of *critical realism* recognising that the scientist who interprets data is not a detached, neutral spectator capable of objectivity. As Toulmin (1982: 252) has so succinctly expressed, "The scientist as spectator is dead." In contrast to the *Cartesian dualism* of modern science which separated mind from matter, reason from emotion, and humanity from

nature, the post-modern scientist reinserts into the cosmos as an embodied observer and participant in the universe he or she is observing.

Consequently, Pannenberg (1988:3) writes that from the eighteenth-century to the beginning of the twentieth-century, the relationship between science and Christian theology were marked by increasing mutual alienation. During the twenty-first century, however, there has emerged a series of efforts to bridge the gulf that had developed. Pannenberg also believes that in England these efforts started as early as the second half of the last century. This is when there was an attempt to make a theologically positive evaluation of the Christian doctrine of evolution, to integrate it into a Christian version of the world and salvation-history.

Given what has been said, in the following section a case study on Darwin's evolutionary theories will be explored and compared with the Biblical account of creation.

3.5 The Heart of Darwin's Theory

The heart of Darwin's theory ([1859]1996: 67-68), *natural selection*, is presented in the fourth chapter of *The Origin of Species*. Thus, he begins the chapter:

How will the struggle for existence act ... in regard to variation? Can the principle of selection, which we have

seen is so potent in the hands of man, apply in nature? Let it be borne in mind in what an endless number of strange peculiarities our domestic productions ... vary; and how strong the hereditary tendency is.

Can it then be thought improbable, seeing that variations useful to man have undoubtedly occurred? That other variations useful in some way to each being in the great and complex battle of life, should sometimes occur in the course of thousands of generations? If such do occur, can we doubt (remembering that many more individuals are born than can possibly survive) that individuals having any advantage, however slight, over others, would have the best chance of surviving and of procreating their kind? On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favourable variations and the rejection of injurious variations, I call Natural Selection.

Speaking generally, Moore (1979:103) says that for some Christian anti-Darwinians the main theological objection to Darwin's theory lay in the perception that it undermined the idea of design in nature, thus bringing into question the very existence of God. For some, the turmoil was enough to bring loss of religious belief. There were many Victorians, steeped in Christian tradition, whose manuscripts and memoirs reveal a common struggle with the ideas and implications of Darwinism.

In all fairness to Darwin, he did base his theory on three reasonable assumptions according to Russell (1985:146). These are:

- *Hyper productivity* or (*super-fecundity*): Organisms produce more offspring than can reach maturity.

- *Variability*: A range of differences exist within any species (in anatomical details which can determine, for example, the ability to see, move, digest, hide from predators, etc); and
- *Natural Selection*: Environmental changes, food shortages, and the presence of predators, together create for a species a struggle for existence. This struggle gradually and inexorably weeds out the less well adapted members through successive generations, while allowing the better adapted to survive to the stage of procreation, and thus pass on their favourable characteristics.

According to Barrett (2004:92), it was combining *variability* and *natural selection* that was Darwin's key insight. Thus, the many slight differences within a species are highly important, Darwin explained. According to him, they afford materials for natural selection to work on, just as the breeder of domestic animals or birds can accumulate individual differences in any given direction by artificial selection.

Consequently, Gray (1878:61) assured that Darwin's theory of descent or any other such theory should not yet be accepted as true and perhaps might never become truth. He insisted, however, that the same care should guide any non-acceptance of such a theory, i.e. the claim that there are no secondary

causes which account for the existence of the manifoldness of plants and animals. With these assertions, Gray did not want to flee into aloof neutrality, but he wanted to make sure that scientific truths must rest on unambiguous proofs.

Apart from the question of how variability arises in a species, Darwin was aware of several other gaps and doubts in his theory. He knew challenges would come according to Barrett (2004:94), about the timescale of evolution. Darwin's theory rested on accepting the long timescale suggested by geological research. For example, Darwin estimated that rock strata in Southern England were about 300 million years old and he considered this but a moment in geological history. Although this theory was challenged by the formidable Scottish physicist Sir William Thomson who calculated that the cooling rate of the planet gave a reading of only about 100 million years, Thomson did lack according to Barrett (2004:94), 20th century knowledge. Current knowledge now states that the earth is about 4500 million years old, a figure well-established from measurements of the radioactive decay of the oldest rocks and from other data.

Doubtless, Darwin's theory was like a jigsaw puzzle with several pieces missing, however, it did have enough of the picture in place to account for a wide range of phenomena. Thus, it enabled him to explain, for example, many of his uniquely wide-ranging observations of the geographical distribution of animals. Above all, states Barrett (2004:95), it provided a reasonable explanation of the countless remarkable examples of adaptation in nature.

One could now ask: What was Darwin's legacy? As one who studied widely according to Barrett (2004:109), Darwin was remarkably successful in making accessible and understandable to a broad audience of readers, evidence that ranged over several disciplines, namely; geology, botany, taxonomy, and morphology for example. Consequently, the fertility, creativity and accessibility of his work, meant that its influence soon spread beyond the concerns of natural science to make its mark in philosophy, the social sciences and Victorian literature. So too, it raised fundamental questions for theology and Christian belief. Thus, it continues to inspire a broad range of academic endeavour – a veritable Darwinian industry.

3.6 Does Theology need Evolutionary Theory?

According to Peterson (2000:223), many traditionally assume that evolutionary theory and especially the theory of natural selection, have profound implications for theology. Therefore, one interestingly notes that this is a nearly universally held assumption, wherever one may be on the theological and philosophical spectrum. According to Floyd (1999:24-31), atheists such as Dawkins (1986) and Dennett (1995), share with fundamentalists the view that evolution and theology are necessarily in conflict. Fundamentalists reject evolution because of religious commitment to the belief in a six-day creation. Atheists such as Dawkins assert that natural selection obviates the need for any designer.

Additionally evolution proceeds from the simple to the complex, and a giant, universal mind would be the most complex of all.

Thus, when one moves into the mainstream of theology, which generally does not hold to a literal interpretation of the six days of Genesis, according to Peterson (2000:223), one finds an almost equal interest in evolution albeit for two different reasons. Firstly, Darwinian natural selection is often perceived as undermining traditional design arguments for God's providence. This is also not only in the sense of replacing God with a purposeless process, but also in the sense that the process does not seem to be going anywhere in particular. One could further say that not only is there no room for a *God-hypothesis* as previously discussed in chapter 1, but there is also little evidence to show that the entire evolutionary process intended to lead towards emerging *homo sapiens*. For that matter, neither for any other particular organisms either. Secondly, because human beings are themselves products of evolution and natural selection, it follows that evolutionary theory has a potentially significant contribution to make with regard to ideas of human nature, a subject about which theology is deeply concerned. It is therefore not surprising, that many in the science-theology dialogue have turned their attention precisely to these kinds of issues (see Peacocke 1984, Ward 1998, Rolston 2004).

Inevitably evolution does matter to theology. Popper (1994:52), in one of his famous lectures stated, "There can be no doubt that Darwin's theory of

evolution by natural selection is of the greatest importance". Accordingly, he did go on to say in the same lecture, "There can also be no doubt that this theory is, in many respects, in an unsatisfactory state." Therefore, one could say that the only means of escaping this conclusion is to deny the implications of origins and historicity.

Doubtless, there are various forms of existentialism and existentialist theology that do succeed in doing this, but only at the expense of divorcing human spirit from biology. A question that one may now ask is: Why should theologians pay attention to alternatives in evolutionary theory? The answer: Because evolutionary theory often implies particular kinds of claims that are relevant to particular theological doctrines and theological schools. Evolutionary theory cannot say whether the universe or the appearance of humankind is merely the result of chance, or a necessary product of it, but it can say what roles contingency and causal laws play. Evolutionary theory can also say something regarding kinds of physical causes that drove human evolution, including something about the constituent of human nature.

Given this, the next question is: How does evolution matter to theology? Peterson (2000:224) believes that the evolutionary theory affects ideas of the origin of life, and thus the ideas of creation. It affects questions of human origins, and thus questions of original sin. Consequently, it further affects ideas of human nature and behaviour, as well as destiny. Thus, it even affects the

question of human uniqueness and ones understanding of the image of God. One may even speculate and say that it affects the formation and evolution of religious belief itself. One reason for saying this is because *Soteriology* and *Christology*, partly base themselves on these prior theological claims.

Consequently, the sciences do matter to theology. Yet, at the same time theology is distinct from the sciences and possesses its own norms, traditions and assumptions. Therefore, the choice is not between evolution and theology, but rather between epistemologies. Although this may be a difficult choice, it is ultimately an important one.

What follows, is an undertaking to further explore the interaction between science and theology on the origin of the universe, and the implications that both views hold for humanity.

3.7 Scientific and Metaphysical Theories regarding the Creation of the Universe

In spite of all the biblical and scientific evidence, Gribbin (1986:392) argues that the new physics of creation leaves no place for the traditional metaphysics of creation, because new cosmological models eventually explain how the universe *created itself*, i.e. emerging from nothing at a certain moment. As a result, he said, metaphysicians “are out of a job”.

An opposite view defended by Isham (1988:405), contends that many intriguing problems related to creation and evolution of the universe are explainable in the cognitive framework of modern theoretical physics. Thus, in his view, one must rather look for explanations that do not belong to the physical science. Zycinski (1996:272) shares the latter opinion, and says;

I think that various metaphysical theories can be based on any physical theory of cosmic action. By determining which philosophical principles are implicitly assumed in the creation models accepted in the theory of vacuum fluctuations; we can better understand which important philosophical presuppositions are tacitly implied by these models. The analysis of these principles demonstrates both the fuzziness of many philosophical concepts and the illusionary character of the methodological standpoint in which the physics of creation was supposed to eliminate traditional metaphysics. In fact, metaphysics is either duplicitly accepted in new physical theories or explicitly introduced in a naive commonsense version.

Thus, the question that arises out of this statement is: How does a vacuum as apposed to nothingness affect the doctrine of creation *ex nihilo*?

Recognising this, Zycinski (1996:272) puts forward that in traditional metaphysics, the fundamental concept of non-being was defined in such a vague manner that many authors did not distinguish between *metaphysical nothingness* and *physical vacuum*. One understood a vacuum in *quantum electrodynamics* as the lowest energy state of a field in which no physical

particles exist. To argue against identifying the vacuum with philosophically conceived *nothingness*, one could claim that the vacuum possesses a rich mathematical structure that one can describe by the formalism of quantum field theory. But, despite the absence of particles, physical fields do not disappear, and their properties can still be characterized in the abstract language of mathematics.

Doubtless, new physical theories of creation do contribute to a better understanding of classical distinctions between the actual and the possible on the one hand, and being and nothingness on the other. One simply has to notice that the “nothingness” in these theories does possess rich mathematical structure which one can describe in the language of mathematics

But, how reliable is this theory of creation from a vacuum? Can one place faith in a mathematical equation to argue for creation *ex nihilo*? Could a mathematical cosmological theory provide a new set of arguments for the existence of God the creator and strengthen the standpoint of Christian theism?

According to McGrath (2004:51-52), the doctrine of creation *ex nihilo* primarily concerns itself with the ontological dependence of the cosmos upon its creator. The doctrine affirms that God, in creating the universe, was not constrained by the limitations of the already existing material from which that

universe was to be fashioned. Rather, God was free to bring into existence a universe in which the recognised Divine will was embodied and enacted.

Given this, Hawking (1993) who presented this quantum-mechanical description of the early stages of possible cosmological evolution with J Hartle in 1981, stated in an interview in 1992, that there are important domains of human experience that one cannot reduce to a physical level. He mentions love, faith, and morals, as three examples of experience that one cannot explain by reference to the laws of physics. Thus, in his later work one no longer finds the epistemological monism that inspired his early work in this area, where he thought that physics could replace theology.

In *The Moment of Creation*, the physicist James Trefil (1983:223) describes the search for unified laws in cosmology. In an epilogue he writes:

But who created those laws? . . . Who made the laws of logic? ... No matter how far the boundaries are pushed back, there will always be room both for religious faith and a religious interpretation of the physical world. For me, I feel much more comfortable with the concept of a God who is clever enough to devise the laws of physics that make the existence of our marvelous universe inevitable than I do with the old-fashioned God who had to make it all, laboriously, piece by piece.

According to Peterson (1999:284),

Versions of this scientifically informed account have been embraced by a number of theological thinkers, particularly those engaged in the theology of nature—most explicitly, Sallie McFague (1993). It is taken for granted in this scenario that human beings are a natural product of this process. Although exactly how mankind came to exist on this planet may be regarded in part as the result of Divine action of one form or another, from Gordon Kaufman's "creative serendipity" (1993) to Arthur Peacocke's "loaded dice" (1993). Such an approach is in contradistinction to much of what has passed before in theological thoughts which has either emphasised a supernatural dualism, or (more officially) recognized the psychosomatic unity of mind and body, but treated nevertheless, humankind as ontologically and theologically unique and separate from other forms of life.

In retrospect, one can now say that the challenge is: Can one complement sections of the Darwinian theory of evolution with a Biblical account of a continuing creation, in order to come to a comprehensive understanding of reality? Or, could one possibly present a case that accurately reflects a theistic God of creation who is *still* creating? Further, could one possibly speak of *creatio continua*, or that God is still creating through natural processes?

What follows is an exhaustive exploration of these questions with respect to their accuracy in light of the Biblical account of creation.

3.8 The Biblical Idea of Creation

3.8.1 Genesis chapters 1-11: Truth or Myth?

Many evangelical scholars consider the events of Genesis as literal events, and foundational to all Christian doctrine. Accordingly, these scholars believe that all Biblical doctrines of theology ultimately have their basis in Genesis, whether directly or indirectly. Given what has been said, a believing understanding of the book of Genesis, coupled with faith, is a precondition to an understanding of God and His meaning to humanity. Thus, if Genesis is only a myth or allegory, then Christian doctrines have no foundation according to Ham (1987:71).

However there are those, according to Montgomery (1991:58), especially of the neo-orthodoxy persuasions who label the first eleven chapters of Genesis as mythological stories from which one can obtain no factual information on the history of the earth. Yet, for those who consider the Bible as the inspired, infallible Word of God, e.g. fundamentalists, Genesis is considered to be a historical record.

Others, according to Kelly (2004:41) suggest that the first eleven chapters of Genesis, and especially the first three chapters, are poetic writing, rather than chronological history. Many scholars have interpreted Genesis 1-3 (and the rest of Scripture) through the framework of the *Documentary Hypothesis*; one of the

central theories in German Higher Criticism. Although many scholars have found this methodology to be inaccurate as a working hypothesis (see Allis 1947; Young 1976 and Whybray 1987), many still question the Mosaic authorship and its historical significance in understanding the beginning of creation.

Furthermore, one also finds, in most classic formulations of Christian dogmatisms, that the doctrine of creation is given a very high-profile, often being the first major doctrine explored within the system as a whole. Thus, two factors are of particular importance towards this development says McGrath (2004:52).

- The doctrine of creation is the first major theological statement faced by the reader of the Bible, as set out in the canonical form.

- Hence, the two most influential communal statements of Christian faith recognised by the Church, the Nicene Creed, and the Apostles' Creed, both open with an affirmation of God as creator. In this, many classic Christian discussions of systematic theology are more broadly likely to follow the Creedal ordering of doctrinal affirmations (see, for example, John Calvin's *Institutes of the Christian Religion*). Thus, the doctrine of creation is often foremost in theological analysis.

In the view of Barker and Burdick (1985:2), Genesis lays an important foundation for understanding the rest of the Bible. According to Marshall (1998:1), the stories told in Genesis also establish the foundation for ones own understanding of God. In this statement, one can agree with Psalm 11:3, “If the foundations are destroyed, what can the righteous do?”

However Fretheim (2005:29) rightly states, regarding the creation accounts found in Genesis 1-2, that they are among the most studied texts in the Bible. For him, these chapters have generated reflection from every conceivable viewpoint, and controversies regarding their interpretation continue apace. Among the many questions these chapters raise for the modern reader, perhaps none are more pertinent than this: Is Genesis 1-2 an adequate statement for one to reflect on about creation?

According to Fretheim (2005:29), in many ways these chapters will continue to provide readers with an indispensable foundation for reflecting on the image of God and the World, including the nature of human and nonhuman interrelationships. However, Fretheim (2005:30) also contends that Genesis 1-2 is not a fully adequate statement for contemporary readers regarding creation, as it has created more problems than solutions. One must not discount the long history of the negative effects of these texts contributing to the environmental crisis and to a second class citizenship for woman in Church society.

3.8.2 The Creation

In retrospect, one can rightly conclude from the creation story that nothing but God is self-sufficient and eternal - everything owes its existence to Him. Thus only God deserves humanity's worship according to Erickson (2001:410). Hebrews 11:3 states that "By faith we understand that the universe was prepared by the word of God, so that what is seen was made from things that are invisible."

Many theologians and biblical scholars, according to Barbour (2000:48), share the view that one should take the Bible seriously but not literally and claim that Genesis witnesses to a fundamental and enduring relationship between God and the world. It does so, they say, by telling a symbolic and poetic story that assumes the pre-scientific cosmology of its day. But, he further states, Scripture conveys religious ideas that one can still accept independent of any cosmology, ancient or modern. Genesis makes three theological affirmations:

- (1) The world is essentially good, orderly, and coherent.
- (2) The world is dependent on God; and
- (3) God is sovereign, free, transcendent, and characterized by purpose and will.

These are characteristics of the world and God at every moment in time, not statements about events in the past. The question is: What does the post-modern scientist have to say about these events?

Although in the past scientists generally viewed “reality” as fixed, immutable, and unaltered by the scientific enterprise itself, Clifford (1994: 65) points out that in post-modern science, it is more realistic to speak of reality as partially created by the scientific community, a community affected by the broader society.

Indeed, one can say that as participants in society, scientists derive their theoretical models from their culture and from specific life experiences. Doubtless, the scientist’s view of the cosmos and its processes are affected by his or her societal attitude. Therefore, it is not only who is doing the research, but also the when and where of research, that have a direct bearing on forming scientific theories (see Harding 1986 & Bleier 1986). Put simply, post-modern science is not autonomous from a society’s social, political, and religious interests and values, according to Clifford (1994: 66). Without doubt, scientific theorising does affect them. This suggests that rigid boundaries between scientific communities and the broader society and its other communities no longer exist. Fruitful and transforming dialogue about the cosmos by the scientific and theological communities is now more possible than ever before.

3.8.3 Continuous Creation “*creatio continua*”

Is God still creating - *creatio continua* - or has He ceased as many have argued based on Genesis 2:2: “*And on the seventh day God ended His work which He had done, and He rested on the seventh day from all His work which He had done*”.

In the modern period, according to Clifford (1994:63), science’s claim to objective truth has posed a notable challenge to creation faith. In the minds of many, modern scientific rationality has, in their view, made it possible to affirm an autonomous self, without God. Many try to affirm the belief that even if God designed and set in motion the universe, its functioning does not need the Divine. Where cosmic process was concerned the theism of modernity contained an inherent atheism. The universe, envisaged as a grand machine could run properly on its own, there was not necessarily a need for a God outside the machine, and certainly not for a God active within the workings of the machine.

Given this, Peacocke (1984:66) writes that, “the natural causal creative nexus of events is itself God’s creative action.” He holds that processes of nature are inherently creative. One might consequently interpret this as a version of the idea that God designed a system of law and chance, through

which higher forms of life would slowly come into being. Needless to say, this would then be a sophisticated form of *deism*.

However, in what seems to be a contradiction of Peacocke's seemingly deistic view of creation, he also says that God is, "at work continuously creating in and through the stuff of the world He had endowed with those very potentialities." The images of an improvising choreographer or composer imply an active, continuing relationship with the world, and Peacocke specifically defends the idea of continuing creation according to Barbour (2000:114).

Further to this, Stoeger (1995:249) holds that God acts through the laws of nature, using them as instruments for achieving intended goals.

If we put this in an evolutionary context. . . we can conceive of God's continuing creative action as being realized through the natural unfolding of nature's potentialities and the continuing emergence of novelty of self-organization, of life, of mind and spirit.

God's purposes are undoubtedly, built into the potentialities of nature, according to Barbour (2000:102), but God also continues to sustain the whole system and holds it in being - without God it would cease to exist.

Needless to say, the world as now known did not come into being ready-made, but rather it has evolved over long periods of time. Thus, according to Polkinghorne (1989:80-81), to *creatio ex nihilo* one can comfortably add the idea

of *creatio continua*, or continuing creation unfolding throughout cosmic history. Simply put, God is present in the evolutionary process. However, one must be careful to say: Not as its sole determinant, for an evolving world is a creation allowed by its Creator to some degree to “make itself” through the shuffling explorations of contingency. Rather, one should say: As the source and guide of its fruitfulness. The work of the Creator continues, not least through the natural processes that are expressions of His will.

Besides, Polkinghorne (1998) believes that the idea of continuous creation reinforces the understanding that one cannot tie the Divine role of the Creator to any particular instant in time, but, on the contrary, is an enduring relationship. Thus, one can understand *creatio continua* as the work of the Creator, specifically in the mode of Divine immanence, just as *creatio ex nihilo* - preserving creation from ontological collapse - is the work of the Creator in the mode of Divine transcendence. These theological concepts are consonant with the scientific discernment of a universe of deep order and evolving fruitfulness.

3.8.4 Creation Contingency and Process Theism

According to *Big Bang Cosmology*, or the view that the universe had a central starting point - a singularity, Clifford (1994:76) puts forth that contingency, the view that there could be multiple outcomes, can rationally account for an expanding evolutionary process. One can specifically relate this to the dynamic

interrelatedness of space-time and matter-energy, and the *Uncertainty Principle*. Accordingly, each of these factors suggests that the physical universe does not have to be the way it is; it could have been otherwise. Yet, these very same factors suggest that the universe is contingently ordered. Thus there is a holistic orderliness to the universe that one can understand through theories like the Big Bang and the many interrelated theories that have contributed to it.

Traditionally, Christian theology has contrasted contingency to necessity, arguing that God is a necessary being, existing beyond time that brought into existence a material universe through an act of Divine freedom. *Creatio ex nihilo* made this perspective possible, because it provided the element of Divine freedom by avoiding the pitfalls of a universe conceived as emanating from a pantheistic God, and therefore part of the Divine essence. If God has the freedom to choose to create or not to create the world, God also has the freedom to choose among possible worlds or universes. By implication then, the contingency within the cosmos is logically accounted for, yet, nevertheless, God could have created a different world if He so chose.

Furthermore, according to Clifford (1994:77), the importance of contingency in any dialogue between theology and science is recognised by many theologians today. Take for instance Pannenberg (1988: 9), who argues that contingency is the first question on which any contemporary discussion about theology and science should focus. In Pannenberg's assessment

(1991:41), contingency points to how important it is to address *creatio ex nihilo* and *creatio continua* in tandem. Understandably, he argues that the conception of creation as *creatio ex nihilo* also applies to continuous creation. This Pannenberg conceives, not as preserving the created world in its original order as classical theology did, but as the continuous production of new forms of existence. Pannenberg (1991:41) asserts: “The element of contingency in the ongoing process of nature has become the mark of the creative activity of God in the history of the universe”.

Also, contingency in the cosmos is given a central focus in Barbour’s (2000:142) treatment of consonance between cosmology and theology. Barbour further believes that science will never eliminate contingency. He underscores its pervasiveness by raising the question he believes to be of special interest to the theologian: Why is there anything at all? He reasons that scientific cosmology cannot answer this question because the existence of the cosmos is not self-explanatory. Like Pannenberg, Barbour reflects on *creatio ex nihilo* and *creatio continua*, giving considerably more attention to the latter.

Regarding *creatio continua*, Barbour (2000:145) posits a twofold correspondence: (1) The laws of contingency can be identified with the orderly aspects of continuing creation. (2) There is also genuine uncertainty in cosmic history which corresponds to the novelty in continuing creation. Uncertainty in quantum processes reflects an indeterminacy that is not simply due to the

limitations of ones knowledge; it is basic to the dynamic of world process itself. The common roles of contingency in science and theology contribute to a fresh perspective on why science and theology need not be compartmentalised.

Emphasis on continuing creation is also evident in what Barbour draws from process theism in explaining what God is: (1) the primordial ground of order and novelty and (2) influenced by the events of the world (2000:230-231). It is unfortunate that Barbour's predisposition for process theism strongly influences his interpretation of *creatio ex nihilo* and *creatio continua*.

Thus, *Process Theology* or *Process Theism* as it is sometimes called, is the fundamental thesis according to Erickson (2001:305) that reality is processive. Thus, God, in His concrete actuality, responds and is affected by the processes of the world, and vice versa, according to Whitehead (1929:524-530). Therefore, according to Process Theology, God's knowledge processes with every new decision and action in the world. As a result, other traditional conceptions about God must also then be modified. Divine sovereignty for instance, is no longer regarded as absolute; rather, one views humans as partakers in determining the future. This post-modern world-view now called *Open-Theism* will be exhaustively studied in the next chapter.

To bring this particular point to a conclusion, process theology claims to view God as a personal being - unlike the impersonal Unmoved Mover of Greek

metaphysics. However, it is questionable whether this is really the case. God, according to Erickson (2001:306), seems little more than an aspect of reality in process theology. In what sense He is a personal, acting being, is unfortunately not made clear.

The author must emphasise at this time, that *creatio continua* is a strong theory, and has many merits that make it Biblically viable, however, creation is winding down. Although God sustains creation as needed, clearly there are laws that do govern creation, and one of these is the second law of thermodynamics. Doubtless, God did create at a specific instance in time, but there will also be a specific point when creation will cease to exist.

3.9 The First and Second Laws of Thermodynamics and their Relation to Creation

According to Blanchard (2002:37), the universally accepted *First and Second Laws of Thermodynamics* do say that the cosmos could not have generated itself. Simply put, there had to have been a moment when energy, matter, time and space came into existence. Given this, if one rules out an eternal, infinite, transcendent and omnipotent God, where can science turn to explain the origin of these, when it cannot go any further back than the moment at which the laws on which it leans began to operate? Andrews (1980:35) takes this further, he correctly says:

No matter how close to the instant of origin one may be able to press the scientific model of the cosmos, it remains impossible for such an explanation to be applied at or before the time zero point.

Hence it follows that science, even at its most speculative, must stop short of offering any explanation or even description of the actual event of origin.

Based on these laws, creationists believe according to Rhodes (2004:158) that the universe is heading toward an ultimate *heat death*, in which no more energy will be converted. Consequently, the amount of usable energy will eventually deplete causing the universe to decay. Thus, in the view of Ratzsch (1996:91), it is eroding, and it is moving from order to disorder. The universe and everything in the universe, including the sun, humankind, the machines that have been built, are all running down. So, contrary to classical evolutionary theory, things are not ultimately moving upward but are running downward. Given this, Ryrie (1986:177) submits that the foundational principle of biological evolution, i.e. that things are moving from disorder to order, from chaos to complexity, is simply wrong. The principle of evolution is precisely the converse of the second law of thermodynamics, and therefore seemingly, both cannot simultaneously be true.

Overwhelmingly, the laws of thermodynamics do add strong support for the idea of a creation. If the second law of thermodynamics is true, then the

universe must not be eternal. Thus, the universe must have had a beginning, just as claimed in Genesis 1:1. Barnett (1950:102-103) writes;

If the universe is running down and nature's processes are advancing in just one direction [entropy], the inescapable inference is that everything had a beginning. Somehow and sometime the cosmic processes were started, the stellar fires ignited, and the whole vast pageant of the universe brought into being.

Similarly, Whitcomb (1979:12) notes that the second law of thermodynamics points to the reality that earth was once more orderly and organised than it is now. And this in turn points to "an infinite and personal God who alone could have infused order and high-level energy into the universe at the beginning".

In keeping with this, Sullivan (1930:240) points to the fact that the universe absolutely had to have a beginning:

The fact that the energy of the universe will be more disorganized tomorrow than it is today implies, of course, the fact that the energy of the universe is more highly organized today than it will be tomorrow, and that it was more highly organized yesterday than it is today. Following the process backwards we find a more and more highly organized universe. This backward tracing in time, cannot be continued indefinitely. Organisation cannot, as it were, mount up and up without limit. There is a definite maximum, and this definite maximum must have been in existence a finite time ago. And it is impossible that this state of perfect organization could have been evolved from some less perfect state. Nor is it possible that the universe could have persisted for

eternity in that state of perfect organisation and then suddenly, a finite time ago, have begun to pursue its present path. Thus the accepted laws of nature lead us to a definite beginning of the universe in time.

To say that the universe is eternal would be nonsensical. After all, all the stars are burning out. If time reached eternally into the past, the universe would have burned-out long ago. What the Bible says makes much more sense, that the space-time universe was created at a specific time (see Genesis 1:1; John 1:3; Colossians 1:16).

Unfortunately, the effect of Darwinian evolution on people's opinion regarding the trustworthiness of Scripture has been a very negative one. If there is no God who created humankind, and if one cannot know anything about God with certainty, then there is no supreme Judge who holds humankind morally accountable. Therefore, there can be no moral absolutes in human life, thus, the idea of "survival of the fittest" will ultimately drive all human decisions. Consequently then, evolution renders God unnecessary and ineffective, which is very different from the sovereign God described in Genesis.

3.10 Conclusion

It was argued in chapter one that Theism is a very acceptable world-view today, when interpreting the metaphysical concepts of the world. It was also stated that creation from a theistic world-view must naturally follow from this argument. It

was then reasoned that for many centuries, the accepted norms regarding the idea of creation were taken from the Christian world-view. However, as science has progressed in its studies of creation, it has encroached many of its findings on the Biblical world-view of creation. Furthermore, it has started throwing doubts on the Scriptural validity of creation as a viable world-view. Following this, the pressures on the modern theologian in academic life to produce counter argument to scientific findings from Scripture, has put much pressure on them. Consequently, this has caused the relationship between science and Christian theology to be marked by increasing mutual alienation. Positively, it was shown that there are many scientists who study nature and its impact on humanity, who are rethinking many of the evolutionary views being proposed today in academic journals around the world. During this century alone, there has no doubt emerged a series of efforts to bridge the gulf that has developed between the two disciplines.

Furthermore, to expose this gulf, and to present a viable alternative to bridge this gulf, a case study of Darwin was undertaken to begin the process of showing that theism is still today a viable world-view about creation. It was also shown that Darwin himself was aware that his theory of evolution had some problems, but in all fairness to Darwin, it was established that his theory was based on three reasonable assumptions, that of: *Hyper productivity, Variability, and Natural Selection*.

Besides, it was shown that inevitably evolution matters to theology.

Doubtless, Darwin's theory of evolution by natural selection is of great importance, and should be studied along a Biblical perspective, as some of Darwin's theories can be scripturally validated. One could go further and say: if interpreted theistically, it could even improve one's understanding of the magnitude of Divine creation. It is therefore not surprising, that many in the science-theology dialogue have turned their attention to precisely these kinds of issues.

Furthermore it was shown that the new physics of creation leave no place for the traditional metaphysics of creation, because new cosmological models ultimately explain how the universe *created itself* emerging from nothing at a certain moment. It was also presented that many theologians and Biblical scholars share the view that the Bible should be taken seriously but not literally. Some even claim that Genesis really only witnesses to a fundamental and enduring relationship between God and the world. However, it was argued that this view is false as Scripture conveys religious ideas that one can still accept independent of any cosmology, ancient or modern.

Finally, it was contended that any view which dilutes the impact of sin in a fallen world was not an option and that the fallen condition of humanity is very literal. The fact is that humankind cannot take care of itself, and God had to intervene through the coming of Christ. It is unfortunate that evolution makes

God unnecessary and ineffective, and as stated, this is very different from the sovereign God described in Genesis.

In the following chapter, an alternate view of God's sovereignty and omniscience called *open theism* will be evaluated in the light of a theistic world-view. Although this particular view sees God as theistic in His work, it also views God as diluted in power and knowledge of future events. Thus, the purpose of evaluating this particular view is to show, that even some academically accepted post-modern views on reality fail, in the author's view, as a viable theistic world-view. The problem is that it tends to have a negative outlook on creation, and even questions if God can truly bring to pass His plan and will on this earth. This certainly has an effect on how one views reality, and specifically, how one views God. As such, it is a necessary study, as it will show that the open view of God fails, in the author's view, the test of what comprises a traditional theistic world-view.

CHAPTER 4

Open Theism, Determinism, and the Sovereignty and Omniscience of God

4.1 Introduction

An argument was presented in chapter one, stating that there continues to be strong suggestions put forth by alternative world-views for the absence or even the non-existence of God. Consequently, an exploration of these world-views was undertaken, and a case made for a theistic world-view as a most viable choice in comparison to these alternate views, irrespective of the latest scientific findings. In defence of the theistic world-view, an argument was put forth that what really distinguishes each view, is their acknowledgement or denial of an intelligence and purpose beyond all manifestations of perceived reality. Furthermore, it was stated that there are basically three world-view beliefs within these categories:

- The first world-view is one that acknowledges both an ordinary and an ultimate reality, with God being the architect of both. This is a Biblical world-view in which God interacts with both the physical and spiritual realms, i.e. a transcendent God.

- The second world-view holds that there is a reality which lies beyond the physical space-time universe; this is a Quantum Physics world-view and in some cases, God is viewed as Immanent
- The third world-view holds that there is nothing beyond this reality, and that everything merely interacts in such a way as to form a whole. This is an evolutionary world-view, and depicts a purposeless monism, i.e. an absent God.

What follows, is a review of what makes up a world-view with one exception, the assumed elements for a theistic world-view will be added. Once these dimensions are established, it will then be evaluated in the light of a world-view that argues against the Divine sovereignty of God, as well as against His Omniscience. Although the purpose of this thesis is consonance with the sciences, the world-view in question, called *Open Theism* is a post-modern one which on the surface seems theistic, yet when it is researched a little deeper, one sees that theism is not what this view holds. Thus, the purpose of this post-modern case study is to show that there are world-views that have a form of theism, but reject or twist certain elements found within the traditional understanding of the Scriptures. The question is: can they still be classified as a viable theistic world-view? Therefore, before embarking on this exploration, a brief summary of what belief system open theism holds will be explained.

4.2 Background to the Problem

To begin, whether one knows it or not, whether one likes it or not, each person, consciously or unconsciously holds to a world-view. These views function as interpretive conceptual schemes to explain why people “see” the world as they do, and why they often think and act the way they do. As a result of this, competing world-views often come into conflict with each other. These clashes may be as innocuous as a simple argument between people or as serious as a war between nations. Therefore, it is important to understand, that competing world-views are the fundamental cause of disagreements, and even the splitting of organisations, including the beliefs of people.

As such, world-views can be likened to double-edged swords. An inadequate conceptual scheme can, like improper eyeglasses, hinder ones efforts to understand God, the world, and ones-self. On the other hand, the right conceptual scheme can suddenly bring everything into focus. However, the choices among competing world-views involve several difficult questions. For one thing, one must always contend with the ever-present possibility of non-theoretical reasons adversely affecting ones thinking. For another, it is difficult to be sure which criteria or tests one should use in choosing among world-views.

Understandably, Lee (1998:93) rightly warns against the idea that the Bible “presents a comprehensive and unified world-view”. Instead, what Scripture provides is witness to God’s creation and providence as related to humankind. Besides, he argues, it is certainly insufficient to quote “the Bible says” and assume that one has, by that method, arrived at a plausible theistic world-view. Of course, Lee takes care to highlight not only the inspiration of Scripture - it being *Theopneustos* - but also that it is a human book.

Considering this, when one thinks of the topics that create friction among Christians, the subject of Divine sovereignty is in all likelihood high on the list. Many have experienced heated discussions over the nature of Divine sovereignty, especially concerning issues of Divine election and salvation. According to Wellum (2002:257), many Christians, even those who have a good theological education, have expressed time and again that they wish the subject would somehow disappear. Unfortunately, that is hardly likely, since the subject of Divine sovereignty is so foundational to one’s entire theology and praxis.

Therefore, this subject, so vital to a correct understanding of what makes up reality, will be studied within the light of a theistic world-view. This, one of the more controversial views about the sovereignty of God, is also directly related to God’s omniscience. One can therefore comfortably term this a post-modern view of God’s sovereignty and omniscience, usually referred to as Open Theism.

4.3 Introducing Open-Theism

Simply put, open theism, sometimes called *openness* or the *open view*, and occasionally referred to as *Neotheism* (see Geisler & House 2001), is a theological position dealing with human free will. It controversially deals with issues of humanity's relationship to God, the nature of the future, and God's sovereignty and omniscience. It is the teaching that God has granted to humanity a free will and for the will to be truly free, the future free-will choices of individuals are unknown ahead of time by God. Broadly speaking, they hold that if God knows what a person is going to choose beforehand, can one consider the choice to be truly free? This is especially so when it is time to make those choices, since one cannot make a counter choice because the choice is already "known". In other words, one could not actually make a contrary choice to what God "knows" a person will choose, thus implying that the choice in question would not really be free. Open theism is also of the view that God is in a process of learning, especially as people make choices that He was not fully aware that they would make. This philosophical idea of God is similar to the view of God as expressed by *process theology*. In the following section, process theology and its influence on open theism will be briefly explored.

4.4 Process Theology and its Influence on Open Theism

One of the main influences on open theism has traditionally been the views of God expressed by the Process Theology of Whitehead 1929, Hartshorne 1953, Cobb 1965, and others. Although process theology is seemingly being sidelined in favour of the more refined teachings of open theism, there is little doubt that open theism is indebted to these scholars and their philosophical views of God. According to Lindsay (1977:21), process theology advances the following. (1) a reformulation of the ontological argument for the existence of God, (2) a reconstruction of the transcendence and immanence of God, or His relationship to the universe, (3) a redefinition of divine attributes and (4) a restatement of the doctrine of the Trinity.

Keeping in mind these points, process theology also argues that an eternal, immutable God cannot have a real relationship with a changing world, unless God relates to the universe according to its nature (see Sanders 1998:24). The implication is that all real relationships involve change. According to Geisler & House (2001:202), the essential argument goes like this.

1. All real relationships involve change
2. But an unchanging God cannot change

3. Hence, an unchanging God cannot have a real relationship with a changing world.

One of the major tenets of process theology, as with open theism, is the idea of a God who is limited in power. For the process theist, this understanding, according to Keller (1995:105), enables them to solve the problem of evil more satisfactorily than classical theists can, given their understanding of God's limited power. They claim, as do open theists, that according to classical theists, God has the power to intervene decisively at any time and at any place to bring about any logically possible outcome that God wants; thus, classical theists, in their view, must admit that God at least permits the evil that occurs. The author will extensively deal with this in the coming sections. The position of process theists on the other hand, leaves them with the task of explaining God's power in such a way, as do open theists, to make it clear that (1) God does indeed lack the power to intervene to prevent evils, yet (2) God has a sort of power appropriate to a Being who is worshipped. In process theist's discussion of God's power, they typically distinguish between persuasive and coercive power, and assert that God only has the former. God, they say, lacks the power (as do open theists) to totally determine the behaviour – more precisely, the concrescence – of any person. According to Keller (1995:106), these are the typical thoughts and theology of Whitehead and Cobb. For them, God can only lure (attempt to persuade) the person to develop in a certain way. The main reason for this type

of thinking and philosophy is that God, in the view of process and open theists, lacks knowledge regarding the future actions of people.

Taking all the above into consideration, and as shall be shown in the following section, open theists have to admit that their view inevitable collapses into process theology. Furthermore, process theists regard traditional views of God (like open theists) as inconsistent with the Bible and logic. As has been pointed out, in open theism as with process theism, the future is unknowable by God. However, as shall be explored later, there are some open theists who hold that the future is knowable by God, but they uphold that God voluntarily limits His knowledge of free-will choices so they can remain truly free. Others like Sanders (1998: 198) take this statement even further, by upholding that the future, being non-existent, is not knowable, even by God.

All of the future that is undetermined by God (which includes all future free choices and actions), since it has not happened and hence is not real, cannot be an object of knowledge. This future, they say, is logically unknowable, and as such not even God can rightly be said to know what cannot in principle be known.

Thus, according to Ware (2000:31) open theism has been emerging for the past twenty years as a prominent alternative to the classical *Arminian* model of Divine providence. With the publication in 1994 of *The Openness of God: A Biblical Challenge to the Traditional Understanding of God*, co-authored by C

Pinnock, R Rice, J Sanders, W Hasker, and D Basinger, the openness proposal moved from backstage to find its place under the spotlight.

Referring to the open theism view, Pinnock et al (1994:103-104) offers a succinct summary of the key notions, doctrinal commitments, and values of open theism:

In this book we are advancing.., the open view of God. Our understanding of the Scriptures leads us to depict God, the sovereign Creator, as voluntarily bringing into existence a world with significantly free personal agents in it, agents who can respond positively to God or reject his plans for them. In line with the decision to make this kind of world, God rules in such a way as to uphold the created structures and, because He gives liberty to his creatures, is happy to accept the future as open, not closed, and a relationship with the world that is dynamic, not static. We believe that the Bible presents an open view of God as living and active, involved in history, relating to us and changing in relation to us. We see the universe as a context in which there are real choices, alternatives and surprises. God's openness means that God is open to the changing realities of history, that God cares about us and lets what we do impact him. Our lives make a difference to God—they are truly significant. God is delighted when we trust Him and saddened when we rebel against him. God made us significant creatures and treats us as such.

Further on, a case study will be undertaken to demonstrate that this view is, to a certain degree, in opposition to a traditional theistic view of God, as the One who controls and keeps everything by His omniscient power. What is needed now is that the elements that make up a world-view need to be

explored, to show that the open view of God fails, in the author's view, the test of what comprises a traditional theistic world-view.

4.5 The Major Elements of a World View

The first question one should now ask is: What kind of beliefs make up a world-view? Nash (1992:26) puts forward that a well-rounded world-view includes beliefs in at least five major areas: God, reality, knowledge, morality, and humankind; thus, the following is a breakdown of those elements.

4.5.1 God

Perhaps the most important element of any world-view is what it says or does not say about God. As such, world-views thus differ greatly on this matter. About this, Byl (2001:224) suggests, that if God is the starting point of any world-view, then one should give His revealed Word the utmost confidence as the only trustworthy source of knowledge beyond ones observable horizon. Thus, the questions one would ask regarding matters surrounding world-views is;

- Does God even exist?
- What is the nature of God?
- Is there only one true God?

- Is God a personal being, i.e. is God the kind of being who can know, love, and act, or is God an impersonal force or power?

Recognising the importance of such questions, Packer (1981:45-49)

firmly states that the Biblical name for God, Yahweh, expresses His self-sufficient sovereignty, limitless life, and infinite power (see Ps 139:1-4; Eph 1:4-5; Jn 5:26; Jer 32:17). Consequently then, God is the centre, source, and goal of all that exists (see Heb 1:2-3 and Col 1:16-17; Rev 1:8). He is creator, ruler and judge of everything created. Clearly, to ignore any of these elements will, beyond question, result in a God of diminished power and sovereignty, as is the case held by open theists.

4.5.2 Ultimate Reality

Given what has been said, a world-view should also include beliefs about ultimate reality, a subject often discussed under the term metaphysics. In the philosophical systems of thinkers like Plato and Aristotle, metaphysics often becomes a complex and mysterious subject. However, a person need not complicate their world-view for it to include metaphysical beliefs. Thus, generally speaking, these beliefs could include answers to questions such as:

- What is the relationship between God and the universe?
- Is the existence of the universe a brute fact?

- Is the universe eternal?
- Did an eternal, personal, omnipotent God create the world?
- Is God and the world co-eternal and interdependent?
- Is the world best understood in a mechanistic (that is, non-purposeful) way? Or is there a purpose in the universe?

The majority of these questions were dealt with and answered in the previous chapter.

4.5.3 Knowledge

Understandably, a third ingredient of any world-view is one's view of knowledge. Even people not given to philosophic pursuits hold beliefs on this subject. The easiest way to see this is simply to ask whether one believes that knowledge about the world is possible. Regardless of their answer, their reply will identify one element of their epistemology.

Other questions one could include are:

- What are the proper roles of reason and sense experience in knowledge?
- What is the relationship between religious faith and reason?
- Is knowledge about God possible?
- Can God reveal himself to human beings?

- Can God reveal information to human beings?

4.5.4 Ethics

Understandably, most people are more aware of the ethical element of their world-view than of their beliefs about metaphysics and epistemology. Reasons are, people continuously tend to morally judge the conduct of individuals, including themselves, others, and even nations. The kinds of ethical beliefs that are important in this context, however, are more basic than moral judgements about single actions (see Lewis 1947).

4.5.5 Humankind

Furthermore, every world-view includes several important beliefs about human beings. Examples may include:

- Are human beings free, or are they merely pawns of deterministic forces?
- Are human beings only bodies or material beings, or were all the religious and philosophical thinkers correct who talked about the human soul or who distinguished the mind from the body?
- If they were right in some sense, what is the human soul or mind, and how is it related to the body?

Additionally, a person's world-view could also include a set of ideals that lays out how he or she thinks things should be. These ideals produce a gap between the way things are and the way they ought to be. One could rightly consider world-views as double-edged swords. Thus, an inadequate conceptual scheme can, like improper eyeglasses, hinder ones efforts to understand God, the world, and humankind, while the right conceptual scheme can bring everything into focus.

Rightly, one can say, the world exists solely because of a free decision to create by a God who is eternal, transcendent, spiritual, omnipotent, omniscient, omni-benevolent, loving, and personal. Therefore, because there is a God-ordained order to the creation, human beings can discover that order. It is this order that makes science possible; and it is this order that scientists attempt to capture in their laws.

Clearly, as shown through the elements presented, open theism fails almost every required element, in the author's view, needed to correctly build a theistic world-view. Indeed, one can still take this even further, by showing just how dangerous open theism can be. The following will show how open theism can damage the credibility of Scripture by the way it introduces post-modern thinking into its tenets.

In considering the above statement, and in interpreting open theism vis-à-vis a theistic world-view, one would also need to understand its tenets and how they relate to post-modern thought. Hence, the following section will commit to uncovering some of the dangers of a post-modern world-view. This will include how this system has effected and conformed some to accept open theism, as a viable alternative to classical Christian thinking on determinism, God's sovereignty and His omniscience. Modernism and its relation to Christianity will also be explored.

4.6 Modernism, Postmodernism, and the Self

Firstly, according to Dockery (2001:108-109), modernism is characterised by vesting authority in humanity itself. Whether following the external canons of empiricism or the internal canons of rationalism and romanticism, the modernist mind accomplished enthroning humanity as the final arbiter of truth. Secondly, this human authority, according to Dockery, asserts itself both against corporate authority and Divine revelation, either in denying them altogether, or in subjecting them to the individual for validation. While human autonomy is at the heart of every non-Christian thought system, modernism distinguished itself by its self-consciousness. However, modernity can also be defined as a cultural condition characterised by constant change in the pursuit of progress. As such, modernism can also denote the attempt of scholars and theologians to bring religious thought into harmony with the scientific findings and secular

philosophies of the day. The question one may now ask is: Could one combine modernism with Christianity in its pursuit of understanding reality?

4.6.1 Christian Modernism

It was stated in the beginning of this thesis, that according to McGrath (2004:32), a scientific theology is fundamentally Christian in its foundation and in its approach. Thus, in the author's view, one could use the term, *Christian Modernist or contemporary thinker*, when working within science and theology to further understand reality. Furthermore, one could do this, in the author's opinion, without having to enthronе humanity - as expressed by Dockery- as the final arbitrator of truth. In saying this, the author would like to present the following definition of a Christian modernist. A Christian modernist, or contemporary thinker, affirms the power of human beings, including the authority of scripture, the enlightenment of the Spirit and scientific knowledge and technology, to make, improve, deconstruct and reshape their built environment. Therefore, in the author's view, the essence of the Christian modernist is both progressive and optimistic, and therefore this approach can, and has been effectively used throughout this thesis, to further the understanding of reality.

In opposition to modernism, postmodernism is the belief that direction, evolution, and progression have ended in social history. Society is rather based on the decline of absolute truth, and the rise of relativity. All truth within a

postmodern context is relative to ones viewpoint or stance. Postmodernism is therefore an attempt to think beyond the confines of the past; it especially does not take other people's views as the final truth. In the following section, this view will be explored regarding its relationship and influence on current Christian thinking, specifically its influence on open theism.

4.6.2 Postmodernism and Christianity

In the view of Erickson (2002:59), one question that will immediately arise for Christians is how this postmodernism mood and way of thinking corresponds to the Christian faith. Is it possible to be a Christian and to be post-modernist? Are there elements of postmodernism that are compatible with traditional Christianity, perhaps even conducive to it, and are there elements that are in conflict with Christianity?

However, one should first ask whether this is yet an issue. Are there suggestions that Christianity, specifically evangelical Christianity, has absorbed and is displaying any elements of postmodernism?

4.7 Relating Christianity to the Changing Times

Over the years of church history, Christians have held several different opinions about how they should associate their Christian beliefs to the spirit of the times.

Some contend, according to Erickson (2002:63-64), that it is not only what one believes, but also how one preserves the way it is expressed that matters. Thus, no adaptation in presenting the Christian message because of the cultural situation of the recipient or recipients is therefore needed. One simply declares the message, relying on the Holy Spirit to make it intelligible. Similarly, as cultural forces change, there is no need to alter the way one understands the doctrines or explains them to one.

A second grouping in Erickson's view (2002:64), believes there is an unchanging content of the Christian faith. Unless one thus preserves this content, one is no longer dealing with what one terms Christianity. Respectfully, this group is similar to the first one described. Unlike them, however, these Christians believe that the form of conception or expression of the message can suitably adapt to the situation and the times. Therefore, this group believes that just as the Bible continues to be translated into many different languages without changing what it says, so its message can be expressed in many different cultural forms without losing the essential meaning of the original. Thus it can be brought forth in various time periods, using ways of thinking current at those times. Similarly, it can be expressed in different cultures, including African and Asian, just as it is in Western or First World ways of thinking. It can also be expressed at different levels of sophistication and abstractness or complexity. Moreover, one can put it into language and imagery understandable by children, or that which makes sense to a highly educated adult.

4.8 God, the Reality-Constructor

Responding to this, Dockery (2001:110), states that the church may react to this challenge by seeing the creative word of God as a reality-constructor. Thus, a fundamental activity in Scripture is the Bible's articulation of a transcendent, ultimate reality. This is often, if not usually, in contrast to perceived reality. One such case is when the servant of Elisha sees the armies of God surrounding Dothan (2 Kings 6:8-17). Another is when Isaiah sees the vision of God on His throne in the face of pending exile in Isaiah 6. Furthermore, it is found in John's visions of God enthroned and ruling over the earth as written initially for late first-century Christians under intense persecution (Rev. 4-5). In many places within the Scriptures, one is urged to look beyond the order which ones own senses have construed and look, "for the city which has foundations, whose architect and builder is God" (Heb. 11:10). Many do not naturally perceive this transcendent reality. Consequently then, God established a host of metaphors and images through which one is able to view it.

As a result, God's relationship with His people is presented by various metaphors which emphasise different aspects of that relationship. No one metaphor is adequate in capturing the richness of God's nature or the wonder of His relationship with His creatures. Therefore, the task of biblical interpretation may proceed in this post-modem age, with a view to deconstructing false views

and reconstructing – one might even say, proclaiming apt reality. Doubtless, one may do this quite effectively through the images of Scripture.

Given all that has been said, one needs to evaluate and judge open theism according to how it stands up to the scrutiny of Scripture. Therefore, one must ascertain if it either enlightens ones understanding of God, reality and humankind, or if it brings confusion within these particular areas.

4.9 Deconstructing Open Theism

Scripture does not precisely define the nature of human freedom, but philosophers and theologians do discuss it. In general, scholars usually present two main notions of freedom; *libertarianism* and *compatibilism*. Needless to say, both conceptions of human freedom clearly contradict each other, but both are possible views of freedom in the sense that there is no logical contradiction in affirming either view. Supporting the notion that both views of freedom are coherent and defensible, Flint (1988:177-79) puts forward that: “Ultimately the view of freedom that one ought to embrace should be the view that best fits the Biblical data, not our pre-conceived notions of what human freedom is or ought to be”. What follows is a breakdown of the differences and similarities between libertarianism and compatibilism.

According to Wellum (2002:260), compatibilists view human actions as causally determined, yet free. In other words, in contrast to a libertarianistic view, a compatibilist view of freedom, in the view of Peterson et al (1991:59), perceives the human will as decisively and sufficiently inclined toward one option. Thus, even though it opposes the libertarianistic view, it is still free as long as it meets the following requirements:

1. The immediate cause of the action is a desire, wish, or intention internal to the agent.
2. No external event or circumstances compels the action to be performed, and
3. The agent could have acted differently if he or she had chosen to (see Peterson et al (1991:26-28)).

If these three conditions are met, then even though the human action is determined, it may still be considered free. John Feinberg (1987:400) summarises this view well when he states:

If the agent acts in accord with causes and reasons that serve as a sufficient condition for his doing the act, and if the causes do not force him to act contrary to his wishes, then a soft determinist would say that he acts freely.

Generally, open theists like Sanders (1998:220-224) reject this view of freedom, and they do so quite strongly.

Considering this, one could ask: What exactly is the openness proposal regarding the relationship between Divine sovereignty, omniscience, and human freedom? Probably the best place to begin is to define clearly what open theists mean by human freedom, before one can turn to how they view the Divine sovereignty, omniscience and human freedom relationship.

When it comes to human freedom in current philosophical and theological literature, there are two basic views which are primarily discussed and adopted. The one is an *indeterministic* notion referred to in various ways such as libertarian free will or *incompatibilism*, and a deterministic notion referred to as compatibilism or soft determinism. Open theism strongly endorses the former rather than the latter. Therefore, it is important to be clear as to what this view of freedom is, since, as one shall see, it has dramatic implications for how the open theist construes the Divine sovereignty, omniscience and human freedom relationship.

The question one may now ask is: What then do philosophers and theologians mean by a libertarianistic view of freedom? Simply stated, the most basic sense of this view is that a person's act is free, if not causally determined. For libertarians, this does not mean that one's actions are random or arbitrary. In the view of Wellum (2002:259), reasons and causes play upon the will as one chooses, but none of them is sufficient to incline the will decisively in one

direction or another. Thus, a person could always have chosen otherwise than he or she did. Basinger (1993:416) puts it this way; for a person to be free with respect to performing an action, they must have it within their power “to choose to perform action A or choose not to perform action A. Both A and not A could actually occur. However, which will actually occur has not yet been determined” (see Hasker 1983:32-44).

Thus, a further question one may now ask is: How does open theism conceive of the Divine sovereignty and human freedom relationship, given its commitment to libertarianism? One could take it even further by asking how open theists view the relationship between a libertarian view of human freedom and God's sovereign rule over the affairs of humanity. Wellum (2002:260) believes that most open theists, if not all of them, tend to “limit” God's sovereignty in some sense. Furthermore, he states, that with the word “limit”, one is not necessarily using the word in a disparaging or negative sense. Instead, it is used in the sense that God freely chooses to limit Himself by virtue that He has chosen to create a certain kind of world which contains human beings with libertarian freedom. In this sense then, “limit”, does not refer to a weakness or flaw in God, but rather to a self-imposed limit that is part of His plan, not a violation of it (see Cottrell: 1989:108-110).

Obviously, this view is in stark contrast to the compatibilist or soft determinist view. According to the determinist, if a person acts in accord with

causes and reasons that serve as a sufficient condition for the person doing the act, and the causes do not force the person to act contrary to their wishes, then a soft determinist would say the person has acted freely. Open theists like Sanders (1998:220-2240) and Basinger (1993:21-37), generally reject this view of freedom, and they do so quite strongly. This leads one to the next point of discussion, namely that of the openness view of *Divine Omnipotence*.

Traditionally, according to Wellum (2002:262), Christian theologians and philosophers have sought to maintain that God has complete and infallible knowledge of everything past, present, and future. Accordingly, Morris (1991: 87) writes:

Not only is God omniscient, He is necessarily omniscient, i.e. it is impossible that His omniscience collapse, fail, or even waver. He is, as philosophers nowadays often say, omniscient in every possible world. That is to say, He is actually omniscient, and there is no possible, complete and coherent story about any way things could have gone (no possible world) in which God lacks this degree of cognitive excellence.

However, as scholars have long been discussing in the history of theology, this view of God's omniscience does appear to generate a thorny problem. Simply put: How can one possibly conceive to be free in ones actions if God knows exactly how one will act on every occasion in the future. Morris (1991:89) poses the problem in this way,

If God already knows exactly how we shall act, what else can we possibly do? We must act in that way. We cannot diverge from the path that He sees we shall take. We cannot prove God wrong. He is necessarily omniscient. Divine foreknowledge thus seems to preclude genuine alternatives and thus genuine freedom in the world.

Clearly, this is a valid question, especially if one brings into the equation the study of nature from a scientific perspective. For example, Karl Barth, a neo-orthodox writer, and others of his persuasion used the idea of primary and secondary causes to defend Divine sovereignty of nature. At the same time though, they kept the idea of free will as a God-given attribute of human nature. Furthermore, Barth (1958:148) asserted that God, “rules unconditionally and irresistibly in all occurrences”. Nature is God’s “servant”, the “instrument of His purposes.” God controls, orders, and determines, for “nothing can be done except the will of God.” God foreknows and also predetermines and foreordains. “The operation of God is as sovereign as Calvinist teaching describes it. In the strictest sense it is predestinating”. Clearly, Barth affirms in the view of Barbour (2000:160), both Divine sovereignty and creaturely autonomy. As such, God controls, and all creaturely determinations are “wholly and utterly at the disposal of His power”. As a consequence, the creature “goes its own way, but in fact it always finds itself on God’s way.” Thus the idea is that all causality in the world is subordinate to God. For Barth, when a human hand writes with a pen, the whole action is performed by both – not part by hand and part by pen. Barth further declared that creaturely causes like the pen, are real,

but “have the part only by submission” to the Divine hand that guides them (Barth 1958:42, 94, 106, 133).

Furthermore, Farrer (1966:76, 90) writes that “God’s agency must actually be such as to work omnipotently on, in, and through creaturely agencies, without either forcing them or competing with them”. As a result, God acts through the matrix of secondary causes and is manifest only in their overall pattern. “He does not impose an order against the grain of things, but makes them follow their own bent and work out the world by being themselves”. Barbour (2000:161) puts it this way, “we cannot say anything about *how* God acts; there are no ‘casual joints’ between infinite and finite actions and no gaps in the scientific account. So, too, the free act of a person can at the same time be ascribed to the person and to the grace of God acting in human life”.

As a result, it is at this point that open theists offer a solution, according to Wellum (2002:263), to the foreknowledge-freedom problem that is logically consistent, yet a departure from traditional Christian belief. Their view is known as *presentism*. Presentism strongly insists that God knows everything there is to know, i.e. God is truly omniscient. However, presentism then adds this very critical point: It is precisely future free actions of people that are impossible to know. Swinburne (1993:175) sums it up thus “omniscience is knowledge of everything true which is logically possible to know”. Given libertarianistic freedom, they insist, it is impossible for anyone, including God Himself, to truly

know what people will do since there are no antecedent sufficient conditions which decisively incline a person's will in one direction over another. Thus, in upholding a libertarianistic view of human freedom, open theism denies that God can know the future free actions of human beings (see Hasker 1989:136-138; and Basinger 1993:55-64).

Perhaps one may ask: what are some of the implications of such a view, seeing that open theists consider God to be a "risk-taker". It seems that as God does not know the future, logically, God must respond and adapt to surprises and to unexpected happenings. As a result, the implications are that not only does God lack exact and infallible knowledge of the contingent future, but, as Basinger (1993:58) argues, "It can no longer be said that God is working out his ideal, preordained plan. Rather, God may well find Himself disappointed in the sense that this world may fall short of that ideal world God wishes were coming about".

A question that comes to mind is: Do open theists believe that God's ultimate plans will not come to pass? The answer is no, according to Wellum (2002:263). Rather, open theists argue, even though God does not have exhaustive knowledge of future contingents, He is still God. Moreover, given His familiarity with present causal tendencies and His clear grasp of His own providential designs, God is almost sure about how the future will turn out even

though the future remains open. In defence of this, Rice (1985:55-56) explains it thus:

God's future thus resembles ours in that it is both definite and indefinite. But it differs greatly from ours in the extent to which it is definite. Since we are largely ignorant of the past and present, the future appears vastly indefinite to us. We know very little of what will happen because we know and understand so little of what has already happened. God, in contrast, knows all that has happened. Therefore a great deal of the future that appears vague and indefinite to us must be vividly clear to Him.

Despite these arguments, one must add that even after all the caveats are factored in, open theists must still affirm that a God, with only present knowledge, must take risks. Clearly, if decisions made by God depend solely on the responses of free creatures, then creating and governing such a world is, in the words of Hasker (1989:197), "a risky business."

An example of this type of "risky business" is found in the way open theists view specific passages in the Bible. Consider the following examples where, according to Ware (2000:45), openness proponents claim that God learns and may even be taken by surprise by what develops in His relation with humans.

In Genesis 22:10-12, God halts Abraham at the last moment with knife in hand ready to be raised above Isaac's tethered body and says, "Do not stretch

out your hand against the lad, and do nothing to him; for now I know that you fear God, since you have not withheld your son, your only son, from Me".

Commenting on this text, Sanders first approvingly quotes Brueggemann (1982:187) who writes, "God genuinely does not know.... The flow of the narrative accomplishes something in the awareness of God. He did not know. Now He knows." Consequently, Sanders (1998:52-53) explains further:

If the test is genuine for both God and Abraham, then what is the reason for it? The answer is to be found in God's desire to bless all the nations of the earth (Gen 12:3). God needs to know if Abraham is the sort of person on whom God can count for collaboration toward the fulfilment of the Divine project. Will he be faithful? Or must God find someone else through whom to achieve his purpose? God has been faithful; will Abraham be faithful? Will God have to modify his plans with Abraham? In Gen 15:8, Abraham asked God for assurance. Now it is God seeking assurance from Abraham.

According to Sanders, this account is illustrative of the fact that God does not know what free creatures will do until they act. For example: Will Abraham obey God? For Sanders, unfortunately God does not know. However, because of the test, God learns here and now that Abraham will. Thus, according to Sanders "We rob the passage of its natural meaning, when we strip from it its simple message contained in God's own words": "For *now* I know."

Furthermore, Sanders also argues that earlier episodes in the biblical narratives clearly show that not only does God learn moment by moment as

humans freely choose and act, but at times, occurrences may even genuinely surprise God. As a result, future free actions may not only be unknown by God; they may also be unanticipated. Accordingly, Sanders (1998:45-46) suggests that the first sin of the woman and man in the Garden of Eden would constitute such a case. He writes:

God, in freedom, establishes the context in which a loving and trusting relationship between Himself and the humans can develop. God expects that it will, and there is no reason to suspect, at this point in the narrative, that any other possibility will come about. A break in the relationship does not seem plausible considering all the good that God has done.

Yet, according to Sanders (1998:46), “the implausible, the totally unexpected happens.” Furthermore, in Sanders’ view, not only does God learn that the man and woman have sinned, but God is, as it were, quite *surprised* by this occurrence. Although God always knew that sin was possible, it was not probable, or plausible, or expected that His human creatures would turn their backs on Him. Thus, it is impossible to know how often this may be the case in unfolding human history, but here according to Sanders, one has a concrete example where God’s belief about the future, i.e. what He thought most likely to occur were strikingly wrong. Rather, the “totally unexpected happens,” God is surprised, and so God corrects His mistaken beliefs as He learns this truth that the man and woman have sinned.

Although Sanders gives many such examples, the most significant one is due to the central importance of this event in all of human history. For Sanders (1998:100-101), it simply is not and cannot be the case that God *knew* in advance that Christ would in fact choose to be crucified. Thus, Christ's decision to go to the cross was not made in eternity past, according to Sanders - as it was not foreknown by God - but rather in the historical moment when, in prayer to the Father, Christ determined *then* to take this path. The fact that Jesus prays to the Father, "If You are willing, let this cup pass from Me." Thus, Matt 26:39 is, in the view of Sanders, evidence that the future was open. For Sanders, no decision was made in eternity past concerning Christ's death, and the cross was not inevitable.

But how can this be, one may ask for say *Theism*, in which God creates a world in which He foreknows with complete accuracy and precision exactly what will occur in every moment of history? For in such a view, as Sanders (1998:196-197) describes it, "God is never caught off guard, never surprised by any event and never forced to make any ad hoc decisions." Where is the risk in this view, one may ask? Of course Sanders continues, "God remains a risk taker in the sense that God allows libertarian freedom and does not control what the creatures do with it".

Thus according to Sanders' statement, it seems that there is a sense in which God takes a risk in His creation of the world, in any non-deterministic

model of Divine providence. Therefore, granting libertarianistic freedom is a sufficient, and perhaps a necessary condition for genuine risk-taking. But, despite this, there is a sense in which the level of risk for the God of open theism is obviously greater. According to Ware (2000:48), in all other Arminian or non-deterministic models, at least one can say that before God creates the world, He knows exactly what He is getting when He brings the world into existence. As a result, God can foresee just what will happen and He knows every aspect of history and its outcome from the start. Every detail of the future, including every future free creaturely choice and action, is foreknown by God with exact precision before He acts, to bring the world into existence. And importantly, in all of these other Arminian models, from all eternity, God knows with certainty that, and precisely how, He will reign victorious in the end, in accomplishing all His purposes and fulfilling all His promises. Unfortunately, this is not so with the God of open theism.

4.10 God's Infinity and His Omnicience

According to Geisler & House (2001:26-27), both theists and open theists agree that God is infinite (without limits). God's knowledge is identical with His nature, since He is a simple Being. So then, God must know according to His Being, thus, God must know infinitely. Understandably then, to be limited in knowledge of the future is thus not to know infinitely. Hence, God's infinite knowledge must include all future events; if it did not, then He would be limited in His knowledge

and perhaps one could then consider God to be finite? Moreover, they further argue that all effects pre-exist in their efficient cause, since a *cause* cannot produce what it does not possess, it cannot give what it does not have.

However, God is the First Cause of all that exists or will exist. Hence, the future, including all of its free actions, pre-exists in God. By knowing Himself, God knows all future free actions. God knows Himself infallibly and eternally. Thus, He has infallible and eternal knowledge of all free actions that will ever occur.

Clearly, reality consists of and includes both the actual and the possible. Given this, only the impossible is not real. Despite this, however, God's knowledge extends to all that is real. If it did not, then He would not be all-knowing, since there would be something that He did not know. Since God knows the possible as well as the actual, God must therefore know the future, since the future is possible, not impossible. If it were impossible, then it would never happen. Hence, God must know all that will be actualised in the future, including all future free acts.

Unfortunately, this leaves one with the question regarding the problem of evil. This problem according to Pyne & Spencer (2001:266) is perhaps the dominant question of contemporary theology. How can one believe in a good and sovereign God amid horrific evil? Open theists take the problem very seriously, and they believe they address it more satisfactorily than do classical theists.

For example, Hasker (1989:91-201) argues at length that open theism handles the problem of sin far better than the traditional way of viewing sin, i.e. it is a problem of the original sin of Adam. For Hasker “God is a risk taker” because of His lack of control over human actions, he writes:

One finds excellence in the vision of a creation which, wholly dependent every moment on the sustaining and energising power of its Creator, nevertheless contains beings which possess under God’s un-programmed freedom, a creativity of their own; and if such a case may be made, then it will be possible to claim that the God of free will theism is indeed the being through which nothing greater can be conceived.

As a result of this type of freedom, Boyd (1997:38-39) opens his book *God at War* with the story of Zosia, a child tortured and killed by Nazis in front of her mother. Viewing her experience through the words of the hymn, “My Times Are in Thy Hand”, Boyd writes,

Again, if we have the courage to allow the antinomy between the lyrics of this hymn and Zosia’s tortured screams to engage us on a concrete level, the antinomy borders on the unbearable. What does it mean to assert that the hand of the all-powerful and all loving Father “will never cause his child a needless tear” when asserted in the vicinity of a child who has just had her eyes plucked out and of the screams of Zosia’s terrorised mother? In this concrete context, does not suggesting that this event came from the hand of God, and that it came about “as best as it seemed to thee”, come close to depicting God on Hitlerian terms? What is more, would not such a conception significantly undermine the godly urgency one should have to confront such evil as something that God is

unequivocally against?... The Nazis' agenda somehow here seems to receive Divine approval. Yet while we are to view the Nazis' agenda as being diabolically evil, we are apparently supposed to accept that God's agenda in ordaining or allowing the Nazis' behavior is perfectly good.

Furthermore, Boyd (1997:20) contends that the Bible was written from the perspective of a "warfare world-view". As he describes it, this world-view;

is predicated on the assumption that Divine goodness does not completely control or in any sense will evil; rather, good and evil are at war with one another. This assumption obviously entails that God is not now exercising exhaustive, meticulous control over the world. In this world-view, God must work with, and battle against, other created beings. While none of these beings can ever match God's own power, each has some degree of genuine influence within the cosmos. In other words, a warfare world-view is inherently pluralistic. There is no single, all-determinative Divine will that coercively steers all things, and hence there is here no supposition that evil agents and events have a secret Divine motive behind them. Hence too, one need not agonize over what ultimately good, transcendent Divine purpose might be served by any particular evil event.

Sadly, statements such as these imply, according to Pyne & Spencer (2001:267), that God is not able to prevent evil events from happening; a conclusion that does little to reinforce one's hope for the future. However, in defence, open theists scoff at this conclusion, for they believe God can intervene. Arguing that God will surely defeat His enemies in the *eschaton*, Boyd (1997:287) writes, "Hence the ability of any within the angelic or human society of God's creation to rebel freely against God shall some day come to an end".

However, Pyne & Spencer (2001:268) rightly state that after expressing his disgust at the “Hitlerian” implications of providence, is this the way Boyd would answer his own questions about the cries of a tortured child? Did God, who was capable of intervening, choose not to act because He wanted the oppressor to remain free? If open theists believe that God can intervene to prevent tragedies of human evil or for that matter, natural disasters, they have in no way, in the author’s view, escaped the traditional problem of evil.

4.11 God and Determinism

On the opposite side of this thinking, lies the *deterministic view*; the claim that everything is determined. The question is: Is the determinist right?

Before addressing the arguments for determinism, it is necessary to remove some misconceptions about the deterministic position. According to Hasker (1983:37) it must be most strongly emphasised that determinists do not deny that people make choices. If they did deny this, their position would be absurd, but the fact is they do not. Besides, the experience of choosing, of seeing alternatives, weighing up desirability, and finally making up one’s mind, is not any different whether one is a libertarian or a determinist. Thus, while determinists believe that there are sufficient conditions which will govern their choices, they do not know at any given time what those determinants are, or how they will decide as a result of them. So, like everyone else, they simply

have to make up their own minds. As a result, the difference between the liberterianistic and determinist lies in interpreting the experience of choice, not in the experience itself.

One may ask: What are the arguments for determinism? For some (perhaps many) determinists, determinism seems to have the status of an ultimate principle. For example, Leibniz (1996:66) found the *principle of sufficient reason* to be a necessary truth of reason. This particular principle states that, for anything which occurs, there must be some sufficient reason that thing occurs rather than something else. As such, Hasker (1983:38) asks: "And how can this be doubted? If there is no *sufficient* reason for something to happen, then this means that the reason that actually exists is *insufficient*, and if that were so, the event would not take place."

However, Barrett (2004:146-147) believes differently. He states, that the idea of Divine providential action through hidden introduced active information, is consonant with that of a gracious Creator. That is, one who allows the creation to be itself and to have room to develop through the exercise of human free will including the pathways of free procedures. This may also be accomplished via divinely installed guiding principles of chance and necessity. In Christian theology it is the Creator-Spirit who is thus creatively at work throughout space-time (see Jn 5:15 and Rev 21:5). This Spirit of Life, is referred to by Taylor (1972:27-28) as the *go-between God*, he states;

God is ever at work in nature, in history and in human living, and wherever there is a flagging or corruption or self-destruction in God's handiwork, He is present to renew and energize and create again... If we think of a Creator at all, we are to find Him always on the inside of creation. And if God is really on the inside, we must find Him in the process, not in the gaps. We know now that there are no gaps... If the hand of God is to be recognised in His continuous creation, it must be found not in isolated intrusions, not in any gaps, but in the very process itself.

Peacocke (1993:174-175) likens the role of the Creator to that of the composer-

who, beginning with an arrangement of notes in an apparently simple subject, elaborates and expands it into a fugue by a variety of devices of fragmentation, augmentation and re-association...Thus might the Creator be imagined to enable (the unfolding of) the potentialities of the universe which He himself has given it, nurturing by His redemptive and providential actions those that are to come to fruition in the community of free beings — an improviser of unsurpassed ingenuity — a composer extemporizing a fugue on a given theme.

Although arguments such as these have considerable weight, many determinists believe the strongest reasons for their position come from the theory and practice of modern science. The most general scientific argument for determinism is found in the claim that determinism is a “methodological assumption,” a “necessary presupposition” of science, according to Hasker (1983:39). In his view the scientist is seeking to understand, explain and control nature, therefore, the way to reach this goal is by discovering and stating the universal laws to which natural processes conform. The scientist, to begin with,

does not know what the laws are; i.e. what he or she is trying to determine through investigation. However, it is absolutely essential to assume that such laws exist, i.e. the ones that determinism holds, for if he or she does not assume this, the whole endeavour makes no sense at all. And of course all this applies as much to the science of human behaviour as to any other part of science.

Thus Skinner (1962:257) states: "You can't have a science about a subject matter which hops capriciously about. Perhaps we can never prove that man isn't free; it's an assumption. But the increasing success of a science of behaviour makes it more and more plausible."

One should note that scientists can only presuppose determinism as a working hypothesis. As such, the claim that everything is determined is not a scientific conclusion, but rather a philosophical assumption. As Evans (1996:52) puts it:

No one has actually discovered the scientific laws that the determinists believe underlie all human behaviour. Though several generations of psychologists, sociologists, and social scientists of other stripes have laboured mightily, no one knows the laws of human behaviour that are in any way comparable to the laws discovered by the physical scientists.

Consequently, Hasker (1983:41) states that the argument that determinism is a "necessary presupposition of science" seems clearly unsound. Note firstly that the presupposition is relevant to the work of the scientist only if he or she commits to finding and formulating laws which are strictly

deterministic. That is, laws which assert that in a given set of conditions exactly one result can and must follow. But many fields of science seem to get along quite happily with statistical laws which assert merely that, out of several cases of a certain kind, a certain percentage will yield a specific result. Of course, it might be said that this simply reflects the immature and unsatisfactory condition of those sciences. This meaning, the statistical laws are merely temporary stand-ins for the deterministic laws that represent ones ultimate goal.

But even if one were to concede that the final aim of the scientist must be formulation of deterministic laws, this by no means justifies one assuming the truth of determinism. However, what it does justify is the claim that *if success is possible in a certain field of science* - where “success” is defined as the discovery of truth, deterministic laws - then there must be deterministic laws which hold true of the phenomena of that field. But whether success is possible can only be found out by looking.

Therefore, one can say that the argument for determinism as a methodological assumption of science is unconvincing. There is no concrete support yet from the specific sciences; as impressive as it might seem on the outside. In fact, the progress of physics, has led it in the opposite direction (see Barrett 2004; Barbour 2000; Clayton 1997).

But, one may still ask: How then does open theism deal with the area of God's sovereign rule and His omniscience including His predetermined plans for humankind? In the following section this will be dealt with and conclusions to this question reached.

4.12 Open Theism's Diminished God

As previously discussed, often the God of open theism is referred to as a God who takes risks. For example, Boyd (2000:57-58) suggests that taking responsible risks is a virtue, and so is appropriate for God, he writes:

Everyone who is psychologically healthy knows it is good to risk loving another person, for example. You may, of course, get hurt, for people are free agents. But the risk-free alternatives of not loving or of trying to control another person, is evidence of insecurity and weakness, if not sickness. Why should we abandon this insight when we think about God, especially since Scripture clearly depicts God as sometimes taking risks?

Indeed, Boyd (2000:58) further suggests that "if God is truly 'above' taking risks, then, we must accept that things such as sin, child mutilations, and people going to hell are all in accordance with God's will." Though some affirm this, says Boyd, most Christians "reject it in horror." Clearly, God doesn't always get his way, but because God is wise, God's risks are always "worth it."

As a result of Boyd's statement, Ware (2000:50) correctly asks where in Scripture one sees God taking such risk. From the examples given above, it is clear from an openness perspective that God took a big risk in simply giving humans libertarian freedom. Although God wanted them to use their freedom to love and obey him, God knew such a capacity could be used for evil, destructive purposes. Thus, according to open theism, when the man and the woman first sinned, it showed how big a risk God took. Although God fully expected them to obey, they unfortunately failed the test, and brought the beginnings of extensive human sin into the world. This risk is all the more puzzling when one realises that God would have known that His holiness would require sin's penalty to be paid.

Despite the many expressions of hope suggested in open theism (see Sanders 1998:42), it must be seen, according to Ware (2000:51), just how significant is this sense of risk that God supposedly accepts. This is especially so when He chose to create the kind of world He has created. The fact is the God of open theism brings into existence a kind of world in which He largely really only exercises a power of love and persuasion towards His volitional creatures. All their free decisions, unknown in advance by Him, have the potential of either advancing or violating His purposes. The success of these purposes rests, rather significantly, in others' hands. At this very moment, according to open theism, not even God *knows* whether His purposes will be fulfilled. The God of open theism truly is the God who risks.

4.13 The Test of Open Theism

As stated in the beginning of this chapter, the open theism view needs to be tested as to its viability as a theistic world-view. The criteria set forth, according to Nash (1992:26), are that a well-rounded world-view includes beliefs in at least five major areas: God, reality, knowledge, morality, and humankind. The question one may now ask is: How does the open theism world-view compare with these criteria?

What follows, is the basic tenets of open theism. It is with these presuppositions that open theists approach the Bible and interpret it.

- God's greatest attribute is love.

This attribute of God is often elevated above His other attributes and used to interpret God in such a way as to be a cosmic gentleman who wants all to be saved, and mourns over their loss.

- Man's free will is truly free in the libertarian sense.

Man's free will is not restricted by his sinful nature but is equally able to make choices between different options.

By contrast, compatibilist free will states that a person is restricted and affected by his nature and that his nature not only affects his

free will choices, but also limits his ability to equally choose among different options.

- God does not know the future

This is either because God cannot know the future because it does not exist, or... It is because God chooses to not know the future even though it can be known.

- God takes risks

Because God does not know the future exhaustively, He must take risks with people whose future free will choices are unknowable.

- God learns

Because God does not know the future exhaustively, He learns as the realities of the future occur.

- God makes mistakes

Because God does not know all things and because He is dealing with free will creatures (whose future choices He does not know), God can make mistakes in dealing with people. Therefore, God would change His plans accordingly.

- God changes His mind

God can change His mind on issues depending on what He learns and what He discovers people do. Usually, God's change of mind is due to Him being surprised by something He did not plan for or expect.

As one can clearly see, open theism presents a view of God contrary to classical and orthodox Christianity, which sees God as sovereign, all knowing, and unchanging. Thus, one simply has to read these tenets of open theism, to realise that they fail in all five criteria that now follow.

- **God:** Not only is God's sovereignty and omniscience very questionable in open theism, but His ability to protect and love His people is also jeopardised.
- **Reality:** It questions the ability of God to bring to pass what He has stated He will, thus inferring that humankind has the ability to alter future reality, which includes God's plans.
- **Humankind:** Open theism questions God's ability to foresee what humankind will do in the future, which, as a consequence, brings about doubt as to His ability to protect His people, and create a future for them.

- **Ethics;** How can one ethically justify the evil in the world, according to open theists, unless one sees it through the eyes of the God of open theism who cannot, or is limited to control or halt the spread of evil.
- **Knowledge:** Doubtless, the God of open theism is limited in knowledge and understanding. As such, it is a direct attack on the omniscience and sovereignty of God, and is contrary to Scripture.

4.14 Conclusion

In concluding this case study of open theism and its failure as a viable theistic world view, one will do well to consider two questions that have been in the foreground throughout this part of the debate. Firstly, can the teachings of God's foreknowledge and determination of the future be accounted for in open theism? Secondly, do any of these teachings require that one affirm specifically God's exhaustive knowledge of the future?

First, notice the specificity and exactness, as well as the breadth and variety of God's knowledge and prediction of innumerable future items. God knows in advance every word that one speaks before it is even spoken. God predicts the naming of certain individuals long before they are born, as well as the places in specific kingdoms that are yet in the future. He declares how many kings will come at some future time, what alliances will be made and the affect

of these on other nations, and on Israel. He further knows how long government structures will be in place with precise accuracy, including the times and dates of events, which are far too numerous to mention here.

Second, one can notice how frequently that which was predicted, prophesied and determined by God has come to pass, even though the free will of people were involved. To make this point more forcefully, one needs to ask the question of how much of predictive material does some involvement of future free choices enter into the fulfilment of them, and one will realise that the vast majority, if not all, have come to pass. This will surely give one an idea of how much God knows of all the free choices, decisions, actions and contingencies relating to the totality of the future, both near and far.

In the following chapter, the crucial questions of how God provides guidance for his people will be explored. Special reference will also be made to how God leads people through prayer, including questions regarding areas such as: Can one trust God's leading and be confident that His direction is best, as opposed to the God of open theism, who relies on people making right decisions? Furthermore, how shall one interpret and make sense of the terrible suffering in the lives of people? As such, the question of: Is God at work to bring about good through all suffering, or is suffering or pain sometimes simply an unavoidable and pointless by-product of this sinful and evil world? Accordingly,

scientific case studies will be explored and compared to what Scripture states concerning these issues.

CHAPTER 5

God's Providence and its Relation to Prayer, Healing, Personhood and Sin

5.1 Introduction

The first question one might ask in a debate about the providential hand of God on His creation is: how should one, in this context, define providence? According to Tupper (1985:579), providence means that God “sees ahead” and “watches after” creaturely existence generally and each individual specifically. Williams (1996:117) defines providence as, “the overseeing care and guardianship of God for all His creation.” As such, God is understood as one intimately concerned with His creation. In certain ways, God is central to the conduct of the Christian life, which means, Christians are able to live in the assurance that God is present and continuously active in their lives.

However, the role of prayer is a problem that has concerned thoughtful Christians when considering the *nature* of providence, and how it links up to miraculous events, and specifically, physical healing. Erickson (2002:430) states that the difficulty stems from the question, “What does prayer really accomplish?” On the one hand, if prayer has any effect on what happens, then it

seems that God's plan was not fixed in the first place. On the other hand, if God has settled His plan and He will do what He is going to do, then does it matter whether one prays or not? Every committed Christian wants to believe that prayer makes a difference. According to Ware (2000:164): "What is the point in praying, if prayer itself turns out to be superfluous and ineffectual"?

Polkinghorne (1998:84-85) refers to providence as *Divine action* in the world. From a theological and a scientific view, he sees providence divided into three levels.

General providence. This is the Divine sustaining of the order of the world, in which one understands the laws of nature as expressions of God's faithfulness. The deist, as much as the theist, will accept this idea.

Special providence. This view concerns itself with particular Divine actions within cosmic history. It is understood as taking place within the grain of physical process, thus not immediately distinguishable from other happenings. God may act through famine or through times of plenty, and this may be discernible by faith, but it will not be demonstrable to the sceptic.

Miracle. The concern here is with radically unnatural events, such as turning water into wine or restoring the dead to life. If such things happen, their very nature suggests that they are the effects of Divine action of an unusual kind.

For Polkinghorne, these categories are not entirely sharply defined. There are some events (such as those that might be interpretable as highly significant coincidences) which might seem to fall into a grey borderline area. Nevertheless, the classification provides a useful taxonomy for thinking about possible Divine acts. As a result, in recent writing about science and theology there has been much discussion of God's action in the world. The following is to survey some of the suggestions put forward.

5.2 **Providence in Prayer and Healing**

One should note from the start of this discussion, that the above question is simply one particular form of the larger issue of the relationship between human effort and Divine providence. Barth (1958:148) defines Divine providence in terms of the sovereignty of God when he states that God ...

rules unconditionally and irresistibly in all affairs.... Nature is God's 'servant', the instrument of His purposes.... God controls, orders, and decides, for nothing can be done except the will of God.... God foreknows and predetermines and foreordains.

Although this statement is true, it does appear from Scripture that God often works in some sort of partnership with humans. One could, in a sense say that God does not act unless humans do play their part. Thus, when Jesus ministered in His hometown of Nazareth, He did not perform any major miracles; all He did was heal a few sick people. Scripture states that Jesus “was amazed at their lack of faith” (Mark 6:6), suggesting the people of Nazareth simply did not bring their needy ones to Him for healing. Often the act of faith was necessary for the Lord to act, but it seems that this was lacking in Nazareth. To see it from another perspective, Bloesch (1978:31, 57) explains:

While God’s ultimate purposes are unchangeable..., His immediate will is flexible and open to change through the prayers of His people. A personal God, who loves and cares, can be solicited in prayer. Prayer can work miracles because God makes Himself dependent on the requests of His children.

In the view of Erickson (2002:431), when God wills the end, He also wills the means. Therefore, in Erickson’s view, prayer does not change what God has purposed to do; it is simply the means by which He carries out His final objective. However Thiessen (1979:129) states that some hold that prayer can have no real effect on God, since He has already decreed just what He will do in every instance, however he does argue that this is an extreme position. One must not ignore James 4:2, “You do not have because you do not ask.” One could say, God does some things only in answer to prayer, He does other things without anyone’s praying, and He does some things contrary to the prayers offered. In His omniscience God has already taken all these things into account,

and in His providence He sovereignly works out everything in accordance with His own purpose and plan. Thiessen further argues:

If we do not pray for the things that we might get by prayer, we do not get them. If He wants something done for which no one prays, He will do them without anyone praying. If we pray for things contrary to His will, He refuses to grant them. Thus, there is a perfect harmony between His purpose and providence, and man's freedom.

In this regard, one needs to consider the contentious issue concerning whether God heals when one prays.

The twentieth and early twenty-first century has seen a remarkable growth in interest in the subject of the spiritual healing of the body. This growth has arisen in three related but distinct stages of movements (see Erickson 2001:852-853). Firstly, the Pentecostal movement, which arose and grew in the United States in the early part of the twentieth century, and stressed the return of certain of the more spectacular gifts of the Holy Spirit. Then, about the middle of the century, the Neo-Pentecostal or Charismatic movement began; it had many of the same emphases. In the 1980's and onwards the "Third Wave" arose. These movements put greater stress on the miracles of spiritual healing than does Christianity in general. Often they make no real attempt to give a theological explanation or basis for these healings. As such, when one raises the question, the answer often given is that healing, no less than forgiveness of sins and salvation, is to be found within the atonement. The argument is that Christ died to carry away not only sin, but sickness as well. Among the major

advocates of this view was A. B. Simpson, founder of what is today known as the Christian and Missionary Alliance.

One of the striking features of the view that Christ's death brings healing for the body, according to Simpson (1880:30-31), is the idea that the presence of illness in the world is a result of the fall. When sin entered the human race, a curse (actually a series of curses) was pronounced on humanity; diseases were part of that curse. Since illness is a result of the fall, not simply of the natural constitution of things, it cannot be combated solely by natural means. Being of spiritual origin, it must be combated in the same way the rest of the effects of the fall are combated - by spiritual means, and specifically by Christ's work of atonement. Intended to counter the effects of the fall, His death covers not only guilt for humanity's sin, but also humanity's sickness. Healing of the body is therefore part of a Christian's great redemption right. And if that is the case, then when one prays for a healing, whatever the sickness might be, healing should take place.

However, the research that has been undertaken on the relationship between prayer and healing over several decades does not confirm the above contention. The following is a breakdown of these findings.

5.3 Historical Aspects of Prayer and Medicine

In various interviews and surveys undertaken over several decades by prominent scientists and medical doctors (see Meyers & Benson 1992; Angel 1985; Kleinman, Eisenberg, Good 1978; Engel 1977), it was found that most people believe that not only does the mind affect the body (a view with which most scientists would agree), but there are also supernatural forces that have an intense effect on one's physical and emotional well-being (a view with which most scientists would disagree).

From a scientific perspective, the important question is: how should one deal with reports of miraculous healings and the belief that prayer can affect healing? Is there a special connection between belief in the supernatural and physical well-being? With the accelerating technical advances of Western medicine, there are increasing patient complaints against the medical community for their exclusionary focus on the biomedical model of disease. According to these surveys, it would seem that many patients, particularly if their disease is severe, want metaphysical as well as medical interventions; that is, they want a direct link from their medical care to God.

In a later study and in response to these findings, McCullough (1995:15-29), in a review of the prayer literature, considered the following four areas of prayer research as far as man is concerned:

- prayer and subjective well being;
- prayer as a form of coping;
- prayer and psychiatric symptoms;
- intercessory prayer.

He reported that both the frequency of prayer and the presence of mystical and religious experience during prayer were predictive of subjective well being on many indexes. It was, however, stated that several confounds in the studies reviewed rendered the data interpretation problematic. Variables such as religious commitment and socio-demographics were not controlled. Thus, if one prays often but has little commitment to religious belief, the positive affects on subjective well-being may be predicted to diminish.

McCullough further observed that prayer is used more often for symptoms that have been treated with medication, and have been discussed with a physician, than those that have not. One obvious problem found is that prayer as an effective coping response is confounded with medical treatment. Thus, as one experiences the effect of the medical treatment, there may be a tendency to credit change to prayer.

What about intercessory prayer, or the act of praying for another? Sir Francis Galton (1872:125-135) was the first to apply statistical analysis in trying to determine the effects of intercessory prayer. While his data collection method was flawed, he inferred that intercessory prayer was not a significant predictor of life span or social class. Since Galton's study in 1872, there have been at least six empirical studies looking into the effect of intercessory prayer. Collipp (1969:201-204), Elkins, Anchor & Sandler (1979:81-87), Joyce & Weldon (1965:367-377), O'Laoire (1997: 38-53), and Wirth & Barret (1994:61-67) all studied the effect of prayer on various medical conditions and found no statistically significant effect for intercessory prayer. Green (1993:2752), however, did find positive expectancy (the belief in the effectiveness of prayer) in relation to intercessory prayer to have a significant affect on patient anxiety levels. Thus, for those patients who had a high expectancy for the effectiveness of prayer to reduce anxiety, anxiety was reduced.

Although these studies do not validate or deny the effect of prayer, the question remains unanswered: does prayer work?

5.4 Does Prayer Work?

The question one might now ask is: Should medical doctors or psychologists advise their patients to pray? According to Sloan, Bagiella & Powell (1999:664-667), "it is premature to promote faith and religion as adjunctive medical

treatments." According to them, so far, the existing research on the effect of prayer is so flawed in terms of controlling for viable alternative theories and the likelihood of errors, that belief in prayer for physical and emotional well-being is simply unwarranted. However, the empirical evidence strongly suggests that expectancies for desired outcomes, social connectedness, and deep religious positive expectancies may be effective buffers for the stressors associated with various medical conditions. As such, any intervention that improves patient well-being is valuable. One could also ask how psychology plays a role in understanding the effectiveness of prayer in ones life.

5.5 Psychology and Prayer

The study of prayer in the early history of modern psychology was without doubt, a thriving concern (see Pratt 1908 & Strong 1909). In the years that followed, however, the study of prayer dropped dramatically, following the general trend of declining interest in the relation between psychology and religious beliefs (see Spilka & McIntosh 1999). However, during the last several years, researchers have revisited the topic of prayer (see Hood, Morris, & Harvey, 1993; Ladd & Spilka 2002; Laird, Snyder, Rapoff, & Green, 2001; Poloma & Gallup 1991). Consequently, Ladd & Spilka (2002) proposed an explicit theoretical basis for understanding prayer as a means of forming cognitive connections. One should state that none of these proposals were based on the premise that one was

dealing with a personal God when praying. As a result, one might then ask:

What has this to do with providence?

Reasons for bringing this into the discussion, is to show that many pray without really believing that anything will happen, except within them. And of course, the person praying has the comfort of knowing they have someone they can talk to, whether the desired outcome of the prayer manifests or not (this is explored further on). According to Ladd & Spilka (2002), prayer contains *inward*, *outward*, and *upward* dimensions as postulated by Foster (1992). The theory behind this is that inward prayers emphasise self-examination. Outward prayers focus on strengthening human to human connections. Upward prayers centre on the human-Divine relationship.

Besides the directionality of prayer put forth, Ladd & Spilka (2002) also reported three second-order factors; referred to as higher orders that appear to represent the intentionality of prayer.

Higher order factor one, consists of content stressing intercession.

- Outward: Prayer on behalf of someone's difficulties.
- Outward: Prayer to share another's pain.
- Inward: Prayer to evaluate one's spiritual status.

In broad terms, it seemingly represents a way of connecting which highlights the internal conditions of others as well as ones-self. Engaging in intercessory prayer compels recognition of another's inner struggle, even as examination prayer evaluates one's own private situation. Perhaps even more intense is the prayer of suffering or the willingness to enter someone else's pain to provide comfort.

The second higher order factor encompasses prayers of rest.

- Upward: Searching for stillness, sacrament.
- Upward: Encountering tradition, and tears.
- Inward: Experiencing personal turmoil.

Here, connections with the Divine appear to provide both peace and pain. These mixed experiences of spiritual pleasure and pain are not uncommon (cf. Weil 1951).

The third higher order factor is marked by:

- Outward: Assertiveness and petitionary prayer.
- Outward: Material request approaches to praying.
- No inward experience is recorded here.

This factor shows connections based on a bold use of prayer. Instead of abandoning one's needs, this type of prayer puts those needs at its centre. The

research conducted did not refer to any empirical data stating whether any of the needs prayed for were received.

However, what these researchers have uncovered and systemised, is correct, and does throw more light on the subject of prayer. It also exposes the need for evangelical research to be conducted in this area of prayer and its effect on God's people. Unfortunately, all the research conducted fails to answer the question of God's involvement in ones prayers, other than at a superficial level. As such, the comfort of knowing that from an inward, outward and upward belief, prayer does to a certain degree accomplish something is not enough in the author's view. Scripture is clear that God is concerned for the health and well-being of His people. A belief in a theistic God who is actively involved in His creation, demands deeper answers to the prayer question and what it can accomplish, than that given by science.

It is unfortunate that many of the studies undertaken around prayer and healing were based on empirical data, inclining to ignore the omnipotence and omni-benevolence of God. In the author's view, it was also not pointed out whether any of the subjects interviewed, or the scientists conducting the experiments, had a believing trusting faith in God, even though they did pray. So far, the author of this work has not found any major research undertaken by evangelicals to counter-claim these scientific findings. It is unfortunate, but many scholars, even those in the theological disciplines, are sceptic, when it comes to

anything related to healing or any miraculous events. Bultmann (1958:16), one of the most influential New Testament Scholars of the previous century, is the most prominent exponent of a non-miraculous Christianity. He identifies the miraculous as an aspect of the mythological world-view that has been supplanted by the world-view of modern science. For example, he asserted that miracles were "mythology". For Bultmann, the scientific world-view has rendered the idea of the miraculous untenable for contemporary humanity. Bultmann (1958:37-38) wrote, "Modern men take it for granted that the course of nature and of history, like their own inner life and their practical life, is nowhere interrupted by the intervention of supernatural powers." He adds "...modern man acknowledges as reality, only such phenomena or events as are comprehensible within the framework of the rational order of the universe. He does not acknowledge miracles because they do not fit into this lawful order."

However, the question remains as to why the Bible would instruct Christians to pray in all circumstances, if God were not going to answer any of their prayers; specifically prayers for healing. Although it was suggested that the data presented was flawed, and that much research is still needed, one may ask: Is that a good enough answer when reading the negative statements made within these studies about the relationship between God, prayer and healing?

In all fairness, one must say that natural science deals with facts. It was presented in the introductory chapter of this thesis that facts are the way that the

natural scientist builds a coherent framework for understanding the world (see Barton 1999:17). Unfortunately, as this framework has developed, it has conflicted with theology and will conflict with theology in future studies until both disciplines find common ground. The reason: As science exposes itself to new data it is subject to change, thus it is continuously evolving. One could say there are no absolutes at this time in the scientific world, especially in its understanding of prayer. None of the scientists quoted can claim that their observations have acquired the status of ultimate truth. In this vein, the following letter sums up what the general consensus by the theological world is on the findings of natural science.

In a letter written to the scientific magazine *Nature*, Donald MacKay (1997:502) from the Department of Communications and Neuroscience, at University of Keele in the United Kingdom wrote;

In scientific laws we describe, as best we can, the pattern of precedent we observe in the sequence of natural events. While our laws do not prescribe what must happen, they do prescribe what we ought to expect on the basis of precedent. If by a “miracle” we mean an unprecedented event...then science says that miracles ought not be expected on the basis of precedent. What science does not (and cannot) say...is that the unprecedented does not (or cannot) occur...We cannot dogmatically exclude the ever present possibility that the truth about our world is stranger than we have imagined.

Although as previously submitted; doubtless, science has achieved enormous success as ways of knowing the structures and processes of the

material world, physical science, it appears, leaves no place for Divine action.

One should also declare that it is a human moral trait to seek explanations.

Regardless of whether this is in science, or any other discipline, each could claim that they are doing research simply for the very sake of understanding how nature operates. This is irrespective of whether it is in religion or any other field that deals with unexplainable events, e.g. the discipline of quantum physics.

Natural science needs to understand that if major breakthroughs are to be achieved in the dialogue between science and theology, scientific methods, as advanced as they are, hold no intrinsic guarantee that it can lead to ultimate truth, specifically when it comes to unexpected happenings, i.e. when one prays and things happen.

Regarding this, Bloesch (1978:58) writes:

Evangelical prayer is based on the view that a sovereign God can and does make Himself dependent on the requests of His children. He chooses to realise His purposes in the world in collaboration with His people. To be sure, God knows our needs before we ask, but He desires that we discuss them with Him so that He might work with us as His covenant partners toward their solution. There is, of course, a time to submit as well as a time to strive and wrestle with God in prayer, but this should come always at the end of prayer and never at the beginning. Moreover, our submission is not a passive resignation to fate but a relinquishing of our desires and requests into the hands of a living God to answer as He wills.

A question that now seems to surface is: How does God influence humanity regarding prayer and His answering of it, and how does this in turn affect surrounding activity to bring about Gods Divine will?

5.6 God's Actions

To start, it has been put forward throughout this work until now, that there is no doubt that the last twenty years has seen a remarkable renewal of interest in the relation of theology and science (see Sanders 2002). One particularly difficult tangle of issues has to do with the idea, deeply rooted in the theistic traditions that God acts in the world. From a science view, Murphy (1996:4) defines these actions as a *bottom-up and top-down causation*.

The fundamental forces of physics underlie chemistry and biology, allowing emergent levels of order in the hierarchical structure of systems. Basic physical laws determine what happens at the microscopic level, and hence underlie functioning at the macroscopic levels, through bottom-up causation. The higher levels in turn, however, affect the processes at work at the lower levels through top-down causation (see also Peacocke 1993).

The question is: What is the relation between theological depictions of the world as the scene of divine action, and scientific descriptions of the world as an intelligible structure of natural law? Can God be understood to act entirely in and through the regular structures of nature or does a robust account of Divine action also require the affirmation that God acts to redirect the course of events

in the world, bringing about effects that would not have occurred had God not so acted? If one says the latter, then is one committed to the claim that God at least sometimes performs miracles, in the familiar (if truncated) modern sense of an event caused by God that “violates” the laws of nature?

No doubt a theistic Biblical world-view involves a strong conception of Divine sovereignty over the world and human affairs, even as it presumes human freedom and responsibility. While too numerous to list here, Biblical passages affirming God’s sovereignty and Divine action have been grouped by Carson (1981:24-35) under four main headings: (1) God is the creator, ruler, and possessor of all things, (2) God is the ultimate personal cause of all that happens, (3) God elects His people, and (4) God is the unacknowledged source of good fortune or success. As such, no one taking the many scriptural passages attesting to God’s actions in the world seriously, can embrace currently fashionable libertarian revisionism, which denies God’s sovereignty over the contingent events of history.

However, there is no doubt according to Barrett (2004:142), that Divine action is a long-standing topic of debate. If the world is no longer construed in terms of the mechanistic Newtonian picture but rather as a world of flexibility and openness to change, what is the manner and scope of Divine action and wherein lies the causal joint? Where does God actually act? Furthermore, has God in eternity past *determined* the course of all future events? Although

determinism and Divine Causality have been discussed in a previous chapter, it nevertheless has far-reaching implications concerning prayer and thus requires further investigation. The first area one would need to consider is the act of determinism.

5.7 Bottom-up Causality

This particular term states that all events in the world are the result of some previous event, or events. Accordingly, all of reality is already in a sense predetermined or pre-existent, and therefore, nothing new can come into existence. Thus the question: Why pray? This closed view of the universe sees all events in the world simply as effects of other prior effects – a sort of *supervenience* or *emergence* taking place - and has particular implications for morality, science, and theology. Ultimately, if determinism is correct, then all events in the future are as unalterable as are all events in the past. Consequently, human freedom is simply an illusion and the need of prayer irrelevant in changing surrounding reality, as its course of action – in a sense - has already been determined. The question then is: How does this affect or impact on human freedom?

Regarding the question of determinism, Murphy (1995) has proposed that God determines all *quantum indeterminacies* but arranges that law-like regularities usually come about in order to make stable structures and scientific

investigation possible, and to ensure that human actions have dependable outcomes so that moral choices are thus possible. As such, orderly relationships do not constrain God, since He includes them in His purposes. Murphy holds that in human life God acts both at the quantum and at higher levels of mental activity but does it in such a way that it does not violate human freedom.

An alternative would be to say that while most quantum events occur by chance, God influences certain quantum events without violating the statistical laws of quantum physics (see Russell 1998). However, a possible objection to this model is that it assumes bottom-up causality within nature once God's action has occurred and thus seems to concede the reductionism's claim that the behaviour of all entities is determined by their smallest parts (or lowest levels). The action would be bottom-up even if one assumed that God directed His intents to the larger wholes (or higher levels) affected by these quantum events. However, most scholars in this field also allow for God's action at higher levels, which then results in a top-down influence on lower levels, as well as quantum effects from the bottom-up.

In line with this, Peacocke (1993: 215) says that without argument, God exerts a-top-down causality on the world. In his view, God's action is a boundary condition or constraint on relationships at lower levels that does not violate lower-level laws. Generally, boundary conditions may be introduced not just at the spatial or temporal boundaries of a system, but also internally through any

additional specification allowed by lower-level laws. In human beings, God could influence the highest evolutionary level, that of mental activity, thereby modifying the neural networks and neurons in the brain.

Peacocke (1993:217) further maintains that Divine action is effected in humans down the hierarchy of natural levels, thus one has at least some understanding of the relationships between adjacent levels. He suggests that God communicates His purposes through the pattern of events in the world. Thus, one can look on evolutionary history as acts of an agent who expresses intentions but does not follow an exact predetermined plan. Moreover, he says, God influences ones memories, images, and ideas, just as ones thoughts influence the activity of neurons. According to Peacocke, Christ was a powerfully God-informed person who was a uniquely effective vehicle for Gods self-expression, so in Christ, God's purposes are more clearly revealed than in nature or elsewhere in history. In the authors view, Peacocke's idea seems to lean towards *process theology* or even the *openness view* of God discussed in the previous chapter, which relies on chance as the determiner of all future events.

As such, ideas of top-down causation are invoked by both Peacocke (1993:157-165) and Polkinghorne (1998:60; 1996:31-32), but in different ways. Peacocke speaks of the relationship between Creator and creation in panentheistic terms, placing great emphasis on the immanence of God who is

all the time creating in and through the processes of the world. According to him, these processors are themselves God's action and thus constrained to be what they are in all their subtlety and fecundity by virtue of the way God interacts with the world-as-a-whole. Sanders (2002:213), finds Peacocke's position to be "the most promising current theory", though he acknowledges that it operates at a high level of abstraction. Accordingly, knowing the interconnectedness of the world to the finest detail, one thus envisages God as being able to interact with the world "at a *supervenient* level of totality" - *holistically* - thereby bringing about particular events and patterns of events, i.e. His predetermined plan. To further expand on the concept of supervenience, Murphy (1996:23) states that it is a term coined by philosophers "to refer to the relation between properties of the same system that pertain to different levels of analysis". However, Murphy does acknowledge that there are a variety of definitions of supervenience, meaning that the term can be used to describe how higher-level properties supervene on lower-level properties but are not reducible to them. Thus, for example, mental properties can be said to supervene on properties of the neurological system; moral properties supervene on psychological or sociological properties.

Taking the above into consideration, Barbour (2000:170) states that if quantum events have necessary but not sufficient physical causes, and if they are not completely determined by the relationships described by the laws of physics, their final determination might be made directly by God. What appears to be chance—which atheists take as an argument against theism—may be the

very point at which God acts. Such interaction then, amounts to the input of information of a pattern-forming nature; the energy content of which can be vanishingly small so that there is no breach in the causal network of natural law. Indeed, it is a form of top-down causation that Peacocke prefers to call *whole-part influence*. Thus, in the view of Murphy (1996:20), Peacocke has made an important contribution to the dialogue between theology and science by suggesting that theology be understood as the science at the top of the hierarchy, since it studies the most complex of all systems, the interaction between God and the entire universe. Like Sanders (2002), Murphy believes that Peacocke has made an important contribution with his model. For Peacocke, his concern is always to interpret the world's happenings as naturalistically as possible, seeing this as a crucial task of theology in the scientific age. However, in the view of Barbour (2000:170), scientific research finds only law and chance, but perhaps in God's knowledge all events are foreseen and predetermined through a combination of law and particular divine action. Since God's action would be scientifically undetectable, it could be neither proved nor refuted by science. This would exclude any proof of God's action of the kind sought in natural theology, but it would not exclude the possibility of God's action affirmed on other grounds in a wider theology of nature.

Consequently, Polkinghorne (1998) also speaks of top-down causality through providing similarly energy-less *active information*, although he suggests

a more direct input into the world's processes – *chaos concept*. In the author's view, "chaos" is difficult to define. According to Gleick (1988: 306), of the chaos scientists he interviewed "No one could quite agree on a definition of the word itself". However, in the view of Polkinghorne, with the chaos concepts of *butterfly effect* and *strange attractor* in mind, it is conceivable that pattern-forming information can lead a system from one arrangement to another. Meaning, since any trajectory from one point within its strange attractor to another does not involve any change of total energy – thus Polkinghorne suggests, the Divine will could be exerted within any macroscopic part of the world's structure. Besides, he also believes that there is a greater dynamical openness for Divine agency via *chaotic* systems than simply through *holistic* operation on the world-as-a-whole. However, Bak (1997:31) has challenged this theory. According to him, the chaotic theory is not robust, since the critical state only occurs in the ephemeral interface between disordered and ordered states. Furthermore, chaotic systems tend to oscillate back and forth due to the strange attractor and cannot build up unique systems slowly over time. In Bak's (1997:31) words, "Chaos theory cannot explain complexity". However, according to Polkinghorne (1998:36), when challenged, macroscopic physical systems - even in their chaotic mode - follow deterministic equations and therefore cannot be expected to offer any room for manoeuvre. Furthermore, he states, the equations can be understood as estimations to true physical reality, applicable in only those rare and specific situations in which a system can be treated as totally isolated from its environment.

A question one could ask is: Could perhaps Divine causality function only through those who submit by faith to God. Meaning, if one renders their will to God believing that He knows best, one can then say that no violation of human freedom is forthcoming, since it was freely given over to God to do as He pleases. Thus, when one renders freely their will over to God, He can then exercise freely, top-down-causality through the person, to fulfil His will on the earth. Perhaps those who do not freely submit their wills, are not in God's will, so to speak, thus their prayers are not necessarily answered, specifically if it is not part of God's providential plan for their life and others? Therefore the bottom-up causality will still affect their course of action, thus God's Divine will is still coming about throughout creation, even though uncommitted minds or mental processors are in the equation. Thus, to sum up, one could present it as follows:

God could, in a sense, place laws of determinacy into cells at the quantum level. From this a *determined emergence* could occur throughout the different levels till it reaches the mental states (see Murphy 1996:23). From this mental state, ideas could emerge – one could call them *God ideas* (see Barbour 2000:170). It is at this level that one could either determine or reject, by an act of free-will, to go forward with the emerging ideas to bring about changes in the natural realm of reality. For Murphy (1996:25), this is where top-down *action* occurs; when human volition is involved. Consequently, this brings about the

necessary causal changes with the capacity to influence that which sustains its very existence - the natural realm. Thus one has the combination of upward determinism and downward causation. This then brings about human experience which then changes and adjusts human nature as God would have. One could in a sense say that prayer is the causal joint to start the process of bringing about His will on this earth as the person praying, to a large degree, is rendering their will to a higher power.

But despite all that has been said, the question of whether God answers specific prayer still remains unanswered. Could it perhaps be that God is not that concerned with prayer as a means of fulfilling His will on this earth, as His will is already predetermined as assumed throughout the above discussion?

The only answer at this point is to say that as one submits to God, so the ideas and desires regarding what to pray, subtly come on a person's thoughts through emergent properties determined by God at the quantum level. Thus, when one prays those ideas and thoughts that emerge, one is, in a sense, praying God's determined will on the earth, and as a result, things begin to change in the physical.

However, there is an alternative view that need discussion, and that is: could one say that God rather requires prayer simply to bring inward peace and contentment to His people? This is particularly relevant if God's predetermined

plan will come to pass regardless of any outside interference, especially when it comes to humanity's free-will? In this vein the following is a breakdown of this alternate view.

5.8 Is Prayer only a Means of Inward Change?

Moltmann (2001:247-249), who breaks with monotheism and embraces a Hegelian form of panentheism (see Heiler:1958), contends that one can no longer pray *to* God but only *in* God, i.e. in the spirit of God. Accordingly then, one reinterprets prayer rather as *soliloquy*; reflection on life or meditation on the ground of being. Some theologians (see Tillich1957 & Schleiermacher1963) believed that prayer should only take the form of gratitude, resignation, or meditation rather than a petition to alter the ways of God. In other circles, prayer is interpreted and understood as a consciousness-raising experience which brings one into tune with the infinite. This is very much in line with the findings undertaken by Green (1993:2752) and Sloan et al (1999:664-667), who stated that those patients who had a high expectancy for the effectiveness of prayer to reduce anxiety, anxiety levels were indeed reduced and may also be effective buffers for the stressors associated with various medical conditions.

What these researchers, in the author's view, fail to recognise is that prayer is an essential element in the totality of Christian living, especially regarding intercessory prayer. Paul writing to Timothy states the following in I

Timothy 2:1-2, “I urge that supplication, prayers, intercession, and thanksgiving be made for all men, for kings and all who are in high positions”. While no sharp distinction can be drawn between “supplications” and “intercessions”, petitionary prayers are offered on behalf of others. But this does not, unfortunately, answer the question of whether God heals at ones request, or at the request of others, as in intercessory prayers offered on behalf of others?

To answer this, one would first need to determine how a miracle would or could take place. However, this is a complex question, which can lead to different results depending on how this question is approached. One of those approaches, according to Lewis (1947:1), is by experience. However, in his view, “...the question of whether miracles occur can never be answered simply by experience”. For Nichols (2002:711), miracles usually occur within a context of faith and prayer, but one would not want to limit God’s miraculous activity only to contexts of faith and prayer. For example, Erickson (2001:432) writes that some theorise that miracles recorded in the Bible were probably a suspension of natural laws (a view rejected by Lewis as will be shown in the following section). An example of this is the case of the axe head that floated (2 Kings 6:6). The theory suggests that briefly in time, in that cubic foot or so of water, a suspension of the law of gravity came about. In effect, God turned off the law of gravity until the axe head was recovered. The problem with such examples is that breaking such laws of nature, usually introduces complications requiring a whole series of compensating miracles. For one thing, there is no hint in the

narratives that if God suspended the laws of gravity to float the axe head, how would everything else connected to the miracle react? In the following section the phenomenon of God, nature and miracles will be researched.

5.9 God, Nature and the Miraculous

For Lewis (1947:5), the word *miracle* is defined (in his words “rather crudely”) as an influence with nature by supernatural means. McDowell (1999:662) expands on this by stating that a miracle is defined as a special act of God in the world. As a consequence of this, miracles can only exist where there is a theistic God who can perform such acts. Thus, the first question one would need to ask within the context of this study, is: How do the natural sciences perceive the miraculous, if at all?

Firstly, from a biblical perspective, according to Lewis (1947:11-15), “What naturalism cannot accept, is the idea of a God who stands outside nature and made it”. Thus for many natural scientists, miracles are impossible, as in their view, nothing can come into nature from the outside – to cause a miracle – as there is nothing outside to come in. However, even if one admits that God exists and is the author of nature, does that mean that miracles, by right of God’s existence, and that He created nature, must or even can occur?

God, in the view of Lewis (1947:71), might be a being of such kind that it is “contrary to His character to work miracles. Or, He might have made nature the sort of thing that cannot be added to, subtracted from, or modified”. If this is the case, one then has to approach miracles from one of two views. The first being, the character of God excludes miracles. The second being, nature itself excludes miracles.

To begin to unpack this complex subject to reach a reasonable conclusion, one would need to start with the second approach discussed, that being, nature itself excludes miracles. For Lewis (1947:75), “Nothing can seem extraordinary until you discover what is ordinary”. What Lewis is correctly saying here is that if one rules' out the supernatural, one will *perceive* no miracles. Equally valid is that one will *perceive* no miracles until one believes that nature works according to regular laws, a simple but profound example is given by Lewis (1947:75). If one has not yet noticed that the sun rises only in the East, one will not see anything miraculous if the sun rises one morning in the West. If miracles were offered as events that normally occur, then the progress of science would render beliefs in miracles gradually harder to accept, and finally impossible to accept.

Returning to the first view that God's character might exclude miracles, Lewis (1947:77) writes, “It seems reasonable to suppose that the Creator was specifically interested in man and might even interrupt the course of nature for

his benefit". However, the question one now needs to ask is: Can nature be known to be of such a kind, that supernatural interferences are possible? Furthermore, if one grants the existence of a power outside of nature, is there according to Lewis (1947:88) "any intrinsic absurdity in the idea of its intervening to produce within nature, events which the regular 'goings-on' of the whole natural system would never have produced".

From a theological perspective, one could say that when miracles do occur (whether that is an answer to prayer for healing or any similar related requests) natural laws are countered by supernatural forces (see Lewis 1947:59-61).

In this view, the laws of nature are not suspended, but continue to perform. In the process a supernatural law is introduced, negating the affect of the natural law. There are two other possible ways, other than those given by Lewis, of understanding how God may act in a miracle. The first is the traditional way: God responds to prayer, faith, and holiness. If a person or group of persons of holiness and faith pray to God for a healing, God may respond.

A second way is this: Perhaps God's activity, or "energy," to use a modern expression is always and everywhere available, like an extended field or supporting context. Pannenberg (1994:83), for example, argues that the Spirit of God may be viewed (analogically) as a dynamic field, a field that can be

accessed only by those who open themselves to God in faith, holiness, and prayer. The first model, in the view of Nichols (2002:712), envisages God's action in terms of personal response; the second, represents it as a field or context phenomenon; the field is always present but only some access it. One could say that both of these models are necessary to understand miracles, just as both particle and wave models are necessary to understand subatomic particles or the nature of light. The models are complementary, and either one without the other is incomplete. The first model explains the fact that many miracles do seem to be responses to prayer, but by itself it is open to the objection: Why then does God not heal everyone who prays? The reason may be, that to access the Divine energy, a person must surrender to God in faith and prayer, as previously stated, and that few people are doing this, hence the author's previous question; "Did the people involved in the experiments have a believing trusting faith in God?" It is not that God plays favourites and rewards those who grovel. It is rather that those who are not deeply surrendered to God cannot access God's power because they are not "keyed in." For God to act fully in ones life, one would need to be receptive. If there is Divine activity in miracles, however, can one explain how it influences physical processes?

For Lewis (1947:92), the natural sciences state that a miracle is a form of doctoring or tampering with the fixed laws of nature. Meaning that a new cause is introduced, namely a supernatural force, which the scientist has not reckoned on. However, if the laws of nature are necessary truths, then no miracle can

break them. But no miracle needs to break them according to Lewis (1947:93), as a miracle is *with* nature. Lewis again uses a simple but deep analogy to demonstrate this. If one snooker ball shoves another, the amount of momentum lost by the first ball must exactly equal the amount gained by the second ball. However, and this is the anomaly that natural science has not factored in, the laws of motion do not set the snooker balls moving: they analyse the motion after something else, in this case a person with a snooker cue – or perhaps what supernatural power has provided. The snooker balls provide no motion they simply state the pattern to which every event - if only it can be induced to happen – must conform. Thus it is inaccurate to define a miracle as something that breaks the laws of nature, it does not. Lewis (1947:93) correctly states that if God destroys or creates or defies or even pushes a unit of matter (as in the analogy of the snooker ball), He has created a new situation at that point. Immediately, all nature places this new situation in its realm, and adapts all other events to it. Thus the new event finds itself conforming to all the laws of nature.

To sum up this section, if events come from beyond this realm, they will cause no inconvenience or discomfort to the natural realm. The moment the miraculous enters the natural realm, it obeys all the laws of nature.

However, at present, one has to admit that it is difficult to understand the mechanisms of a miracle, and one wonders if it will ever be possible to understand the working of a miracle fully. As such, from a science and theology

viewpoint, Nichols (2002:712) offers that it may be that God acts at the quantum level, as proposed by Barbour (2000:170), as the determiner of indeterminacies. Quantum states, which are indeterminate, are determined by Divine activity to influence physical processes as presented through the theory of emergence. Robert Russell has proposed this model of Divine activity as a way of explaining theistic evolution and special providence (see Russell 1998). Although this might account for an accelerated healing, it is hard to see, however, how it could account for more dramatic miracles like the resurrection.

One could answer this question in broad terms by saying that theologically, and even logically, God cannot be completely separate from the created order. If God was transcendent, God could not influence the world in any miraculous way, and the world could not influence God through prayer and petitions. This is not the Christian idea of God; rather it is the deist idea - a result of viewing the universe as a self-enclosed mechanical system that leaves God on the outside. God's essence is to exist; God is the *act of existence* from which all other existent things draw their existence. There is therefore continuity as well as a discontinuity between God and creation. Rahner (1965: 53–61) has advanced the notion that matter/energy and what theologians call *finite spirit* exist in a kind of continuity. If so, (finite) spirit (such as the soul), could influence matter (or laws) directly, and God, in turn could influence the soul. (This is how Aquinas explains the resurrection). Nichols (2002:713) though, argues against this, and states that God never acts as one force alongside other physical

forces. Rather, God acts in creation immediately to empower nature to transcend itself. Therefore, according to Erickson (2001:434), there should really be no problem when one faces events that run contrary to what natural laws dictate. For Lewis (1947:98), a miracle is emphatically not an event without a cause as has been shown, or without results. Its cause is the activity of God: its results follow according to natural laws. Nature has the capacity to produce miracles, like a woman has the capacity to produce children. However, like nature, the woman cannot produce a child on her own, she needs outside help. Likewise, nature needs an outside or supernatural force to produce a miracle: the capacity for miracles is there.

Of course, twenty-first century science is more likely than was the twentieth century to recognise natural laws as merely statistical reports of what has happened. From a purely empirical standpoint, one has no logical grounds on which to base whether the course of nature is fixed and invaluable, or whether it can be successfully opposed in order to bring about the desired results expected, specifically when one prays for a miracle. Thus again the question arises: How much influence does prayer have in shaping the reality and the destiny of those who pray?

One view, according to Hannah (1979:347), is that although prayer is a form of meditation and reflection, it is also a means of sanctifying grace. It results, in his view, in altering the person, i.e. it affects the person's spiritual

maturity. Calvin (1970:146-147) expands on this by eloquently arguing that prayer changes the one who prays.

The necessity and utility of this exercise of prayer no words can sufficiently express. Assuredly it is not without cause our heavenly Father declares that our only safety is in calling upon His name, since by it we invoke the presence of His providence to watch over our interests, of His power to sustain us when weak and almost fainting, of His goodness to receive us into favour, though miserably loaded with sin, in time, call upon Him to manifest Himself to us in all his perfection. Hence, admirably peace and tranquillity are given to our conscience; for the straits by which we were pressed being laid before the Lord, we rest fully satisfied with the assurance that none of our evils are unknown to Him, and that He is able and willing to make the best provision for us.

Dabney (1972:716) simply writes, “Prayer is not intended to produce a change in God, but in us”. To argue that prayer changes the one who prays is most likely not to be challenged. It is readily apparent that people change when they spend time with God. Hodge (1979:91) states:

The Scriptures assure us, and all Christians believe, that prayer for material as well as for spiritual good is as real a means affecting the end sought as is sowing seed a means of getting a crop, or as is studying a means of getting learning, or as are praying and reading the Bible a means of sanctification. But it is a moral not a physical cause. Its efficiency consists in its power of affecting the mind of God and disposing Him to do for us what He would not do if we did not pray.

Although one would not disagree with these views, Packer (1997:29) clearly and rightly addresses this contentious area of God's providence and healing in the following way;

Petitions for healing or anything else, are not magic spells, nor do they have the effect by putting God under pressure and twisting His arm...Non Christian's prayers for healing may surprise us by leading to healing; Christian prayers for healing may surprise us by not being answered that way. There are always surprises with God. But with God's children 'Ask and you will receive' is always true, and what they receive when they ask is always God's best for them long-term, even when it is a short-term disappointment. Some things are certain, and that is one of them.

In concluding this section, one may again ask, what is a miracle, whether that is around healing or any other suspension or alteration of natural laws, to a scientist and to a theologian? Miraculous events might, of course, simply be illusions; events that are really fabrications, coincidences, or the results of some mysterious power of the mind or an unknown law of nature and not of any Divine activity. In other words, there are no miracles; theologically speaking, there are only unusual events. This of course, is a hypothesis, that remains to be proven. But if part of the cause of a miraculous event is Divine providence, then to a scientist, a miracle, whether that be a supernatural causal event, or a healing taking place within a person, will appear simply as an inexplicable event; a mystery that seemingly goes beyond what can be explained by natural causality.

If on the other hand a suggestion is made for Divine providence, miracles should then be of interest to all those who are trying to understand how God acts in the world. To the believer then, the providence of God is not an abstract conception. It is the believer's conviction that he or she is in the hands of a wise and powerful God, who will accomplish His purposes in the world, whether the prayer for healing or any other need is answered or not.

In the following section the question of humanity's relationship with God's Divine providence will be explored. The departure point being how this providence relates to humanity and the affect it has on personhood and in shaping the future. The first issue is how personhood is shaped through consciousness, and how this in turn affects the surrounding reality of life itself.

According to Peterson (1999:298):

Self-consciousness under various construals can mean consciousness of a self as distinct from others, the ability to objectify oneself in one's own consciousness, thinking about one's own thoughts, thinking about the facts of one's own consciousness, consciousness that one is a narrative self, and so on. It is usually argued that self-consciousness is a thing, that one has or not but a more careful analysis suggests that self-consciousness is a range of abilities and that even human beings have differing ranges of self-consciousness, and that people have different levels of self-awareness at any given time, depending on their mood, intelligence, education, and the like.

One would need to explore these issues as they have a direct bearing on how one makes a causal connection to God. Of course, this in turn would then reflect on issues such as prayer, freewill and how responsible and accountable a person is in shaping their own future. As a result, this then leads to questions of how much of God's providence is tied in to how a person acts and engages events that are inclined to shape their lives. For example, does God cause events to come across people's paths to move them in the direction that He desires? If this is the case, what impact does this have on shaping personhood, consciousness and destiny, and how accountable is one if this is so?

5.10 Personhood and Human Freedom

A most obvious and very important point of intersection between science and theology, according to Polkinghorne (1998:49), lies in the accounts they give of human nature. Men and women are a part of the physical world but distinguished from other entities by their possession of self-consciousness and - from a theological perspective - by their openness to encounter with Divine reality. Physics, biology, anatomy and physiology, psychology, sociology and theology are all disciplines that have something to say about the nature of humanity.

As such, Hefner (2000:73) states that one achieves personhood through acting upon the physical, biological and cultural materials one has inherited. This

in turn establishes a centre of identity that shapes those materials into an understanding of oneself, and how one relates to the surrounding world.

Although one would have little objection to Hefner's view, many questions that one can relate to shaping personhood - whether asked directly or implicitly by contemporary cultures - can be logically answered by the Christian world-view of humanity. Therefore the correct way to address the shaping of personhood is to start from the premise that humanity did not have a beginning as such, for beginning refers simply to the fact of coming into being. Thus, according to Erickson (2001:497), to speak of the "beginning of the human" is merely a scientific type of reference to this fact. He argues that the word "origin" however, connotes the purpose of this coming into being.

A Christian world-view does not therefore ask how humans came to be on the face of the earth, but why, or what purpose lies behind their presence here. The perspective of human *beginning* gives little guidance regarding what humans are or what they are to do. A Biblical framework, on the other hand, gives a clearer and more complete understanding of emerging human nature and its purpose.

To begin this argument for a Christian world-view on emerging humanity, one has to ask: "If who we are is at least partly a function of where we have come from, the key to our identity will be found factually in that God created us".

Humanity thus came into existence because of an intelligent Being's conscious purpose and plan. One's identity then is at least partially a matter of fulfilling that Divine plan.

As such, Erickson (2001:511) puts forward that humanity has no independent existence. They came into being because God willed that they should exist and acted to bring them into being and preserve them. Humans are part of the creation, but not, as humanists preach, the highest object in the universe. For all the respect that humanity has for itself, and the special recognition that they accord to humans of distinction or accomplishment, one must recognise that life, abilities, and strengths, have been given by God to these people of distinction.

In saying this, humanity, in most cases, consistently refuses to believe, according to Rigby (1998:47) that what happens to them is a matter of sheer chance. They rather prefer to believe that they shape their own destinies. Therefore, what happens in their lives, in their view, is a direct result of their own choices and actions. Broadly speaking, one could call it a Darwinian outlook on life. They surmise that no volitional powers other than their own are active in their lives or in the world as a whole. Ironically, many of these people who have not found it reassuring to conceive of God as the author of destructive events, have sometimes held God partially responsible. This is either in His absence in

intervening in destructive events or they have consequently accused Him of orchestrating the event.

Yet many view the idea that God is the governor of the events in the universe with great suspicion. Reasons for this are that it seems to supplant the agency of human beings. One could ask: If God is ultimately in control of all things, what role do humans play in shaping history, and for that matter, their own lives? If God has decreed an event for a person, then is it possible for that person to choose anything other than that decreed by God? This leads to the question of Divine freedom and sin. If a person is unable not to sin because God has chosen that the particular person will sin to further His purpose, can they be held responsible for their actions? To answer this, an understanding of top-down causality needs to be explored.

In the view of Peterson (1999:291), the conscious mind seems an excellent example of an emergent reality that affects top-down causation. On the one hand, much of the activity of minds one can describe in terms of its neural correlates, as images derived from CAT and PET scans dramatically display. In a Phenomenological way however, ones actual conscious mind, operate on ones own level of reality and readily engages in decision making, questioning, and other activities, which in turn affect in various ways the environment that surrounds a person. The changed environment in turn affects a person, and one goes through the cycle again. The higher-order events of ones mind thus

impinges on lower-level events (the motion of a car), which then affect the very mind that caused the set of circumstances to come about.

5.11 Freedom and Sin

This freedom to think and engage the surrounding reality that one has consciously created, leads to the question of how much good and evil is inherit in ones consciousness, and how does it affect the surrounding reality?

One could answer this by saying that with the new level of complexity that self-consciousness allows, new levels of both good and evil are now realisable, as history has well shown. In this sense, one may still speak of physical and of moral evil, and indeed, one may speak of moral evil as an emergent form of physical evil.

This raises the question of how much of God's providence is involved in how one acts, and is God the cause of sin, since He is the creator of humanity and all that goes with it. To explain this, Clarke (1961:237-240) does not hesitate to use the term *determinism* to describe God's causing of all things, including human acts. He offers several points in elucidating his position on this.

- Whatever God does is just and right simply because He does it. There is no law superior to God which forbids him to decree sinful acts. Sin is

transgression of, or want of conformity to, the law of God. But God is “*Ex-lex*,” He is outside the law. He is by definition the standard of right.

- While it is true that it is sinful for one human being to cause or try to cause another to sin, it is not sinful for God to cause a human to sin. The relationship of humans to one another is different from God’s relationship to them, just as their relationship to God’s law differs from God’s relationship to it. As the Creator of all things, God has absolute and unlimited rights over them, and no one can punish him.
- The laws God imposes on humanity literally do not apply to Him. He cannot steal, for example, for everything belongs to Him. There is no one to steal from.
- The Bible openly states that God has caused prophets to lie (e.g., 2 Chron 18:20-22). Such statements are not in any sense incompatible with the biblical statements that God is free from sin.

The problem with Clarke’s view is it questions the very nature of goodness itself. Erickson (2001:456) rightly states that God took sin and its effects on Himself. It would be contradictory while knowing that He Himself would become the major victim for sin, God allowed sin to occur anyway. The Scriptures are clear that human sinfulness grieved God (Gen 6:6). While there is

certainly anthropomorphism here, there nonetheless is indication that human sin is painful to God.

One way theologians have tried to reconcile God's providence with the presence of sin and evil in the world, and the authenticity of God's desire to exist in relationship to His creation, is by arguing that God limits Himself, an area discussed in the previous chapter with regard to Open Theism. In choosing to be limited, God is operating as an omnipotent being whose options are so unlimited that God can even choose limitation. While this explanation upholds God's reputation as omnipotent, it, at the same time, supposedly accounts for God's failure to eliminate evil and God's capacity to be in relationship with humanity. Evil exists because God has chosen, at times, not to exercise Divine power. God can exist in relationship to humanity because God has chosen to take on limited human flesh (in the form of Jesus), and become like His creation.

Although this answer seems plausible, it lacks a realistic point of view when it stands side by side with the Biblical account of how God views sin, and how He dealt with it through Christ. Young (1954:216-217) proposes a more Biblical view of this dilemma, he argues that the answer to this problem from the Christian point of view can be stated rather simply. Since it is the Biblical teaching that God created all things good, the explanation of the problem of evil, both moral and natural, must be found in the fall of man. Not only man but the whole creation has felt the effects of man's original rebellion against his Creator.

Natural evil exists under the permissive will of God just as moral evil does. The fall of creation, like the fall of man, must be viewed, not as something which God could not prevent, but as something which He must permit in the light of His eternal purpose. This again leads one to the question of God's providence and human action.

5.12 God's Providence and the Sinful Acts of Humanity

Erickson (2001:423) argues that even the sinful actions of humans are part of God's providential working. Probably the most notable instance of this is the crucifixion of Jesus, which Peter attributed to both God and sinful men: "This man was handed over to you by God's set purpose and foreknowledge; and you, with the help of wicked men, put him to death by nailing him to the cross" (Acts 2:23). One could argue that only the handing over of Jesus by Judas, rather than the crucifixion, is represented at this point as part of God's plan. The point is that what sinful humans did, was considered to be part of God's providential working.

In 2 Samuel 24:1, David is said to have been incited by the Lord to number the people; elsewhere David is also said to have been incited by Satan to commit sin (1 Chron. 21:1). Another reference sometimes cited as evidence that human sin is part of God's providential activity is 2 Samuel 16:10. David remarks that Shimei is cursing him at the Lord's command. This is in the form of

a hypothetical statement (“If he is cursing because the Lord said to him, ‘Curse David’”), but in verse 11 David categorically states, “Leave him alone; let him curse, for the Lord has told him to.” In 2 Thessalonians 2, Paul declares that Satan deceives “those who are perishing... because they refused to love the truth and so be saved.” Then he adds, “For this reason God sends them a powerful delusion so they will believe the lie and so all will be condemned who have not believed the truth but have delighted in wickedness” (vv. 10-12). Here it appears that Paul is crediting what Satan has done to the work of God as well.

At this point one must address the difficult problem of the relationship between God’s working and the committing of sinful acts by humans. It is necessary to distinguish between God’s normal working in relation to human actions and his working in relation to sinful acts. The Bible makes clear that God is not the cause of sin. James writes, “When tempted, no one should say, ‘God is tempting me.’ For God cannot be tempted by evil, nor does he tempt anyone; but each one is tempted when, by his own evil desire, he is dragged away and enticed” (James 1:14). John states: “For everything in the world—the cravings of sinful man, the lust of his eyes and the boasting of what he has and does, comes not from the Father but from the world” (1 John 2:16). But if the sinful actions of humans are not caused by God, what does it mean when one says that they are within his governing activity? Strong (1907:423-425) states there are several ways in which God can and does relate to sin: He can (1) prevent it;

(2) allow it; (3) direct it; (4) limit it, or (5) punish it. Note that in each case, God is not the cause of human sin, but acts in relationship to it.

1. *God can prevent sin.* At times He deters or precludes people from performing certain sinful acts. When Abimelech, thinking that Sarah was Abraham's sister rather than his wife, took her to himself, the Lord came to him in a dream. He said to Abimelech, "Yes, I know you did this with a clear conscience, and so I have kept you from sinning against me. That is why I did not let you touch her" (Gen. 20:6). David prayed that God would keep him from sin: "Keep your servant also from wilful sins; may they not rule over me" (Ps 19:13).

2. *God does not always prevent sin.* At times He simply wills to allow it. Although it is not what He would wish to happen, He acquiesces in it. By not preventing the sin humanity decides to do, God makes it certain that humanity will indeed commit it; but He does not cause them to sin, or render it necessary that they act in that fashion. At Lystra Paul preached that "in the past, He [God] let all nations go their own way" (Acts 14:16). And in Rom 1 he says that God gave people up to impurity, dishonourable passions, a base mind, improper conduct (vv. 24, 26, 28). In 2 Chron 32:3 1, one reads that "God left him [Hezekiah] to test him and to know everything that was in his heart." These were concessions by God to let individuals perform sinful acts that were not His desire, acts that they could not have performed had He so decided. This is

probably put most clearly by the Lord in Ps 81:12-13: "So I gave them over to their stubborn hearts to follow their own devices".

3. *God can also direct sin.* That is, while allowing some sins to occur, God nonetheless directs them in such a way that good comes out of them. This is what Stauffer (1955:207) has called the law of reversal. Probably the most dramatic case of this in Scripture is the story of Joseph. His brothers wished to kill him, to be rid of him. This desire certainly was not good; it was neither caused nor approved by God. Yet He allowed them to carry out their desire, but with a slight variation. Reuben urged the other brothers not to kill Joseph, but merely to throw him into a pit, thinking to free him later (Gen. 37:21-22). But then another factor entered. Midianite traders came by and the brothers (unknown to Reuben) sold Joseph as a slave. None of this was what God had wished, but He allowed it and used the evil plans and actions of the brothers for perfect good. It is stated in Gen. 39:2, "The Lord was with Joseph". Despite the schemes and lies of Potiphar's wife and the lack of faithfulness by the chief cupbearer, Joseph became successful and through his efforts large numbers of people were spared from starvation, including his father's family - Joseph was wise enough to recognise God's hand in all this. He declared to his brothers: "So then, it was not you who sent me here, but God. He made me father to Pharaoh, lord of his entire household and ruler of all Egypt" (Gen. 45:8). And after the death of Jacob he reiterated to them: "You intended to harm me, but God intended it for good to accomplish what is now being done, the saving of many lives" (Gen. 50:20).

Peter saw that God had in like manner used the crucifixion of Jesus for good: “Therefore let all Israel be assured of this: God has made this Jesus, whom you crucified, both Lord and Christ” (Acts 2:36). Paul spoke of the Jews’ rejection of Christ as the means by which reconciliation came to the world (Rom. 11:13-15, 25). One must recognize here the amazing nature of Divine omnipotence. If God was great and powerful, but not all-powerful, He would have to originate everything directly or He would lose control of the situation and be unable to carry out His perfect purposes. But God is able to allow evil humans to do their worst, and still carry out His purposes.

4. Finally, *God can limit sin*. There are times when God does not prevent evil deeds, but nonetheless restrains the extent or effect of what evil humans and the devil and his demons can do. A prime example is the case of Job. God allowed Satan to act, but limited what he could do: “Very well, then, everything he has is in your hands, but on the man himself do not lay a finger” (Job 1:12). Later, the Lord said, “Very well, then, he is in your hands; but you must spare his life” (2:6). Paul also reassured his readers there are limits on the temptation they will face: “No temptation has seized you except what is common to man. And God is faithful; He will not let you be tempted beyond what you can bear. But when you are tempted, He will also provide a way out so that you can stand up under it” (1 Cor. 10:13). Even when God permits sin to occur, He imposes limits beyond which it cannot go.

5.13 Conclusion

Throughout this chapter, the idea of God's providence and how it relates to miracles, prayer, personhood and sin has been exhaustively examined. In the process the question was asked that if God's plan is settled and He will do what He is going to do, then does it matter whether one prays or not? The answer given is that God does require that humankind work in partnership with Him, and it was shown that God does require His people to pray, in order for things to come to pass.

The issue of healing was also addressed and the conclusion reached was that no empirical data, in the author's view, exists, to counter the claims of the scientific world that healings are not common today. Their test cases showed no significant healings in people that prayed or were prayed for. A case was then made for Divine healing from Scripture, but the question still remains unanswered as to whether God heals when people pray? In the light of this, Packers statement that petitions for healing or anything else, are not magic spells, nor do they have the effect by putting God under pressure and twisting His arm is correct. It was further stated that what Christians do receive when they pray is always God's best for them long-term, even when it is a short-term disappointment.

Research into God's providence and its relation to human freedom and sin was also undertaken, and it was argued that evil in this present world must not be thought of as something God willingly planned as an instrument of human punishment and education, but rather as something He permits because of human freedom. All evil must be seen as a possible consequence of the kind of world God willed to create. Although God certainly knew from eternity the kind of world which would result, because of man's wilful rebellion, He also knew from eternity that He would be able to bring all of His plans to pass in His own time. It was also argued that God is able to effectively use evil to bring many of His purposes to pass. Although evil is a product of human freedom and rebellion; from the Biblical point of view, it is never presented as something which is frustrating God's plans and preventing Him from carrying out His purposes in the world. God is always in control in spite of the present reign of evil, both moral and natural. Although there are still many unanswered questions, it is clear that God is in control of creation through His providential plans, and that His ultimate will for humanity will be realised in the end.

This leads to the question of, "What is the Ultimate End of Humanity?" a question that Science and Theology have been trying to answer ever since humanity became aware of its own existence. In the following chapter this subject will be explored, under the banner *Shaping Eschatology within Science and Theology*.

CHAPTER 6

Shaping Eschatology within Science and Theology

6.1 Introduction

According to Berkhof (1958:666), over the years scholars have applied various names to the last locus of dogmatics, of which *de Novissimis* or *Eschatology* is the most common. As such, the name “eschatology” is based on specific passages of Scripture that speak of “the last days” - *eschatai hemerai*, Is 2:2; Mic 4:1; “the last time” - *eschatos ton chronon*, I Pet 1:20, and “the last hour” - *eschate hora*, I John 2:18. Although these expressions sometimes refer to the entire New Testament dispensation, they still embody an *eschatological idea*. Indeed, when one speaks of eschatology, one has in mind facts and events that connect with the second coming of Christ. As a result, this marks the end of the present dispensation which will, in turn, usher in the eternal future.

As derived from the Greek word, eschatology has traditionally meant the study of the last things. Accordingly, it has dealt with questions – from a Biblical view - on the consummation of history and God’s completion of His work in the world. However, from a scientific point of view, according to Polkinghorne (1998:29), eschatology concerns itself with what one can learn, and extrapolate out of present physical process. Unfortunately, when cosmologists peer into the

future through extrapolated information, their story is one of eventual futility rather than one of hope and fulfilment. As such, the principal role of science is to pose to theology the question: What meaning there could be in the hopeful belief - according to the Christian view of eschatology - that "in the end all will be well".

Generally though, when it comes to the scientific study of eschatology Jackelén (2005:203) states that, the relationship of eschatology and science has hardly been a topic of discussion until now. Furthermore, eschatology is more often than not only given in bibliographies at the end of encyclopaedias' articles or in monographs. Thus, one assumes that whenever eschatology has sought dialogue partners outside its traditional field (of theology), it has generally turned to philosophy. Indeed, even occasionally to social ethics and to ecology, but hardly ever to the traditional natural sciences (see also Ratschow 1982: 361-363; Greshake 1995:398).

Traditionally, according to Jackelén (2005:199), questions about the reign of God, death and resurrection, God's judgment and eternal life have belonged to eschatology. Nonetheless, theologians too often speak rather objectively of the end or consummation of the world, and they generally do this without seriously asking what the future of the universe is likely to look like from a scientific perspective. However, some like Moltmann (1973:137) have attempted this, and envisage what Jackelén (2005:203) calls, a *cosmic eschatology* i.e. an eschatology that includes nature. The thinking behind this view is that

eschatology must take nature into account when dealing with end-time scenarios - *although, usually, non-religiously*. Further, Jackelén does correctly point out that eschatology and scientific questions do show points of contact first and foremost in cosmology. But, in her view, theology still does not pay enough attention to the paradigm shift from the closed cosmos of past studies, to the open universe of modern times (see also Koyré 1994). However, there have been recent attempts by modern scholars to find common ground between these two seemingly diverse subjects (see Polkinghorne and Welker 2000). As such, the following models present just two of many such attempts by scientists and theologians to find this commonality between these two fields of study.

6.2 A Scientific Model of Eschatology

One could ask: Is it at all possible to speak of something which might resemble a scientific eschatology? From a purely scientific view, some like Tipler (1988) and Dyson (1979) believe it is possible.

Given this, both Tipler and Dyson believe that eschatology should also be classified as a branch of physics, and not as a branch of theology alone. Tipler (1988:12) for example, claims that the likelihood of the existence of God, of human free will and of eternal life after death can be proven by pure physics alone. He believes his model, *The Omega Point Theory*, provides him with the proof that God exists. The Omega Point theory is similar (with variations) to the

model invented by Teilhard de Chardin (1975:268-272) to describe the ultimate maximum level of complexity-consciousness, considered by him as the aim towards which consciousness evolves. For Teilhard de Chardin, rather than finding Divinity "in the heavens" he held that evolution was a process converging toward a "final unity", or the Omega Point, identical with the *Eschatos* and with God. According to Vernadsky (1945), the planet is in a transformative process, metamorphosing from the *biosphere*, that is, the sphere of human habitation, into the *noosphere*, that is, the sphere of human thought or consciousness, to the *christosphere*, where Jesus Christ is everything in everywhere.

As such, Tipler's eschatological model states that life is essentially an accumulation of information. As a result of this accumulation of information, and life's path towards the Omega point, it has to pervade and finally dominate, according to Tipler, the entire material universe. The Omega point itself, however, will be a place of maximum accumulation of information, and therefore it will be immanent as well as transcendent with relation to each point in space-time. Because of this, the Omega point will have the properties of personality, omnipresence, omniscience, omnipotence and eternity. Thus, theoretically, the universe exists only when the Omega Point also exists in this universe, and in a sense, decides reality.

Although it seems that Tipler tries not to equate the Omega Point Theory with Christianity, he does try to show that it harmonises with the basic ideas of

almost all religions. He also often refers to the theology of Pannenberg (see Tipler 1988: 305-327). Furthermore, Tipler tries to show that:

1. The universe must be fated to collapse in on itself;
2. Everything in the universe will eventually be incorporated into a single great computer;
- 3 This computer, essentially a universal mind, will be able to prolong its subjective experience to infinity as it approaches the final singularity.

Although the author has addressed Tipler's model as clearly one of the more expressive post-modern views being put forth by science, one does find it a little difficult to harmonise his model with the Biblical idea of the end-times, and the life to come. Although he uses words like omniscience, immanence and transcendence, in the author's view, his model has seemingly nothing to do with the Biblical idea of God or His qualities. For example, when it comes to the idea of the resurrection, Tipler (1988:220-227) states that one should see the resurrection, in his view, as "an exact replica of ourselves, simulated in the computer minds of the far future". Accordingly, the next stage of intelligent life will be machines that process information. For Tipler, the extinction of humankind is a *logically necessary result of eternal progress*. Thus theoretically, in the distant future, a computer capacity will be available that would enable the perfect simulation (emulation) of all possible variants of the world and thus, of the entire visible universe of all times. As such, a resurrection of the dead will

occur, “when the computer capability of the universe is so large that the capacity needed to store all possible human simulations is an insignificant fraction of the entire capacity”. Thus, the physics of immortality does not concern itself with “immortality”, or even the “Biblical idea” of a resurrection from the dead. Rather it concerns itself with the spontaneous reconstruction in the form of emulations: as if, “in the last moment” someone would build a super computer, in which all images of human beings are as holograph programmes.

In a lightly worded defence of Tipler’s model, Pannenberg (1995:313) states that at first glance, Tipler’s model might seem a little far-fetched. However, one must consider that Tipler seriously defines life as an information process. Secondly, one must take his broadly conceived notion of the computer as an information processing entity, far beyond the machines that one currently calls computers used everyday. Thus, according to Pannenberg (1995:314), the Christian hope in the future is not dependant on the portrayal of this earthly corporeality being transferred to another life that is based on different processors. Furthermore, the hope of a resurrection does not rule out that God’s power of life, which has been manifested in Jesus Christ, does govern the universe in ways that are so far unknown. As such, “we are not prohibited from making surmises, even if we do so by means of physics,” according to Pannenberg (1995:314).

In contrast to Tipler, Dyson (1979: 103) speaks neither of resurrection nor of eternal life. By using quantitative arguments, he wishes to explain that life and intelligence can survive without limits, and that communicating information is possible despite constantly increasing intergalactic distances. Fortunately, Dyson is conscious, unlike Tipler who mixes “science” and “science fiction” in his reflections, but he does not consider this too problematic, as long as the science is precise and the fiction is probable. For example, if one links consciousness to molecule substances, then life will stop as soon as the necessary supply of free energy is consumed. If, on the other hand, as Dyson (1979:453) assumes, consciousness depends merely on the structure of the molecules, then life can seek all kinds of practical embodiments, such as an interstellar black cloud or a sentient computer, as in the model of Tipler. Indeed, Dyson sees the most probable form of future life in just such a cloud-type collection of dust particles, which, as carriers of positive and negative charges, organize themselves and communicate among themselves by using electromagnetic forces. The greatest problem with this model, according to Jackelén (2005:206), lies in the fact that the waste heat produced by the metabolism of life, cannot radiate away into space quickly enough. In defence, Dyson’s solution to this difficulty is hibernation: The metabolism occurs periodically, so during constant radiation of waste heat, active phases alternate with phases without metabolism. In this way, an unlimited survival is possible with finite energy, and subjective time is infinite.

In principle, Dyson (1979:459) says that even in an ever-expanding universe, infinite communication of information at finite expenditures of energy is possible. He further states that the amount of energy that the sun radiates in eight hours, is already enough to keep alive indefinitely a society with the degree of complexity that characterises current human development. Although Dyson stresses that, despite the many equations he lists, he is unable to present an ultimate mathematical proof for these claims, he is however, optimistically satisfied with his results. He states that, "I have found a universe growing without limit in richness and complexity, a universe of life surviving forever and making itself known to its neighbours across unimaginable gulfs of space and time." Thus, in his later work, he confidently says that science offers a solid foundation for a philosophy of hope (Dyson 1990:117).

Although these models do sound probable scientifically, one could ask the question: In the face of the immensity of the universe, is eschatology not simply an anthropological particularism that has grown immeasurably overtime? From a purely cosmological perspective, Weinberg (1988:154) states that much in eschatology appears as an absurd exaggeration of how significant this earth is, which according to him "is just a tiny part of an overwhelmingly hostile universe." Weinberg continues: "The effort to understand the universe is one of the few things that lifts human life a little above the level of farce, and gives it some of the grace of tragedy." Monod's (1972:172-180) words are even more disillusioning, he thinks that humans must finally awaken from their age-old

dreams and recognise their complete desolation and their radical alienation. Humanity, according to him, needs to recognise that it is alone in the unfeeling immensity of the universe out of which it emerged only by chance. Even though these conclusions drawn from cosmological theories are highly debatable scientifically and theologically, they nevertheless help one to understand how unnatural, and even how presumptuous, the postulate of a valid eschatology can seem from the cosmological perspective. In saying this, the author has proposed the hypothesis throughout this work that the only possible solution to the debate surrounding eschatology is to view it *Biblically* and *Theistically*.

6.3 A Theistic View of Eschatology

As stated, the author's hypothesis is simply that a Biblically based theistic world-view is the most viable way that one can possibly and rightly come to terms with the many conflicting views that abound about creation, and humanity's end. In this light, Polkinghorne (1998:114) states that one of the important implications of a theistic view of reality is that it assigns total meaningfulness to the universe, and its history. The claim is that the world is truly a cosmos and not, in his view, "a tale told by an idiot". This is because God's will and purpose, and God's assurance of an eventual fulfilment, are behind all that is happening. The most obvious difficulty in establishing this claim is the fact of death. Indeed, not only do all human lives come to a mortal end with much personal business and spiritual growth still unfinished and incomplete, but modern cosmology also

assures that the universe has condemned itself to die over a timescale of tens of billions of years. The question is: How do these views from the natural sciences conflict or agree with the Biblical account of the end times.

Before one can answer this question, one needs to understand, according to Polkinghorne and Welker (2000:3), that both science and theology, speak about unseen realities during their rational discourse. However, it was stated in the beginning of this work that both science and theology view reality differently, e.g. theology recognises both an ordinary and an ultimate reality, with God being the architect of both - a *Biblical world-view*. Science on the other hand holds that there is a reality which lies beyond the physical space-time universe - a *Quantum Physics world-view*.

Thus in the author's view, whether as a physicist one speaks of unseen quarks and gluons, or as a theologian, one speaks of the unseen reality of God, both are dealing with an element of faith in their studies. It is this element of faith that one needs, in order to study the demanding topic of eschatology, from both a scientific and a theological belief. However, there is one more aspect of eschatology that needs discussion, if one hopes to understand eschatology's relation to reality, namely, its relationship to time and eternity.

6.4 Time and Eternity: It's Relationship to Eschatology

In considering all that has been said up to this point, one realises that the idea of time and its relation to eschatology and eternity is a much-neglected subject.

Time - as one understands it - was created by God, it is part of the creation.

However, the created universe consists of a physical or material world, and a spiritual realm - the latter called in the New Testament "the heavenly places."

As a result, one would consider time in the heavenly realm, to have quite different properties than one would usually think of - seeing it is eternal - in regard to the physical, material world. Given this, humanity was created to live in both worlds - the material and the spiritual - at the same "time". Thus a study of time and eternity is necessary, if one desires a clearer understanding of eschatology, and the life to come.

6.4.1 The Complexities of Time

Before one can study time from a religious and scientific perspective, one has to first admit that God is outside of time, i.e. time does not control God. He is an eternally self-existing, self-defining, living Being. Since He created time, one can think of past, present, and future as eternally present before His eyes. Craig (2001:217) puts it thus, "Since God never begins to exist nor ever ceases to

exist, it follows that God is *omni-temporal*. He exists at every time that ever exists; that is, He endures throughout all eternity".

Consequently, God's actions in eternity can affect past, present, and future (as experienced by humankind) simultaneously. Thus, a certain action of God completed in the past can have continuing and lasting results. Indeed, other activities of God, such as His expressions of grace and mercy towards all, continue day after day. As a result, certain events, such as the "appointed" hour one dies or the Day of Judgment, are fixed in the future, predetermined by God. As a result, unlike God, humankind is - to a degree - controlled by time.

One might now ask the question: Is time eternal, since it was stated that this age would end? Scripture is clear that there will be a final consummation of all creation (see Is 2:2; Mic. 4:1; I Pet. 1:20 | John 2:18).

6.4.2 Time, Death and Eternity

Further to the above, one may also ask: What is death, and how is one to define it according to time? Various passages in Scripture speak of physical death; that is, cessation of life in one's physical body. Indeed, Ecclesiastes 12:7 refers to death as separating body and soul (or spirit). In the New Testament, James 2:26 also speaks of death as the separation of body and spirit: "As the body without the spirit is dead, so faith without works is dead".

What one is dealing with here is the cessation of life in its familiar bodily state. However, this is not the end of existence. As such, one must not think of life-and-death as existence and non-existence, but rather as two different states of existence. Death is simply a transition to a different state of existence, and not, as some tend to think, extinction. But, if physical death is simply a transition from one mode of existence to another, how is time, as one understands it in this existence, related to the next existence? Or will time cease to exist, just as life in the physical body ceases to exist?

According to Craig (2001:218), , which implies, creation out of nothing (see also Barrow & Tipler 1986:442). As such, Hawking (1996:20), who was a proponent of infinite time, now acknowledges that, “almost everyone now believes the universe and *time itself* had a beginning at the big bang.” Seemingly, this consensus lends strong support to the view that neither events nor time, existed before creation. As Parks (1981:112-113) states “It is deceptively easy to imagine events before the big bang..., but in physics there is no way to make sense of these imaginings.” One might ask: What then is one to make of these findings as it relates to eschatology and the end of humanity?

Before one can successfully answer this question, one needs to ask: If time is finite and began at the big bang, what existed before time, or what state did God exist in before time began?

As already stated, with the creation of the universe, time began.

Subsequently, God entered time at the moment of creation in virtue of His real relations with the created order (see Craig 2001:233). As a result, one could speculate that not only is God *timeless* without the universe, but He is now also *temporal* with the universe. Indeed, theoretically, there seems to be two aspects of God's life, a timeless phase and a temporal phase. But, according to Craig (2001:233), logically this is confusing, since to stand in relation of *earlier than* is by all accounts to be temporal (see also Leftow 1991).

The question is: How is one to escape this seeming antinomy? One possibility is to look at time from the view of not being divisible, a sort of undifferentiated time. Craig (2001:233) refers to it as *Amorphous Time*. Thus, the argument would then be compatible with the existence of amorphous time, before creation. Indeed, one could say: God existing alone without the universe, would exist in an amorphous time before the beginning of divisible time as it is known (see also Lucas 1973:311-312; Padgett 1992:122-146; Swinburne 1993:204-222).

Such an understanding of God's time before creation seems attractive, as it enables one to speak literally of God existing before creation. It also seemingly avoids the problematic claim that God has endured through infinite time prior to creating the universe. It also confirms the claim from Scripture that one will live forever, even though one dies physically in the natural realm. Thus, the fact of a

new creation, with a timeless state of being, means the Christian has a hope and a future that will doubtless be spent timelessly in the presence of God. One can say that this is the final consummation of death, leading to an eternal life resurrection.

Despite all said thus far, one is still left with the problem of reconciling the views of science and theology with regard to creation and the end-times. In the following section these views will be explored and consensus reached, where possible, on how each view interacts with the other.

6.5 Reconciling the Two Views

Despite attempts by believing scientists, philosophers, and theologians to resolve the differences between the Christian faith, and the account that the natural sciences give of the evolutionary history and structure of the world and the universe, they have had only minimal success. Stoeger (2000:19) argues that science with its contemporary scientifically and technologically oriented culture, strongly challenges Christian and other religious beliefs when it comes to visions of the afterlife, resurrection, and *the new heaven and the new earth*. Many in the scientific world consider any meaning or hope in an eventual destiny tied to such Christian conceptions to be pure illusion, without any shred of real foundation in reality. Furthermore, they say that it has no support from anything in experience. Many in the scientific disciplines believe that these conceptions

are simply projections of one's own yearnings for meaning and significance, or symbols embedded in the universe of cultural meaning one has settled to live a happy and productive life. Thus, in their view, they have little or no bearing on what the eventual fate of humanity and that of the universe will be. From all the signs one can gather from the neurosciences, biology, physics, astronomy, and cosmology, death and dissolution are the final words. There is no scientifically supportable foundation for the immortality of the soul, bodily resurrection after death, or a transformed new heaven and earth – unless one accepts the models of Tipler and Dyson.

However, to balance this debate, Peters (2001:125) who has worked for nearly two decades in the science-theology dialogue, states: When theologians deal with loci such as creation or anthropology, it does seem that success between current science and doctrinal understanding is within reach. Seemingly, quantum physics does offer openings to a non-mechanistic understanding of the world as God's creation. Big Bang cosmology also seemingly reinforces the temporal and historical picture of creation drawn by theology. Furthermore, what one learns in genetics and the neurosciences also tends to add to the Christian understanding of the human person as an embodied being. Thus consonance appears to come easy in these areas. However, this is not the case when it comes to eschatology. Here one finds only dissonance, not consonance. Why? One could answer as follows: Because every scientifically projected scenario, leads to a future of the physical world that will destroy all known life. With no life

left in the cosmos, what sense does it make for theology to speak of resurrection to eternal life? Of all the Christian teachings, eschatology appears to be the most out of sync with the world as science knows it. Tanner (2000: 222) states “If the scientists are right, the world for which Christians hold out hope ultimately has no future.”

As a result of the above scenario, it appears that every aspect of scientific cosmology points to a negative future for life on planet earth or even for the cosmos as a whole. Today, the earth is threatened by an onslaught from asteroids and comets; and a major impact could destroy life, as it is known. In five billion years, according to Peters (2001:125), it is predicted that the sun will have exhausted its inner core of hydrogen, expand into a red giant, envelope the inner planets, and destroy planet earth. The universe itself will eventually evanesce due to the law of entropy or, less likely, collapse into a fiery crunch and final conflagration. Under every scientific scenario the life-generating capacity of the natural world will end. No scientific scenario looks like the Christian vision of a new heaven and a new earth.

As such, science accurately depicts the fate of the world when left to its own devices. However, what it leaves out according to Tanner (2000:222), is Divine influence to divert, or overcome, what one could legitimately expect to occur, if the world was left to its own principles of operation.

Thus, a theologian might argue that the world will not come to the expected end envisaged by scientists, because of the continuing influence of a good, life-affirming God in world processes. A theologian could also claim that the world will be led beyond the destruction to which it is heading of its own accord, by a God who, as Christians affirm, can bring something from nothing, and life from death. God might indeed use the old world's destruction, as the scientists describe it, as a purgative means to a new heaven and earth beyond the reach of the old world's own capacities. Destructing the world then, becomes in that case, a kind of world crucifixion that signals the death of death through Divine power.

Furthermore, Tanner (2000:221) states, that by taking this type of strategy of response, a future-orientated eschatology escapes any direct challenge from scientific end-time scenarios. These scenarios or the reasoning that leads to them is simply incorporated, with suitable theological modifications, within the same barely modified eschatological perspective from which the theologian started. The basic shape of the eschatological perspective remains the same. At most, scientific prediction of a dire future encourages the trend in contemporary Christian eschatology away from optimistic assessments of what one can expect from natural processes apart from God's help.

As such, the consummation of the world is not brought about by the world. One might say that a gap exists between the results of world processes

and the world's consummation. Thus, only God with the power to reverse those results can bridge this gap. Only God then has the power to bring what is otherwise unexpected into existence; for example, a world that knows neither loss nor suffering (see Moltmann 1996). One could even say a grace-motored continuity, rather than a continuity of purely natural processes, spans the world as one knows it and the world to come. Presently, the world moves without any great interruption to its consummation but it does so only in virtue of Divine powers, not its own (see Rahner 1973:273-289).

Despite the fact that the sciences of biology, physics, astronomy, and cosmology do give one an idea of humanity's fate, that is death and dissolution, it is not the final destination of humanity, or creation as a whole. Paul the Apostle clearly states in Romans 8: 18-23:

I consider that our present sufferings are not worth comparing with the glory that will be revealed in us.
The creation waits in eager expectation for the sons of God to be revealed.

For the creation was subjected to frustration, not by its own choice, but by the will of the one who subjected it, in hope that the creation itself will be liberated from its bondage to decay and brought into the glorious freedom of the children of God.

We know that all creation has been groaning as in pains of childbirth right up to the present time.
Not only so we ourselves, who have the first-fruits of the Spirit, groan inwardly as we wait eagerly for our adoption as sons the redemption of our bodies.

In these verses, Paul speaks of a twofold groaning of creation (v. 22) and of believers (v. 23). The *creation* i.e. animate and inanimate nature is subject to suffering and physical catastrophes, because of human sin (v. 20). As a result, God has purposed that nature itself will be redeemed and re-created. There will be a new heaven and a new earth, a restoration of all things according to God's will (cf. 2 Co 5:17; Gal 6:15; Rev 21:1, 5), when God's faithful children receive their full inheritance (vv. 14, 23).

The question one faces though is: On what basis can one construct a theology of the eventual future? According to Peters (2001:126), the answer is clear; one must root a theology of the future in the Easter Resurrection of Christ. Stoeger (2000:19) puts it this way:

There is no scientifically supportable foundation for the immortality of the soul, the resurrection of the body and the person after death, a transformed new heaven and new earth... For Christians these have their basis in the revelatory events of Jesus' life, death and resurrection, and all that flows from them...

One could state it thus; what science can do is give information about the nature of the world to be transformed. But one must then rely on independent theological resources for the promise that such a transformation lies in the future.

Polkinghorne (2000:30) speaks forcefully to this, he clearly puts forward the following:

Putting it bluntly, why did God not straightaway create a world free from death and suffering, if such a world is an eventual possibility? The Christian answer, it seems to me, is that the new creation is not due to God wiping the cosmic slate clean and starting again. Instead, what is brought about is the Divine redemptive transformation of the old creation. The new is not a second creation *ex nihilo*, but it is a resurrected world created *ex vetere*. Involved in its coming to be must be both continuity and discontinuity, just as the Lord's risen body bears the scars of the passion but is also transmuted and glorified.

In referring to the empty tomb, Pokinghorne (1994:164) as a hint of the total transformation of everything created says:

Hence the importance of the empty tomb, with its message that the Lord's risen and glorified body is the transmutation of his dead body. The resurrection of Jesus is the beginning within history of a process whose fulfilment lies beyond history, in which the destiny of humanity and the destiny of the universe are together to find their fulfilment in liberation from decay and futility.

Alternately, Peacocke (1993:343) inclines to keep eschatological speculation to a minimum. He stresses the utter faithfulness of God and the Christian hope of remaining eternally "in God". Barbour (1997:152) on the other hand, seems to incline more to a process view of eschatology, summarising thus the ultimate value of the created order:

Every entity is valuable for its continuing contribution to the life of God. The values achieved in this world are preserved in God's eternal life, and this is part of their enduring significance and permanence beyond the flux of time. In addition, some entities, such as human beings, have a (further) future value, if as conscious individuals we survive death.

Although the full hope of process eschatology seems unclear, there is at least the expectation that one's life is meaningful, because preservation is everlasting in God's experience, according to Barbour (1997:241).

Polkinghorne (1994:163) takes this view much further in terms of the Biblical hope of resurrection. In his view, it is not simply the survival of an immortal soul, but resurrection of the human person, as a new embodied being.

The Christian hope is of death and resurrection. My understanding of the soul is that it is the almost infinitely complex, dynamic, information-bearing pattern, carried at any instant by the matter of my animated body and continuously developing throughout all the constituent changes of my bodily make-up during the course of my earthly life. That psychosomatic unity is dissolved at death by the decay of my body, but I believe it is a perfectly coherent hope that the pattern that is me will be remembered by God and its instantiation will be recreated by Him when He reconstitutes me in a new environment of his choosing. That will be his eschatological act of resurrection. Thus, death is a real end, but not the final end, for only God Himself is ultimate.

Ward (1998:215-216) adds to this picture:

It might even be that God's own nature, as love, is only fully realised by creating other conscious agents with whom God can share in fellowship, by giving, sharing and receiving a love that binds Creator and creatures together in a community of spiritual being. If that is so, it is natural to hope that such a community might make it possible for every created member of it to share in knowledge of its final fulfilment in God. In other words, the love of God might require that fulfilment of creation is not only experienced by the one consciousness of God, but shared in a communion of love that God brings to completion. In this way the existence of a resurrection world, however exactly it is envisaged, comes to seem a natural hope for a created cosmos.

In concluding this section, one realises that there are several reasons for the current attention paid to eschatology; one is the rapid development of knowledge. It seems that as technology increases and the scientist and theologian is able to know more, many of the issues surrounding eschatology become obscure and difficult to deal with. At times eschatology, according to Erickson (2001:1160), has become a topic of debate, resulting in accusations and acrimony among scholars. Yet the Bible is clear about what the end entails, whether it concerns the believer or the non-believer. Clearly, according to Barrett (2004:158-159), there is much in the eschatological picture that is speculative, but it is reasonable speculation in keeping with the axiom that the *Lord God perfects the creation with utmost love*. In saying this, Weder (2000:202) aptly sums up the views of eschatology as follows:

The coming of the kingdom of God, finally, is related by the parables of Jesus to the phenomenon of growth. This is perceived as another trace of creativity, which nourishes faith in the creative God. There is a family resemblance

between the creative process of growth and the creativity of the kingdom to come. The phenomenon of growth points to two fundamental conditions of the universe described by natural science: the process of building up higher complexity in open systems and the openness of the universe, which is protected from chaotic deliberacy or chaotic indefiniteness by strange attractors and the capacity to self-organisation. Although the world to come cannot be grasped as a prolongation of this universe, although this universe is bound to finitude, its openness, ordered by attractors, may be seen as a metaphor of a freedom so attractive that it allows hope for the final creation of a new and free world of everlasting peace.

This theological conclusion grounds ones hope that God will break the limits of the mind's dependence on the body - a dependence that is ubiquitous in the present experience of the world. The Christian hope is that, by His grace, God will enable the continued existence of the self, with a non-physical body after the death of physical bodies. It also leads to hope that, although the universe shall surely be uninhabitable for human subjects at some point in the finite future, God will create "a new heaven and a new earth" in which human subjects can remain eternally in the Divine presence.

In the following section, the author will sum up and conclude, what has been put forth throughout this thesis regarding reality, world-views and their relationship to science and theology.

6.6 Summary of Argumentation

Firstly, the argument in the beginning of this study was clear that for many decades, science and theology have accused each other of arrogance in their claims to know the truth. However, there is now a growing realism and humility about the limits of the two disciplines. Because of this, often, many see both disciplines as complementary ways of seeking to understand the world. Thus, each ones mental models of reality are inevitably incomplete in their respective disciplines. Therefore, in the author's view, there is justification to combine science and theology to further the general understanding of what makes up reality.

Furthermore, for one to have a correct understanding of reality, a study of creation is to be the starting point, regardless of whether it is from an evolutionary or Biblical point of view. The author was confident that by engaging the different viewpoints proposed by namely, science, philosophy and theology, one would be in a much better position to argue and propose a theistic belief on reality.

To do this, the author set up a framework within each chapter to deal with specific views related to both disciplines. To do this successfully, the common frame of reference between each was presented and researched. Furthermore,

the differing world-views of each were also introduced, and where fitting, commonality sought and explored. It was put forth that one can only come to a reasonably clear understanding of what makes up reality, if one understands the beliefs and views of each on this.

It was also clearly stated that doubtless, the relation between science and faith is complex, and unfortunately, there is a tendency among scientists to deny faith as a way of solving issues. However, agreement was reached in consultation with the respective scholars in their chosen fields, that in recent years, there has been a growing interest in exploring how science and theology relate. Indeed, many are openly speaking about “a new convergence” in the disciplines, opening the way to new insights and understandings about reality. It was put forward that what distinguishes these world-views is their acknowledgement or denial of an intelligence and purpose beyond all expressions of sensed reality.

From this view, the author argued that theism is a most viable world-view, when interpreting metaphysical ideas of the world. Furthermore, a presentation was made that creation from a theistic world-view, must thus naturally follow from this argument. Also, it was put forth that for many centuries, the accepted norms on the idea of creation were taken from the Christian world-view. However, as science has progressed in its studies of creation, it has no doubt encroached many of its findings on the Biblical world-view of creation. As such,

this has now started throwing doubts on the validity of the Biblical idea of creation as a viable world-view. Following this, the author showed that pressure is put on modern theologians to produce counter argument to scientific findings from Scripture, which doubtless, has caused the relationship between science and theology to be marked by increasing mutual alienation. Positively, it was established that many scientists who study nature and its impact on humanity, are rethinking many of their proposed evolutionary views, and are expressing these views in academic journals around the world. Also, during this century alone, there has emerged a series of efforts to bridge the gulf that has developed between the two disciplines in this area.

Furthermore, it was determined that any view that contradicts itself or destroys itself in the process or act of affirming itself, is self-defeating and false and only theism is actually undeniable. As such, the author also established throughout this thesis that theism offers an argument with the undeniable premise that leads one to recognise the existence of an infinitely perfect and powerful Being. Indeed, any world-view that cannot prove to be true simply based on the premise that it is non-contradictory, must be false. On this basis one could then confidently state that by implication, this would mean that theism, the only remaining non-contradictory view, would be true by the process of falsification.

To further expand on this, the author undertook a case study of Darwinism, to start the process of showing that theism is a most Biblically legitimate view on creation. Darwin, it was argued, was aware that his theory of evolution had some problems, but in all fairness to Darwin, he did base his theory on three reasonable assumptions, namely: Hyper productivity, Variability, and Natural Selection.

As a result, evolution does inevitably matter to theology. Thus, Darwin's theory of evolution by natural selection is important and one should study it from a Biblical perspective, as some of Darwin's theories do not, as such, oppose Scripture. It was furthermore shown, that if one interprets evolution theistically, it could even strengthen one's understanding of the extent of Divine creation. Based on this the author established that many in the science-theology dialogue have turned their attention precisely to these kinds of issues.

As a result of these statements, the author of this thesis did place on record that the work presented throughout, was prone to subjectivity, as the author wrote from a strong Christian viewpoint. Although the author did dialogue with views that were in conflict with theism, the author did compliment each scholar's view, especially where they contributed to an overall understanding of reality.

The study then turned to the deterministic view in the light of evolution, and evaluated it specifically from the post-modern mindset. The author then presented ideas of some scholars who suggest ways in which traditional ideas of God's role can be reformulated to recognise both law and chance concerning reality. The result of this study showed that arguments for determinism as a methodological assumption of science is unconvincing. There is no concrete support yet from the specific sciences concerning determinism; as impressive as it might seem on the outside. The progress of physics, clearly the most advanced science so far, has led it in the opposite direction

A challenge to the Open-Theism argument for determinism was presented, as this was one of the more controversial post-modern views being proposed today about reality. As a result of this case study of open theism and its deterministic view of reality, it was established that it fails as a viable theistic world-view. As such, it was shown that God knows in advance every word that one speaks before it is even spoken. Also, God predicts naming certain individuals long before they're born, including the places in specific kingdoms that are yet in the future.

Further to this, a study of God's providence and its relationship to miracles, prayer, personhood and sin was also examined. In the process the question was asked: If God has settled His plans, and He will do what He is going to do, then does it really matter whether one prays or not? The answer

given was that God does require people to work in partnership with Him. As a result, God does require His people to pray for things to come to pass.

The issue of healing was also addressed and the conclusion reached was that no empirical data, in the author's view, exists, to counter the claims of the scientific world that healings are not common today. Their test cases showed no significant healings in people that prayed or were prayed for. As a result, a case was made for divine healing from Scripture, but the question remained unanswered as to whether God heals when people pray. Because of this question, it was put forth that it is the believer's conviction that he or she is in the hands of a wise and powerful God, who will accomplish His purposes in the world - whether it be through the answering or not answering of the prayer for healing or for any other need. Based on this, it was put forth though that what Christians do receive when they pray is always God's best for them long-term, even when it is a short-term disappointment.

Regarding aspects of creation, it was put forth that the new physics of creation leave no place for the traditional metaphysics of creation, because new cosmological models ultimately explain how the universe *created itself* emerging from nothing at a certain moment. Based on this view, it was shown that many theologians and Biblical scholars, unfortunately, share the view that the Bible should be taken seriously, but not literally, and claim that Genesis really only witnesses to a fundamental and enduring relationship between God and the

world. It was then argued that this view is false, as Scripture conveys religious ideas that one can still accept independent of any cosmology, ancient or modern. It was then put forth, that if the world is in a state of decay, one would need to ask why? The only logical answer to this is the Biblical account of the fall of Adam in the Garden of Eden according to Genesis chapter 3. It was then shown that a correct understanding of the fall of Adam and Eve would lead one to understand better the fallen state of the world and why it is in decay, rather than moving towards perfection as proposed by evolutionists.

The subtleness of the humanistic view of sin argued by some who claim to be Christians was also explored, and it was shown that although their arguments sound very stable, and they might even have a scriptural base to argue from, it is unfortunately a veiled denial of original sin inherited by the disobedience of Adam in the Garden of Eden.

It was argued that any view which dilutes the impact of sin in a fallen world was not an option, and the fallen condition of humanity is very literal. It was put forth that humanity cannot take care of itself, and God had to intervene through the coming of Christ. It was also shown that evolution makes God unnecessary and ineffective, which is very different from the sovereign God described in Genesis.

Research into God's providence and its relation to human freedom and sin was also undertaken, and it was argued that evil in this present world must not be thought of as something God willingly planned, as an instrument of human punishment and education, but rather as something He allows because of human freedom. It was shown that all evil must be seen as a possible consequence of the kind of world God willed to create. Although God certainly knew from eternity the kind of world which would result, because of humanity's wilful rebellion, He also knew from eternity that He would be able to bring all of His plans to pass in His own time. It was also put forth, that God is effectively able to use evil, to bring many of His purposes to pass. Although evil is a product of human freedom and rebellion; from the Biblical point of view it is never presented as something which is frustrating God's plans, and preventing Him from carrying out His purposes in the world. It was shown that God is always in control, despite the present reign of evil, both moral and natural. Although there are still many unanswered questions, clearly, God is in control of creation through His providential plans, and His eventual will for humanity will be realised in the end.

This led to the question of: "What is the Ultimate End of Humanity?" - A question that science and theology have been trying to answer ever since humanity became aware of its own existence. It was established that as technology has increased, many of the issues surrounding eschatology have become obscure, and difficult to deal with. It was shown that at times,

eschatology has become a topic of debate, resulting in accusations and acrimony among scholars. Yet it was also established that the Bible is clear as to what the end entails; whether that is towards the believer or non-believer. Furthermore, it was reasoned that much in the eschatological picture was shown to be speculative, but it is reasonable speculation in keeping with the axiom that the *Lord God perfects the creation with utmost love.*

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