

Lancaster Theological Seminary

**Re-Reading Resurrection and the Providence of God in the Heidelberg Catechism:
A 21st Century Scientific – Theological View**

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Doctor of Ministry

by

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Re-Reading Resurrection and the Providence of God in the Heidelberg Catechism:
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ABSTRACT

The central thesis of this study is that the resurrection of Jesus Christ represents a change in matter and the laws of physics that govern the universe. In this context resurrection and the providence of God are addressed through a series of select questions and answers posed by the Heidelberg Catechism. Subjects such as the beginning of the universe, divine governance, original sin, resurrection and new creation are held in juxtaposition with scientific theories of Big Bang cosmology, thermodynamics, death of the universe, and evolution. It is concluded that hope for the future and the problem of evil are resolved only in light of cosmological resurrection and God's suffering with creation for the sake of new creation.

Preface

THE HEIDELBERG CATECHISM

OLD QUESTIONS: ALTERNATIVE ANSWERS

The Heidelberg Catechism: Then and Now

From a historical perspective it is fair to say that among the many historical confessions of faith, the Heidelberg Catechism has earned a status close to that of *de facto* standard-bearer of Reformed teaching. While it is true that there is no one universal catechism or confession that can speak for the entirety of the Reformed tradition, the Heidelberg has functioned in this role more so than any other.

In the midst of 16th century theological and political turmoil, the Heidelberg Catechism was conceived and written as *a way forward* – a way to bridge the gaps, chasms, and contradictions that threatened the heart of the Reformed movement during a time of competing catechisms – a time of competing truth claims. Perhaps more importantly, it was a document meant to comfort a laity full of questions in a sea of conflicting answers. At risk was loss of the believer's certainty and comfort: what to believe, whom to believe, and how to understand one's life as a Christian. In short, Christianity (at least from the Protestant perspective) was on the brink of disarray. The Heidelberg Catechism, in earnest, would cast as wide a net as possible in a Reformed, but nevertheless ecumenically-minded, document with the hopes of unifying competing camps, not only between Reformed and Lutheran ecclesia, but also within increasingly divided Reformed circles. That was a long time ago; what can we say of it today? We face a similar situation. Confusion between what science

tells us, what scripture says, and what church tradition has taught challenges our faith. What are we to believe? The laity once again is in need of clarity, guidance, and assurance that scripture and the world we live in (from a scientific perspective) are not necessarily at odds with each other. It isn't a question of choosing one or the other, but of using them wisely.

Enter the 21st century

To a 21st century Christian the HC can sound strange if read with an indifference to its native context. I would argue, however that, as was the case then and remains today, there is a laity full of questions not only in a sea of conflicting answers, but also in some cases *untenable* answers. In the context of present day science, and in light of the catechism's historical conditioning, this is the case only if left unattended. In retrospect, when we place the Heidelberg Catechism in historical context it must be said that we might better appreciate it not only for its longevity, but more so for the catechism's overarching doctrine rooted in Reformed tradition. Having withstood scrutiny and attack from the onset and then having found its place in history, we continue to wrestle with its text, interpreting it not only with tools of historical-criticism, but also, as I now suggest, bringing to it exegetical tools of 21st century scholarship.¹ Approached from this perspective I suggest we view the

¹ Speaking to this point, see Jack L. Stotts where he says, "A more common thread in more recent Reformed confessions is a treatment of scripture [the very source to which the Heidelberg Catechism turns] that reflects the struggle in the church over how one is to understand and therefore read and be instructed by it . . . [R]ecent Reformed confessions . . . make a place for critical reading and interpretation of the Scriptures. In doing so, they legitimize the use of such interpretive tools as historical and literary criticism as important instruments for understanding how the Bible is to be read and understood." Cited in

catechism as a living document, open and ready to be interpreted in new ways, returning time and again to its questions formed in the crucible of Reformed thought and debate. Proceeding along these lines we may conclude that this approach is consistent with *semper reformanda*, as the “Reformed sector of the Protestant Reformation is one that holds to what can be called an ‘open’ rather than a ‘closed’ confessional tradition.”² As such, in light of scientific findings that lead to a new world-view it seems reasonable that the catechism stands to benefit from engaging in creative mutual interaction of science and theology. (We will say much about CMI, Creative Mutual Interaction in the ensuing pages).

With this in mind, this study is not an attempt to address all one hundred twenty-nine questions of the Heidelberg Catechism; rather, it is specific to questions having to do with resurrection and the providence of God. As such, seven questions form the focus of this work, with an additional eighth as a sub-section (listed on “Table of Question & Answers,” page ix). In each case the catechism either directly states the subject (resurrection or providence of God) in the question, or implies it in the answer.

In pursuit of faith in the age we live in, we now begin to explore *Resurrection & the Providence of God in the Heidelberg Catechism: A 21st Century Scientific – Theological View*.

“Introduction: Confessing After Barmen” in *Reformed Confessions: Theology From Zurich to Barmen*, ed. Jan Rohls (Louisville: Westminster John Knox Press, 1987), xvi.

² Ibid., xi.

TABLE OF HC QUESTIONS & ANSWERS

Q&A 1 – *Our Only Comfort*

Q&A 26, 27, 28 – *The Providence of God*

Q&A 45, 57, 58 – *Resurrection*

Q&A 2 – *Sin and Misery* (A sub-section of Q&A 1)

Question #1

Q: What is your only comfort in life and in death?

A: That I am not my own, but belong body and soul, in life and in death to my faithful Savior, Jesus Christ.

He has fully paid for all my sins with his precious blood, and has set me free from the tyranny of the devil. He also watches over me in such a way that not a hair can fall from my head without the will of my Father in heaven: in fact, all things must work together for my salvation.

Because I belong to him, Christ, by his Holy Spirit, assures me of eternal life and he makes me wholeheartedly willing and ready from now on to live for him.

Question # 26

Q: What do you believe when you say, “I believe in God, the Father almighty, creator of heaven and earth?”

A: That the eternal Father of our Lord Jesus Christ, who out of nothing created heaven and earth and everything in them, who still upholds and rules them by his eternal counsel and providence, is my God and Father because of Christ the Son.

I trust God so much that I do not doubt he will provide whatever I need for body and soul, and will turn to my good whatever he sends upon me in this sad world.

God is able to this because he is almighty God and desires to do this because he is a faithful father.

Question # 27

Q: What do you understand by the providence of God?

A: The almighty and ever present power of God by which God upholds, as with his hand, heaven and earth and all creatures, and so rules them that leaf and blade, rain and drought, fruitful and lean years, food and drink, health and sickness, prosperity and poverty – all things, in fact, come to us not by chance but by his fatherly hand.

Question # 28

Q: How does the knowledge of God's creation and providence help us?

A: We can be patient when things go against us, thankful for when things go well, and for the future we can have good confidence in our faithful God and Father that nothing in creation will separate us from his love. For all creatures are so completely in God's hand that without his will they can neither move nor be moved.

Question # 45

Q: How does Christ's resurrection benefit us?

A: First, by his resurrection he has overcome death, so that he might make us share in the righteousness he obtained for us by his death.

Second, by his power we too are already raised to a new life.

Third, Christ's resurrection is a sure pledge to us of our blessed resurrection.

Question # 57

Q: How does, "the resurrection of the body" comfort you?

A: Not only will my soul be taken immediately after this life to Christ its head, but also my very flesh will be raised by the power of Christ, reunited with my soul, and made like Christ's glorious body.

Question # 58

Q: How does the article concerning “life everlasting” comfort you?

A: Even as I already now experience in my heart the beginning of eternal joy, so after this life I will have perfect blessedness such as no eye has seen, no ear has heard, no human heart has ever imagined: a blessedness in which to praise God.

Question # 2

Q: What must you know to live and die in the joy of this comfort?

A: Three things: first, how great my sin and misery are; second, how I am set free from all my sins and misery; third, how I am to thank God for such deliverance.

Translation Note:

All questions and answers in this study are from *The Heidelberg Catechism, 450th Anniversary Edition*. ed. Faith Alive Resources. Grand Rapids: CRC Publishing, 2013. The translation represents a recent (2011) ecumenical effort on the part of The Christian Reformed Church in North America, The Presbyterian Church (PCUSA), and the Reformed Church in America to present a fresh, contemporary sounding translation while retaining the distinctives of the original language. Specific to this is the matter of gender inclusivity where textually possible.

NOTE: A “Table of Alternate Answers” appears at pages 140 – 143.

INTRODUCTION

Q 1

JESUS CHRIST, OUR ONLY COMFORT IN LIFE AND DEATH

The Way Forward

In hope of the resurrection, and in firm belief of God's unfailing covenant with all creation, I am at one with the Apostle Paul where he says, "If in this life only we have hoped in Christ, we are of all people most to be pitied" (1 Corinthians 15:19).

The resurrected Christ, the Christian hope for eternal life, has been and remains the central kerygma of the church. In our Eucharistic liturgies we sing with joy; *Christ has died, Christ has risen, Christ will come again*. The anointed One has risen. Easter celebration and proclamation of the resurrection is a Christian peculiarity. What does it mean to say, Christ has risen? What might have actually happened to the body of Christ on Easter morning, and what ramifications might this have for creation in light of science? In view of the resurrection of the cosmos, when existing matter is transformed from perishable to imperishable, in what sense do I belong, *body and soul* to my faithful Savior? Does God's creation now, from what we know of it, provide hints of what might be to come?

Ultimately, this work considers the above questions in context of the believer's comfort as addressed in Heidelberg Catechism Q&A 1 *Jesus Christ our only comfort in life and in death*, and Q&A's 45, 47 and 58 *Resurrection of the body and comfort of*

everlasting life. In addition to resurrection, the providence of God, God's ongoing care for creation (Q&A's 26, 27 and 28), will be explored. Together these bookends, creation and the providence of God, will be engaged through mutual interaction of science and theology as we consider God's physical universe in terms of cosmological and human evolutionary development. It is against this backdrop, with an eye toward the future, that the new creation will be considered. As such, this study is rooted in the biblical hope of the bodily resurrected and ascended Jesus Christ, open to what science has to say about the physical universe, and concludes with alternative answers influenced by theological and scientific possibilities for transformed matter, the new heaven and new earth.

Embedded in Q 1 is the seed of all questions that follow. Unlike many Reformed ministers before me, I did not come to the Heidelberg Catechism as a youth growing up in Bible studies, acquainting myself with the 129 questions and answers between its covers. As an ordained minister in the Reformed Church in America I came upon the catechism much later in age, with eagerness and willingness to entrench myself in Reformed doctrine. Perhaps reading it with fresh eyes, for the first time, I found it difficult, if not impossible for me to adopt the oft-mentioned warm, endearing tones normally attributed to it. Rather, I found it offputting as a result of historical conditioning and difficult to make sense of in light of 21st century science, both of which felt like obstacles to pastoral care. It is difficult to apply a 16th century understanding of the world (scientifically and theologically) to problems, hopes, fears, and much needed *comfort* of 21st century believers. The problem, as will become clear throughout this work, lies not in the questions, but in

the answers, as in large part they reflect a 16th century world-view. As such, it is the questions that this study treats as compelling, as they are as pertinent and meaningful today as when first posed 500 years ago. In this way, by addressing the questions, Christianity is always looking forward, re-engaging in relationship with Jesus Christ and the world around us according to how we know it, and according to how God continues to reveal Godself to us. It is with this forward looking view that *alternative answers* will be framed in context of 21st century scientific and theological insight. In this sense, the questions are renewed with each coming age.

The root of this study is in pastoral care where I simply found myself at a loss for words, either because I did not have them, or because the counselee's understanding of God in relation to the world has little or no acknowledgement of how the universe works, in other words, why things happen as they do. For some, God watching over them in such a way that *not a hair could fall from their head without the will of their Father in heaven* (Q1), is a belief that is benign. Yet, for others, the idea that God is directly behind illness, death, natural disaster, or other tragedies of life is not only confusing, but also troubling.

How I wish I had answers that made sense of so much suffering and pain in our lives, answers that were truthful and didn't minimize the gravity of the situation, or seek to paint a rosy picture of God that is detached from God's ongoing activity (and thus responsibility) for creation. This is a big wish, and no small task, but it is the work of this study. We will work toward that end, and in conclusion weigh what has been learned, what has changed (or could be changed) in our dialogue about God and the world. The questions of the Heidelberg Catechism will lead us along the way.

From this perspective I am writing not only for the sake of my ministry, but also with the goal of providing material that could be of service to my pastoral colleagues in a variety of settings. Might mutual interaction of science and the catechism lead to new understanding, one that speaks to the believer's comfort, not over and against what science has to say, but in harmony with what God is doing in the universe? The answer to this question, I believe, is yes. This is the pursuit of this study.

Ultimately, the above is considered against the backdrop of resurrection, the fulcrum around which this study turns. The leap from *belonging body and soul to our faithful Savior Jesus Christ* as a spiritual thought to one that is concerned with the physical universe and cosmological resurrection is a matter of comfort. The question posed by Q1 is both eschatological and deeply pastoral. Though not a word of it is said outright, I suggest, that resurrection is embedded in the text of Q1. In one short sentence Q1 presupposes the healing of wounds, brokenness, and the misery of unfulfilled life, opening the way for a better, fulfilled tomorrow. In his book, *Body & Soul*, M. Craig Barnes eloquently addresses the human experience in light of the catechism:

With almost poetic beauty [Q&A 1] sums up the entire catechism by placing us in the embrace of the triune God. Its reference to the boundaries of life and death asks not only how we handle existential angst of our mortality, but how we feel with all our death-like experiences – such as when a child grows up differently than we planned, a job comes to an end, we lose our health, or our dreams fall apart. These experiences mock our illusions of being in control of life. The catechism begins by echoing our confusion in the face of inevitable losses.³

³ M. Craig Barnes, *Body & Soul: Reclaiming the Heidelberg Catechism* (Louisville: Congregational Ministries Publishing, 2012), 28.

Making sense of our confusion in the face of inevitable loss and angst of our lives often eludes us. We may ask as a people of faith why it is that some tragedy has befallen us, or where is God? We may ask these questions believing that science and reason leave no room for faith, or we may proceed with the belief that there is coherence between science and theology as both “share a commitment to truth and an exploration of common reality, a universe which is created by God.”⁴ It is in this latter paradigm, a universe created by God, understood in both scientific and theological terms, that we will wrestle with Q1 in context of its eschatological importance, not only from the perspective of resurrection, but also the providence of God.

Related to Q&A 1, are Q&A’s 26, 27 and 28 as these speak of creation and the providence of God. It is precisely here, in context of the providence of God and the problem of evil (theodicy) that the theologian is caught in the cross hairs of biblical proclamation and scientific objectivity in facing the futility of the universe. In light of Q1 and *belonging to Christ in life and in death*, the futility of the universe (the scientific theory that the universe and everything in it will eventually die) poses a significant problem to the Christian hope of eternal life. To quote Robert Russell, “In

⁴ David Wilkinson, *Christian Eschatology and the Physical Universe*, (London: T&T Clark International, 2010), 53. Full quote reads as follows: If the nature of science and theology is best seen in terms of critical realism, then this gives the basis for pursuing external coherence as both science and theology share a commitment to truth and an exploration of common reality, a universe which is created by God.

short, if big bang cosmology is correct, the parousia is not just 'delayed', it never happens."⁵

According to cosmologists, the expansion of the universe after the Big Bang will continue until it cools off into a big freeze, or the force of gravity will reverse itself, collapsing into a Big Crunch. These two scenarios are typically known as freeze or fry, the former being the dominant consensus of belief of the scientific community.⁶ The death of the universe is a subject that will be explored in the upcoming chapters, as perhaps it is the ultimate evil, contradicting the biblical promise of a new heaven and new earth. It is against the pessimism of the futility of the universe that the bodily resurrection of Jesus takes on new meaning, and is Our Only Source of Comfort. If the new creation is to have continuity with life and the universe as we now know them, then the divine intervention that raised Jesus from the dead must also redeem the cosmos from futility.

The scientific prognosis of the futility of the universe drives this study to the historicity of the resurrection, illuminating that event not only in theological terms, but also in terms of scientific possibilities. It is here where the connection between resurrection and comfort cannot be overstated. What God has done in Jesus Christ does not stand outside the sphere of the physicality of the universe, but rather, breaks into it, making no phantom, no docetic figure of Christ, but a real person with material properties, a sign of what is to be. It is against cosmic futility and the

⁵ Robert J. Russell, "Sin, Salvation, and Scientific Cosmology: Is Christian Eschatology Credible Today?" in *Sin and Salvation: Task of Theology Today III*, ed. Duncan Reid and Mark Worthing (Adelaide, Australia: Openbook Press, 2003), 134.

⁶ For an in depth discussion on the future of the universe as concerns expansion and contraction see Wilkinson, chapter 2, "Ending in Futility: The Future Pessimism of Science," *Christian Eschatology and the Physical Universe*, 7-22.

challenge of theodicy that the bodily resurrected Christ serves as the definitive harbinger of cosmological transformation and hope for a future world. It is this belief that forms the heart and soul of this work. Based upon what God has already done (the resurrection) we can anticipate what God is more than able to do. This is the good news that speaks in the face of suffering, it is what undergirds a ministry of hope based upon the promise of scripture, and it is what God is doing in the universe to bring about God's end.

It is with this in mind that the pastor/theologian engages the heart and mind of the faithful, acknowledging trepidation brought on by a world often punctuated by unwelcomed events that may be explained when brought into the realm of science. High and above, God the Creator transcends creation, yet at the same time is an immanent God who is Lord of the universe, intimately involved in bringing creation to its consummation. To quote Russell again, "Christian theology assumes that God is free to act in radically new ways, not only in human history but in ongoing natural history of God's creation, the universe."⁷

Returning to our starting point, Q1, this work will explore a way forward – how we might now conceive of the believer's comfort in accordance with the Heidelberg Catechism, scripture, a 21st century scientific worldview, and resurrection, both Jesus' and ours.

Soli Deo Gloria! – To God alone be the glory!

⁷ Ibid., 134.

Overarching Themes: A Sketch of What is to Come

Q1: The Nature of the question

To ask, *what is your only comfort in life and in death* is a question of eschatological importance, as it calls into question the full panorama of the human being's life in community with fellow human beings and God. The first, *life*, is relegated to the present, to the land of the living. The second has to do with our relationship with God as we near death and enter into it. Embedded in this question is the seed of all the questions we will be wrestling with, as well as the theological topics associated with them, such as creation, the resurrection, the providence of God, theodicy, and original sin. Q1 addresses two realms; the first being the cosmos as we know it, the second being the cosmos as it will be, the latter being speculative. In both cases we are concerned with a question of physicality of the universe. In addition, between the present and future cosmos is the bodily resurrection of Jesus. Though the resurrection happens in this world, it points to a new one, but at the same time does not altogether leave the old one behind. This is because the resurrection of Jesus' body (from the perspective of this study) is understood as transformation of existing matter into new substance (*creatio ex vetere*). This is the eschatological premise of this study, that matter of the existing universe will not be destroyed, but will be transformed into the new creation. The table below lists corresponding scientific and theological topics associated with the present cosmos. The bottom half of the table lists theological topics associated with a speculative future cosmos.

PRESENT COSMOS	
SCIENTIFIC TOPICS	CORRESPONDING THEOLOGICAL TOPICS
Big Bang -----	Creation (ex nihilo) & Eschatology
Anthropic Principle -----	The Providence of God
Evolution -----	The Providence of God (Theodicy) Anthropology & Original Sin
Entropy -----	Theodicy, Sin & Original Sin
 NEW HEAVEN & NEW EARTH: SPECULATIVE THEOLOGY	
Bodily Resurrection of Jesus ----- (Transformed body of Jesus)	Theology of Resurrection
Continuity & Discontinuity -----	Eschatology
Transformation of the Universe ----- (Cosmological Resurrection)	Eschatology

Q1 presupposes that we suffer from an absence of comfort and are in need of it. As we are talking about comfort in life, we must necessarily deal with the reality of pain, suffering, and illness that comprises so much of it. Inescapably, beyond pain and suffering, there is inevitable death, sometimes encroaching upon us naturally over time, sometimes coming violently and unexpectedly. We may also say this situation permeates nature as well, leaving no species untouched. In short, the drama of living enlists creaturely participation in the life-death cycle of evolution, contradicting the notion that there ever was a time of creaturely and ecological tranquility, free of disorder, suffering, and death. God's creation, as understood

within the process of evolution is fully inclusive of suffering and death, which raises profound theological questions concerning the providence of God and theodicy. If suffering and death are to be considered evil, is God responsible for them? For example, how are we to interpret the catechism's teaching in passages such as, "He [Jesus Christ] also watches over me in such a way that not a hair can fall from my head without the will of my Father in heaven . . ." (Q1, second part of answer).

In the face of death we turn to our savior, believing that we belong to him and as he was resurrected, so too will we, and with this have life everlasting. But, what of the present? The world we live in at times seems to be at odds with itself, as though something went wrong, something is missing. Embedded in Q1 is also the mystery of life, the cosmos, woman and man living in it. Is there any purpose to it, does humanity have a future? What is the point of evolutionary history, particularly in light of the great cost paid for the sake of advancement of species, inclusive of our own, if there is to be no future? Though Q1 does not speculate on the form of the future, it implies that there is one; belonging to Christ is tantamount to assurance of eternal life, whatever that might be.

Though the Bible does not give us a scientific picture of the universe, it does bear witness to the resurrection of Jesus, thus we have reason to believe that if the cosmos is to be transformed then there must be something about creation (*matter*) that is transformable. In the coming pages we will build upon this theme in the context of science, theology, the Heidelberg Catechism, and the bodily resurrection of Jesus.

When we speak of resurrection we speak of redemption of life and a universe from a condition that holds no future. Death has the last word unless transformation becomes a reality. In context of death, particularly as concerns this green planet, the question of sin and misery in connection with Q1 will be addressed. The question of sin, its origin and effect on creation is given high priority in the catechism. No time is wasted as it comes up quickly on the heels of Q1. We may say that Q1 is in direct response to the gravity of Q2 and a larger narrative around it (see Q2 in footnote).⁸ The challenge for contemporary Christians is to put the world in context according to science without diluting the seriousness of the effects of sin and personal responsibility for it. The connection between sin and Q1 will be explored in the context of such topics as evolution and the origins of human species, as well as cosmological evolutionary development in the context of creation. In this process we will address the struggle of woman, man, and nature in the universe as revealed through the biblical narrative of Paradise, Adam & Eve, first parents, and a fallen world, re-situating the narrative in a scientific context. Here, we will engage in mutual interaction of science and theology. (Necessary background information for mutual interaction of science and theology is addressed in chapter one under the headings, *The Use of Scripture, the Methodological Approach to this Study, and Scientific Terms & Principles*.

Finally, theodicy will be incorporated into the motif of the *Crucified God* where a theology of *incarnation – cross – resurrection* is interpreted using the theology of

⁸ **Q2 Q. What must you know to live and die in the joy of the resurrection?**

A. Three things: first, how great my sin and misery are; second, how I am set free from all my sins and misery; third; how I am to thank God for such deliverance.

Jürgen Moltmann. Here, we will consider a way forward in finding divine *purpose* in context of evolution and commensurate pain, suffering, death and extinction: The cross alone (the crucified God – God suffering with humanity) cannot be separated from the evolutionary history of the world, as though it were a dark event unrelated to God’s ongoing work of creation. Creation, says Moltmann, “is not a work once performed and then finished and done with. It is a process, extended over time and open to the future . . . Theological cosmology has always seen the goal of creation together with creation’s beginning: all things are *from* God, so all things are *for* God and move in his direction.”⁹

It is only in context of the cross and cosmic resurrection that we see purpose in evolutionary processes, *all things moving in God’s direction*. Only then do we see the challenge of theodicy dissolve into God’s overarching plan of creation to new creation. Through the incarnation God entered into the physicality of the world, meeting humanity at a given point in our evolutionary history. At the cross the fully human Jesus died, his body succumbing to the force of death. In the bodily resurrection of Jesus the laws of physics were transformed. The transformation from existing matter (*ex vetere*) as opposed to new matter from nothing (*ex nihilo*) is the premise that drives this study, as it is congruent with matter, evolution, and the existing universe. (We will say much about this in chapter one under the heading of *Continuity and Discontinuity*).

It is only with a view of God’s freedom to act in creation (incarnation, cross, and death of Jesus Christ) for the sake of the end goal, a new heaven and new earth, that

⁹ Jürgen Moltmann, *The Way of Jesus Christ: Christology in Messianic Dimensions* (New York: HarperCollins, 1990), 301.

we find purpose in creation, and thus dispel the evil of suffering. Only then is God an all good, suffering, life-giving God. So, it is not in science that we find comfort, but in God who rules the cosmos that science reveals to us. As such, we can find hope in the present world believing that it is not disconnected from the future, but is very much a part of the process that moves toward God's end, consummation of creation.

Given the above, we return to the Heidelberg Catechism and ask whether the catechism continues to be of value. What substantive wisdom can be expected to come out of a 500 year-old document? At first glance the options appear to be either to accept the catechism unquestioningly, or to acknowledge its problems, but pass over them altogether as a bye-gone relic. There is a third choice, that being, to address the questions head-on, believing that they have the power to provoke thoughtful *alternative answers* if we are willing to search for them, all of which leads us to Christ and comfort in the 21st century. The remainder of this work proceeds toward Christ and comfort in the 21st century.

Navigating Our Way: Introduction of Chapters

To familiarize the reader with the contents and structure of this study, a brief overview of each chapter follows. **Chapter one**, provides background material relevant to the study. In *The methodological approach of this study, mutual interaction of science and theology*, an adaptation of Robert Russell's methodology is defined. This is an essential element of the study as it draws both science and

theology into dialogue with the Heidelberg Catechism. *The use of scripture* provides guidance for the hermeneutical approach differentiating between a literal interpretation of scripture and a poetic one. *Theological underpinnings* provides the eschatological and soteriological outlook of this study, largely influenced by Jürgen Moltmann's theology of the cross and the crucified God. *A biblical and scientific picture of the world* is given so as to draw comparisons between two world-views. Though each speaks about the same universe, they understand it in different ways. Lastly, *scientific terms and principles* that will be encountered in subsequent chapters are given in summary form. This is essential in order to follow the dialogue along a number of topics to be discussed.

Chapter two addresses Q1, 45, 57 and 58 in context of *comfort* and *belonging* to Jesus Christ. Here, belonging is examined in personal as well as cosmic terms, and the physicality of the universe and the human body is considered in the context of cosmological resurrection and eternal life. In addition, the question of the nature of the soul is explored in context of belonging. This is done from a scientific, philosophical, and theological perspective. A key element introduced in this chapter is the storage of all personal and historic memory in the mind of God.

Chapter three first examines the question of natural evil in context of evolution and the 2nd law of thermodynamics and entropy; it then addresses God's ongoing activity in the universe. Here, anthropology and the evolutionary development of *Homo sapiens* in relation to sin, its origin, the consequences of it, and God's response to it are examined. The question of Christ's death in the context of the redemption of the universe as a soteriological act in the context of consummation of creation as

opposed to punishment for sin is examined. This last is explored in terms of cosmological resurrection.

Chapter four addresses theodicy interpreted through the theology of Jürgen Moltmann's Crucified God where, essentially, justification for suffering in the world is resolved in God's suffering in and with the world for the sake of God's end, the new heaven and new earth. Creation is explored in trinitarian terms in the context of incarnation, the cross and cosmological resurrection. With theodicy and the providential care of God in mind, creation to new creation is considered from a scientific perspective (how the universe works) as well as from a theological perspective, God's purpose for the world.

In addition, although the catechism's questions are responded to throughout the study, a **"Table of Alternative Answers"** is given at the end. This also allows for direct comparison of original and alternative answers.

CHAPTER 1

COSMOS & CONTEXT: THE WORLD WE LIVE IN

Methodological Approach to This Study

There has got to be a better way! How often have we heard or expressed this sentiment when confronted by something that feels like a jigsaw puzzle with so many pieces that almost fit, but not quite. Just a twist or turn here or there could make all the difference in the world, if only we could find the right fit. What was a faint picture for me gradually found coherence in the work of physicist-theologian, Robert John Russell. From a pastoral perspective, it made all the difference in the world. I found a way to speak about scripture, God, nature, humanity and the universe in a unified way. Russell's methodology of (CMI) *Creative Mutual Interaction of Science and Theology* provided just the right twists and turns that were previously missing from my theology, and consequently, pastoral care. To be certain, Russell is not the only theologian to pursue this path (as we will encounter others in this study as well). Nevertheless, the systematic approach he employs in challenging both the scientific and the theological communities to engage in interactive work convinced me of the importance of incorporating science into theological-pastoral care conversation. As such, I have incorporated a general framework of his model into this study. My adaptation of Russell's model deserves some mention.

In its simplest form, Russell's model operates from the premise that science and theology share a common domain. As such, he believes that each might indirectly be of benefit to the other. The common domain that science and theology share is the universe. In a similar way, I use an adaptation of CMI for the purpose of bringing science and theology together, believing the two might mutually be of benefit to pastoral care conversations: science, theology, and pastoral care share a common domain, that being, the world we live in.

As concerns the world we live in, and more so the world we hope to live in, the resurrection of Jesus Christ is the focus of this study, it is the guiding light that shapes the eschatological horizon that all is headed toward. As such, CMI is used largely in context of resurrection with the new creation in view. Consequently, when resurrection is understood in context of the physicality of the universe (cosmological resurrection), the conversation cannot be had outside of science any more than theology. The driving principle that guides this work is the theological understanding that creation becoming new creation cannot be divorced from a scientific understanding of the universe, inclusive of cosmological and human evolutionary development. The ramifications of this understanding impact pastoral care, for care of the human being is fully understood only when envisioned in terms of creation to new creation. It is only when the two worlds become seamless that God's purpose for the world, and humanities destiny is fully realized. To this end, mutual interaction of science and theology deepens our engagement with the catechism concerning questions of life, redemption, and a new heaven and new

earth, the essentials of belonging to Jesus Christ as Lord and savior. From this perspective, both science and theology matter.

Russell's model of mutual interaction is quite elaborate, as it has to do with distinct areas of scientific research that follow specific paths to theology and vice versa. By contrast, our methodology is rather simple and straightforward.

As my background is one of divinity and not science, there is no intention to do the scientific work associated with CMI, but rather to present existing science in a way that is accessible to the pastorate. The path taken draws upon the finished work of Russell as well as others who are working in the field of mutual interaction of science and theology. Our goal is to draw upon what Russell and others have to say about such matters.

As concerns eschatological horizons, standing between creation and new creation is the problem of futility of the universe. In contrast to the scientific prognosis of a finite universe, the bodily resurrection of Jesus is understood as a new creation *ex vetere* (from existing matter), a first instantiation of a new law of nature.¹⁰ As such, the entirety of this study hinges upon the belief that transformation of the universe requires a change in the natural laws just as foreshadowed on the Easter resurrection of Jesus Christ.

¹⁰ Note Russell refers to formation of the universe as a "first instantiation" (first instance) of "mild emergence" whereas he understands the bodily resurrection of Jesus to be an "aggressive" form of first instantiation. This is clear where he refers to the resurrected body of Jesus as a "'first instantiation' of a new form of nature . . . It is the result of a radically new act of God in which both the bodily resurrection of Jesus of Nazareth, *and* the 'background conditions' of his environment . . . are transformed." *Cosmology: From Alpha to Omega*, 37. also see *Resurrection: Theological Assessments*, Introduction, xiv, where Ted Peters says of Russell: "For Russell, the Easter resurrection of Jesus is the first instantiation of a new law of nature. Rather than a miracle that violates natural laws, resurrection is a divinely instituted event that changes natural laws."

It is in context of an eschatological view of creation to new creation, grounded in a theology of resurrection that alternative answers will be sought in response to questions posed by the Heidelberg Catechism. Topics associated with the above are introduced in the introductory section (p.9). They are: Big Bang cosmology (*corresponding to creation*), Anthropic principle (*significant for the providence of God*), Evolution (*raising the concern of theodicy, anthropology, sin and original sin*), and Entropy (*significant for theodicy, sin and original sin*). At times each topic will be distinct, while at others there will be considerable cross over with an integrated view of science and theology.

Lastly, with the above in mind, this study puts forth an evolutionary eschatology that provides the framework for God entering into the physicality of the world. God's *entering into* is better understood as kenosis, God's *self-emptying* at the point of the incarnation and the cross. In this way, theodicy takes evolution into account because God is in full solidarity with all creaturely suffering. To facilitate this I have borrowed from Russell's program for an evolutionary eschatology. The criteria he sets forth is as follows:

(a). *The resurrection of Jesus must be understood as bodily resurrection.* (b). *Transformation of old creation into the new is a function of creatio ex vetere* (from existing matter, no consideration of inhalation or new creation *ex nihilo*). (c). *Continuity and discontinuity of old and new creation gives the new creation shape and form.* (d). *Resurrection and transformation of all creaturely*

life as part of the new creation (e). Whole life history comprising personhood is retained.

The Use of Scripture

From the perspective of this study it is not possible, nor is it productive to narrow the use of scripture to a single approach. However, generally speaking, the following principles may be applied: First, scripture is understood as a *witness* to revelation. Specifically this has to do with New Testament texts pointing to Jesus Christ through whom God is revealed. As such, the emphasis is on Christ as the one who reveals God as opposed to scripture itself. From this perspective my use of scripture bears a strong resemblance to a *barthian* view. However, unlike Barth, I do not reject the possibilities of natural theology. Following the lead of theologian-scientists (for example; Russell, Polkinghorne and Southgate), I take the natural world to be revelatory of God when read alongside scripture. In addition, further consideration needs to be given to the use of scripture throughout this study with regard to why some parts are read as poetic language whereas others are read historically. This can be answered in a simple form. For the most part, the focus of scripture falls into two main areas, the first being the creation account and subsequent fall of Adam and Eve, and the second being, the resurrection and post-resurrection accounts of Jesus. In keeping with mutual interaction of science and theology, whereas there is nothing to preclude resurrection and post-resurrection accounts from interacting with science (i.e. laws of physics, cosmology and natural sciences), the same cannot be said for the Genesis accounts. With regard to science, it is possible to explore

continuity and discontinuity in context of resurrection accounts and new creation. On the other hand, in light of science it is not possible to read the Genesis creation and Fall account in continuity with science. Based upon this guideline the resurrection and post resurrection accounts are read in a literal sense whereas the creation and Fall accounts are read as poetic language.

For the sake of clarity something needs to be said about how I am using the term *literal sense*. By literal I mean to say that the empty tomb and post-resurrection accounts of Jesus in some shape or form actually happened. Events such as the angels appearing before Mary Magdalene and her supposing Jesus to be the gardener, or the exact circumstances surrounding Jesus' appearance to the disciples are read as historical, but not necessarily factual in detail. In other words, the kernel of the story is read factually; Jesus rose from the dead in bodily form (John 20:1-29). The same may be said for the details surrounding Jesus' conversation with two disciples on The Road to Emmaus (Luke 24:13-35). These narratives, as well as the resurrection narratives in the Matthean and Lukan tradition (Matthew 28:1-10, Luke 24:1-12) fulfill the basic need for testimony to the resurrection: Jesus overcame death and was no longer in the tomb, appearing in substantive form in time and history.

Texts such as Revelation 21:4, "the former things have passed, and 21:5, "Behold, I am making all things new" are read as prophetic as opposed to historical texts. Here too, poetic language supporting these verses, such as the new Jerusalem coming down from heaven (21:1) is taken as just that, poetic language that announces the new thing that God is doing, the new heaven and new earth.

In bringing this section to a close it is important to indicate that both a literal reading and a poetic one are on a par, one is not subordinate to the other. Both tell true stories, albeit in different ways for different reasons. This is particularly the case concerning the creation and Fall account. Here, scripture attempts to say something about the origin and order seen in creation, but more importantly, affirms the dependence of all that exists on God, as well as the creatures whom the Creator cares for. The maturing of humanity with its pitfalls, trials and tribulation resonates in the text of Genesis. While not a historic (and certainly an un-scientific) account of creation, it is a poetic account of humanity's plight in the world with one another, nature, and God. In this sense the narrative conveys truth.

To summarize the above, we began by saying that scripture is a witness to Christ through whom God is revealed. Adding to this, the human nature of Christ is emphasized over his divine nature. In addition, scripture has been divided into two categories, the first being New Testament resurrection and post-resurrection narratives, the second being the creation and Fall account (Genesis 1-3). The latter, as well as some New Testament texts (Colossians and Revelation) are read poetically as well. Last, both literal and poetic readings are filtered through the lens of mutual interaction of science and theology. In this sense, (as stated at the beginning), it is difficult, as well as unproductive to narrow the use of scripture to one school of thought.

Theological Underpinning of this Study

Throughout this study I emphasize the continuity (or at-oneness) between God and humanity in Christ, not only for the sake of humanity but also for the sake of creation.¹¹ This allows for a variation of natural theology that is fully realized in cosmological resurrection. In this sense the hermeneutical approach to this study employs a *Christology* from below. (By *Christology from below*, I do not mean to convey *low Christology* in the sense that Jesus is not seen as the object of worship, or that his salvific efficacy is solely that of a moral teacher, or exemplary model of human behavior that leads to a *pelagian* view of salvation).¹² To the contrary, as will become apparent in chapter four (sub-section, Creation, Incarnation & cross), the hermeneutical approach taken here places a high view on the incarnation and bodily resurrection of Jesus. These two are never apart from the triune God who transcends creation, and thus is free to enter into it according to the Creator's will.

¹¹ For a brief, but concise overview of Barth's Christology see Anthony Thiselton where he says, "Barth sees a more radical discontinuity between God and humanity than most others. He presents hermeneutics as part of his theology of God as Father, Son, and Holy Spirit, 'From above.' He emphasizes that the Bible is by human authors, and so is no more than a 'witness' to christocentric revelation." For a full reading see Anthony C. Thiselton, "Karl Barth's Earlier and Later hermeneutics," *Hermeneutics: An Introduction* (Grand Rapids: Wm. B. Eerdmans Publishing Co., 2009), 185-190.

¹² For an excellent discussion on high, middle and low Christologies see Salvator Mundi, "Three Types of Christology," *Evangelical, Catholic, and Reformed: Doctrinal Essays on Barth and Related Themes*, ed. George Hunsinger (Grand Rapids: Wm. B. Eerdmans Publishing Co., 2015), 134. For full essay see, 126-145. Note: As concerns my statement above, the following statement by Mundi conveys a robust description of "Low Christology," which I caution against: "Low and middle Christologies usually dispense with presenting Jesus as the proper object of worship and prayer. From a high Christological standpoint, neither a low Christology such as we find in someone like John Locke (or in a very emaciated version in someone like Marcus Borg), nor middle Christology such as we find in the likes of Schleiermacher, Tillich, Bultmann, or H. R. Niebuhr is satisfactory on this score. None has any real place for Jesus as the object of worship." 137.

Here, the efficacy of Jesus Christ is realized in his resurrection as the beginning of material transformation of the universe.

A high Christology requires a high view of Christ's saving work, as well as his full deity. The intention of this study is to show that Christ's saving work has not only to do with personal salvation, but more so in the broader context of cosmological redemption without which the first has little meaning. The ramifications of this view are both hermeneutical and soteriological. It is true that the hermeneutical approach I employ with regard to resurrection and post-resurrection texts places an abundance of weight on the human nature of Jesus, perhaps even pushing his deity to the background, in effect overshadowing his divine nature. However, as stated above, this is not to be mistaken for a low Christology that reduces Jesus to a religious teacher or person of exemplary moral behavior. To the contrary, the scope of his salvific work, beginning with incarnation, continuing through his life's work, death, and resurrection sees him as the object of praise and worship.

The view put forth in this thesis differs from a traditional high Christology only in the sense that I integrate the saving work of Jesus with science. From thence mutual interaction of science and theology (scripture) yields a fresh perspective not only on the saving work of Christ, but also the economic Trinity in creation to new creation. As such, it is in connection with mutual interaction of science and theology that a *Christology from below* (in the sense that I use the term) becomes a critical hermeneutic to this study.

Following the above, a robust understanding of the human nature of Jesus is central to cosmological resurrection, the laws of physics, and the new creation. It is

in this overarching context that scripture bears witness to the crucified Christ through whom the triune God is revealed in a supreme act of divine kenosis; God enters into creation for the sake of new creation (cosmic redemption). *This motif will be taken up at a latter point in conjunction with theodicy and Jürgen Moltmann's theology of the Crucified God where creaturely suffering is commensurate with biological evolutionary life in the context of creation to new creation.*

It is critical to note that as Russell is central to the scientific-theological side of this study, Jürgen Moltmann likewise is pivotal to the theological underpinnings, specifically, as concerns the eschatological view of this work. Here, particularly as concerns the providence of God, theodicy is interpreted through Moltmann's theology of the *Crucified God* where God empties himself in the incarnation and the cross (death) of Jesus for the sake of new creation. As such, our understanding of soteriology is one that must be interpreted on a cosmic scale if human beings and all creatures are to have an environment in which to dwell. This environment can be nothing less than a new creation *ex vetere* (from existing matter) as opposed to *ex nihilo*, for the latter is nothing less than annihilation of the *good creation* for the sake of a second one *ex nihilo*. In such a case the divine blessing of Genesis 1:28, *to be fruitful and multiply*, and the edict that *God saw everything he had made and declared it good* (1:31) would not have teleological meaning. Rather, creation would be completely divorced from eschatology that moves toward God's end to make all things new: "Behold, I will make all things new" (Rev. 21:5). This newness is not found in destruction of the old, but in transforming the old into something new, "the former things have passed away" (21:4).

The dichotomy between a “good creation” and creation as we know and experience it is a quandary that is echoed throughout this study by multiple authors. Wolfhart Pannenberg addresses the problem citing that, “Only in light of eschatological consummation may [the verdict] “very good” be said of our world as it is in confusion and pain.”¹³ In view of eschatological horizons it is the present creation that moves toward the future and thus cannot be at odds with God’s intended purpose for creation. Between the old and new creation is the resurrection of Jesus Christ in whom the tension of present and future holds together. As such, the bodily resurrection of Jesus must be conceived of within the physicality of the universe, both present and future, not apart from it. This is the case because the grace of Christ was (is) experienced in this world in all its physicality, inclusive of history of the cross. It is in physicality of the cross and this world that the death of Jesus stands as the end of an old order and the beginning of a new one where the finality of death and the beginning of eternal life for creation is ushered in. Citing Calvinist theology Moltmann writes:

Calvinist theology sees a continuity between the grace of Christ experienced in history and the glory of Christ expected in consummation. In individual believers too there are seeds of eternal life, which will there grow up to their fullness. Consequently, even the end of the world cannot be total annihilation and new creation. It can only be a transformation out of transience into eternity.¹⁴

The connection between incarnation, cross, resurrection, and creation will be fleshed out in greater detail in chapter four under the heading *Theodicy & the Crucified God* where it is said that God suffers not only at the cross as the *Crucified*

¹³ Wolfhart Pannenberg in *The Groaning of Creation*, 16.

¹⁴ Jürgen Moltmann, *The Coming of God: Christian Eschatology* (Minneapolis, MN: Fortress Press, 1996), 271.

God, but also in the cruciform reality of creation to new creation. It is in the context of creation to new creation, inclusive of pain and suffering commensurate with evolution that theodicy is subsumed into the motif of the Crucified God: only in the eschatological context of consummation, (which requires transformation, not annihilation) can the *goodness* and *blessedness* of Genesis be true, only then, in solidarity with creation can God be said to be good.

This theme is further buttressed by the work of Christopher Southgate whose approach to theodicy is one of “divine fellowship and co-suffering of God for the world.”¹⁵ Here, he takes the cross of Jesus Christ to be the epitome of divine compassion and further stresses the importance of giving an account of eschatological fulfillment to creatures that have not flourished in this life. In the context of cosmological, planetary, and creaturely evolution, pain, suffering, death and extinction are taken up into the suffering God in an eschatological view of the consummation of creation, effectively yielding a new heaven and new earth.

These questions, or what seem to be contradictions where frustration and God’s providential care for the world is concerned will be examined through the lens of science in mutual interaction with theology in response to the Heidelberg Catechism’s questions, bringing freshness in the form of insights and alternative answers. The language used in connection with such tension of present and future is that of continuity and discontinuity, but first we will need a picture of the universe God has given us to dwell in.

¹⁵ Christopher Southgate, *The Groaning of Creation: God, Evolution and the Problem of Evil* (Louisville: Westminster John Knox Press, 2008), 16.

A Biblical Picture of the World: Past, Present & Future

Though biblical language depicting the world is strikingly different than that of science, it is the same universe that both speak of, first being with the eyes and language of poetry, second through the empiricism of science. As such, the integrity of each remains intact as both have something of importance to say.

The Genesis creation account establishes a monotheistic God who is creator of all that exists. Each of the six days of creation contributes to the finished work of God. What is brought forth out of nothing, *ex nihilo*, is blessed and declared “good” in the Creator’s eyes. God is intimately engaged in the work of his hand even to the point of breathing life into the clay figure Adam. Community is quickly formed when Eve is fashioned out of Adam’s rib. The two have been created in the “image of God,” thus human potential abounds. Free to make moral decisions, the two must navigate their way through life, living with the consequences of their choices. Contrary to the Creator’s will, the couple share the forbidden fruit after having been tempted by the serpent. Angered by their disobedience, God punishes the couple, and the serpent by leveling a series of curses against them and the land. As a result of disobedience and the curse severe hardship is experienced in all spheres of life paralleling the socio-economic conditions faced by every household in ancient Israel.

The poetic narrative of Genesis is about more than creation. The rise and fall of the couple, the hardships that they endure (as represented by the cursed ground) is an ongoing saga of humanity and creation. The story of humanity from Eden to present is summed up in the following passage:

Though traditionally described as a “fall,” the Garden of Eden story portrays a fall upward. Human’s trade paradise for wisdom and, in the process, cause the universal desert to bloom. They forfeit blissful innocence for the godly power of moral discernment, the ability to know right and wrong and to choose. The world prospers as a result. The “fall” in this story is the painful process of growing up, maturing into moral beings, becoming fully human and thus “like God.”¹⁶

Fortunately for humanity and the world the story does not end in Eden, rather, it is only the beginning. God’s providential care for the creature is always and everywhere present. Nowhere is this more fully realized than in the person of Jesus Christ whom God gave to the world for the sake of the world.

In Jesus, beginning with the incarnation and ending at the cross, the triune God enters into the affairs of the world. Through the life and ministry of Jesus humanity is given a picture of love, what it means to be fully human in the image of God. In an act of selfless love Jesus carries his cross for the world, marching toward death that could not hold him. Upon the words, “It is finished,” Jesus closes the chapter on the old order; he begins something new. Rising from the grave glorious, imperishable, Jesus ushers in a new eschatological horizon that points to the consummation of creation when there will be no more crying, no more tears, pain, sin or death. On that day creation will have reached God’s end for the world. Indeed, the proclamation in Genesis 1:31 will have reached maturity: “And God saw everything that he made, and behold, it was very good.”

Post-resurrection Appearances of Jesus: Implications for Cosmological Resurrection

¹⁶ Richard H. Lowery, “Genesis,” *Chalice Introduction to the Old Testament*, ed. Marti J. Steussy (St. Louis: Chalice Press, 2003), 35.

From the perspective of this study, resurrection is understood in terms of cosmic redemption, meaning the whole creation is redeemed. The poetic language of Revelation 21:1-4 speaks of transformation of heaven and earth, creation is consummated not apart from, but with God at the center of life. The old has passed away, and new life has come. There will be no more mourning, death, crying or pain. "Behold, I am making everything new!" says the One seated on the throne.

The victory of Christ over death, his perishable body raised as an imperishable one is the beginning of cosmic resurrection. When we speak of the present creation we speak of a world that is not cursed, but rather, is merely incomplete. Nevertheless, it is a blessed creation that foreshadows what will be. According to Colossians 1:17 *He [Jesus] is before all things, and in him all things hold together*. As previously stated, any eschatology short of a cosmic one is an empty eschatology because it fails to deliver a future for the creature and creatures.

The connection between the bodily resurrection of Jesus and a new heaven and new earth cannot be overstated, as it mandates cosmological resurrection on the grounds of Jesus' preeminence in all things; "all things hold together in him, and he is before all things . . . he is the firstborn of the dead, that in everything he might be preeminent" (Colossians 1:17-18).

The new heaven and new earth is not an annihilation of the old, replaced by something new (*creatio ex nihilo*) as in the first creation. If this were the case then God would not be Creator and Redeemer, nor would Jesus be preeminent in all things, nor could all things be said to hold together in him if the *six days of creation* were destroyed for an altogether new one. On this account Moltmann cites the

doctrine of the Trinity where he says, "Cosmic eschatology is . . . necessary for God's sake. There are not two Gods, a Creator God and a Redeemer God. There is one God. It is for his sake that unity of redemption and creation has to be thought."¹⁷ Further he adds:

Because there is . . . no humanity detached from nature . . . there is no redemption for human beings either without the redemption of nature . . . Consequently it is impossible to conceive of any salvation for men and women without "a new heaven and a new earth." There can be no eternal life for human beings without the change in the cosmic conditions of life.¹⁸

Polkinghorne likewise makes an argument for unity concerning transformed matter of Jesus' body and that of the universe where he says:

Just as Jesus' body was transformed into the risen and glorified body, so the 'matter' of this new environment must come from 'the transformed matter of this world': The new creation is not a second attempt by God at what he had first tried to do in the old creation. . . . The first creation was *ex nihilo* while the new creation will be *ex vetere* . . . The new creation is the divine redemption of the old. . . . [This idea] does not imply the abolition of the old but rather its transformation.¹⁹

At question is the relationship of present and new creation, meaning, the physicality of the universe as it is, and thus, how it might become. *Behold, I make all things new* (Rev. 21:4) according to Moltmann means that "nothing passes away or is lost, but that everything is brought back again in new form."²⁰ The idea of *nothing passing away* is consonant with transformation of the old (matter) to something new

¹⁷ Moltmann, "Eschatology and Cosmology: Initial Constructive Proposals" *Time in Eternity*, 67.

¹⁸ Moltmann, *The Coming of God*, 259-260

¹⁹ John Polkinghorne, "Bodily Resurrection of Jesus: Objective and Subjective Interpretations" *Time in Eternity*, 44

²⁰ Moltmann, *The Coming of God*, 265.

(transformed matter). The terminology used to describe the emergence of something new from the old is continuity and discontinuity.

Continuity & Discontinuity: Post-resurrection Appearances of Jesus

When we speak of transformation of old to new we are speaking about continuity and discontinuity. *The Road to Emmaus* (Luke 24:13-35) illustrates this phenomenon where the resurrected Jesus draws near two heart-stricken disciples. Not even in a face-to-face encounter did they recognize him; yet it was he. Only in the liturgical action of the blessing and breaking of bread did they come to know their Lord. Something was different, yet the same. Something of the old was there, yet the new was present as well. A similar story is told regarding Mary Magdalene supposing Jesus to be the gardener, recognizing him only upon utterance of her name (John 20:1-18).

The familiar, yet unfamiliar nature of the post-resurrected Jesus was just that, a familiarity that bore the marks of humanity but was substantively different, something changed in a subtle, yet radical way. This too is what must happen on a cosmological scale if life everlasting is to be a reality. In this vein, Russell sees the resurrection of Christ as “the beginning of a final act that will transform the character of creation.”²¹ Life as we know it is distinct in character, we are physical beings existing of flesh and bone. The interdependent relationship we have with one another and nature is what makes us who we are, this is our only reality. Any sort of world that infers an escape from this world in all its physicality is a gnostic world.

²¹ Russell, “Eschatology and Cosmology,” *The Groaning of Creation*, 80.

Indeed, creation that comes to ruin hardly could be called blessed. To this affect Moltmann says:

If God himself is the eschatological salvation of believers, and if this eschatological salvation is designed only for those created in God's image, then blessedness must indeed be thought of as devoid of any world. And the inevitable conclusion is that the world must be judged unblessed.²²

The new heaven and new earth must be more than poetic language. As such, it is not to be conceived of outside the limits of science, matter, and the laws of physics, for these are God's laws that guide creation. It is here, where matter must undergo transformation, and with it new laws that will govern matter and energy necessary to comprise a new physical reality in which we will live. On this subject

Polkinghorne writes:

The "matter" of the resurrected world will be the transformed matter of this dying universe, transmuted by God in his faithful act of cosmic resurrection. It will have new properties, consistent with the end of transience, death and suffering, because it will be part of the new creation . . .²³

We may define *continuity* then, as elements that will be present in the new creation, just as Jesus was physically present to the disciples post-resurrection. Likewise, we may define *discontinuity* as elements (or more aptly, laws of physics) that will be altered, for example, the role of the 2nd law of thermodynamics and entropy in death and decay (more will be said about this in chapter three under the topic of "The Providence of God and the Problem of Evil).

²² Moltmann, *The Coming of God*, 268.

²³ Polkinghorne, *The Groaning of Creation*, 80.

Thus, it is not in place of, but from within existing matter that transformation will take place. Just as the resurrection of Jesus was an emergence of a new form of nature, in the same way we may envisage continuity and discontinuity on a cosmic scale. As such, cosmological resurrection is not annihilation of the old creation replaced by a second, *ex nihilo*, rather, it is the old creation transformed into a new form of nature. Thus, it is not in dispensing with scientific cosmologies and parameters of the universe that we anticipate the new creation, rather, it is in proceeding with the belief that God is able to alter the laws of physics, thus transforming the physicality of the universe into a new heaven and new earth.

Robert Russell addresses this in the following quote:

Now if God is to transform the universe, it follows that God must have created the universe *such that it is transformable*, i.e., that it can be transformed by God. This, in turn, means that if it is to be transformed and not replaced, God must have created it precisely with those conditions and characteristics of 'continuity' that will be part of the new creation.²⁴

The universe that Russell believes to be transformable is based upon *conditions* that allow matter and the laws of physics of the old creation to be present in altered shape or form in the new creation. This is the continuity that both he and Polkinghorne speak of. In light of transformation, continuity and discontinuity it would be helpful to first have a basic understanding of the universe as it presently exists.

²⁴ Russell, *Eschatology and Scientific Cosmology: From Conflict to Interaction* (Center for Theological Inquiry) Reflections, vol. 8 Interpretation vol. 70, no. 1, Science and Eschatology. January 2016. 26.

A Scientific Picture of the World: Past, Present & Future

Science tells a different story about emergence of the universe than scripture. Poetic language of the Bible's stories of creation is replaced by empiricism of scientific research and observation. Nevertheless, just as out of the void the universe unfolds over six days in the biblical account, stars, planets and galaxies emerge from a singular point in time designated by science as $t=0$, the beginning of time and formation of the universe. Both Genesis and science tell a rich story about the universe emerging from nothing (*ex nihilo* in theological language). While theology is apt to claim that God brought about this event, from the side of science there is not knowledge of anything or anyone prior to $t=0$, only subsequent cosmological evolutionary development.

In this section the Bible will be put aside as the cosmos is considered from a scientific perspective in order that we might have a better understanding of how the universe operates. The latter is critical, not only from the side of theology and science, but also from the side of pastoral care. Though not the answer to every question, science does go a long way insofar as answering questions as to *why* things happen as they do. Where science interacts with theology the answers take on deeper meaning; God enters the picture, a familiar language buttresses the conversation.

While the God-part of the conversation is familiar to the faith community, the science-part more than likely is not. What is given here represents the greater consensus of the scientific community based upon ongoing research. It is important to understand that rigorous work in the fields of quantum mechanics, cosmology

and evolution are ongoing, as opposed to conclusive. We may adopt this same open-ended philosophy in terms of engaging in a rigorous theological approach to exploring alternative answers to the Heidelberg Catechism. The intention of this section is to provide the reader with scientific terms and principles that will be encountered throughout the following chapters, as well as providing a basic understanding of the universe.

A summary of the scientific picture of the universe looks like this: The cosmos begins 13.7 years ago with the Big Bang. Densely hot matter less than the size of an atom rapidly expands into what will become the universe. Stars begin to form in about 400 million years, as the universe expands it begins to cool down, becomes less dense; galaxies and planets are formed. Our solar system begins to form 9 billion years after the Big Bang. Within the vast universe the precise balance of laws of physics and circumstances necessary for life are in perfect alignment (the Anthropic Principle). Less complex to more complex forms of life, understood in terms of Darwinian evolution, emerge on earth, inclusive of *Homo sapiens*. But with life, there also is death due to entropy (the dissipation of ordered energy), a necessary part of the evolutionary process. Yet, life has evolved from a lower to a higher form until *Homo sapiens* become fully rationale beings. Looming in the background behind biological evolutionary life is an ever-expanding universe cooling off and eventually dying: the end of the universe and everything in it. In condensed form, this is a picture of the universe through the lens of science.

The following terms and principles serve as an introductory explanation of how the universe operates in order to prepare the reader for what is to follow:

Quantum Mechanics

Quantum mechanics (also known as quantum physics) is a branch of physics that studies the physicality of the universe at the subatomic level. According to quantum theory, unlike the determinism of classical physics, quantum mechanics tells us that a law of probability, as opposed to certainty is built into the universe.²⁵ Particles at the subatomic level exist in a wavelike state of fuzziness, or haze where precise location, velocity, and speed cannot be predicted. Reality at the quantum level is unlike perception of reality in our day-to-day lives. For example, as we observe the world, the precise location of an object, or speed and velocity of a passing projectile can be determined in absolute, objective terms. By contrast, the location of particles such as atoms, photons, and electrons in space are contingent upon a law of statistical probability. There is no physical law that determines precisely when and where a particle will exist in space. Physicists refer to the non-deterministic behavior as *quantum weirdness*. Quantum mechanics shows that the best we can ever do is to predict the probability of particle behavior.²⁶ “Simply put, this means that quantum mechanics does not predict the observation of any single definite result. Rather, quantum mechanics predicts a number of possible results and tells us statistically how likely each of these is.”²⁷ The aspect of the quantum world differs greatly from how we see it. David Wilkinson puts it this way:

This immensely successful theory [quantum theory] reveals a world quite different from the everyday world described by Newton. Instead

²⁵ Brian R. Greene, *The Fabric of the Cosmos: Space, Time, and the Texture of Reality* (New York: Vintage Books, 2004), 11, 95.

²⁶ *Ibid.*, 79.

²⁷ Mark W. Worthing, *God, Creation, and Contemporary Physics* (Minneapolis, MN: Augsburg Press, 1996), 49.

of things being determined, they are uncertain, uncaused and unpicturable. This uncertainty of position and momentum, and energy and time, dissolves our classical picture and indeed many of the solid foundations of 'common sense.'²⁸

What does the above mean for theology in context of our study? I suggest that uncertainty and the indeterminism of quantum mechanics is compatible with a view of God acting in creation at the quantum level. In terms of resurrection and the providence of God this allows for possibilities where the dialogue between science and theology understands God acting through the laws of physics as opposed to violating them. This will be a consideration when discussing resurrection and the providence of God.

Cosmological Evolution: Big Bang Cosmology

In the beginning there was nothing, and then there was something. That *something*, the moment the universe came into being is an event that marks the beginning of time ($t=0$). This cosmic event is known as the *Big Bang*, commonly understood as the beginning of the universe 13.7 billion years ago.²⁹ Although there are multiple models of the universe it is generally accepted that the universe began as a singular point of extreme density of

²⁸ David Wilkinson, *Christian Eschatology and the Physical Universe* (New York: T & T Clark International, 2010), 138.

²⁹ For an excellent discussion see Russell in, *Time in Eternity*: where referring to "absolute singularity" he says, "an event marking the beginning of time, labeled ' $t=0$,' in which the density and the temperature of the universe go to infinity as its size approaches zero . . . [There was] a general consensus among scientists by the 1950s that we do indeed live in an expanding universe with the event ' $t=0$ ' labeled the 'big bang.' Evidence today shows that the origin of the universe at $t=0$ is some 13.7 billion years in our past." Robert J. Russell, *Time In Eternity: Pannenberg, Physics, and Eschatology In Creative Mutual Interaction* (University of Notre Dame Press: Indiana, 2012, 57. For fuller discussion see 32-33, 56-57, 60-62.

matter and energy which expanded at an astronomical rate during the universe's earliest moments. A huge force, sometimes called repulsive gravity, occurred pushing everything away from everything else. This early expansion as a result of gravitational force is known as *inflationary cosmology*.

The duration of time associated with this spatial expansion immediately after the bang is staggeringly small, as it is less than “a billionth of a billionth of a billionth of the blink of an eye.”³⁰ Within 10^{-35} seconds after the *burst* the repulsive gravitational force filled the expanding space with radiation, matter, and antimatter (subatomic particles made up of photons).³¹

Although an oversimplification, and by no means an absolute theory, the above describes the earliest history of the universe.³² As such, based upon scientific observation of the universe we can envision cosmology in two

³⁰ Brian R. Greene, *The Fabric of the Cosmos*, 285

³¹ Ibid., 285. Actually, within a trillionth of a second after the bang, space was filled with matter such as quarks and leptons followed by heavy particles called hadrons, which in turn produced protons and neutrons as well as other particles. The point being, for a moment (10^{-35} seconds after the *burst*) the interplay of particles giving rise to new particles was prolific. This would soon cease as the temperature of the universe dropped. For a more detailed picture of early particle formation see Neil deGrasse Tyson, *Astrophysics For People in a Hurry* (NY: W. W. Norton and Co., 2017), 18-26.

³² While a general theory of inflationary cosmology incorporates fundamental astronomical observations, caution should be exercised with regard to speaking in absolute terms. On this matter Brian Greene says the following: “[I]nflationary cosmology is not a single, unique theory. Rather, it is a cosmological framework built around the realization that gravity can be repulsive and thus drive a swelling space . . . So for many years physicists have studied all sorts of possibilities – various shapes for potential energy, various numbers of inflation fields that work in tandem, and so on – and determined which choices give rise to theories consistent with astronomical observations. The important thing is that there are aspects of inflationary cosmology theories that transcend details and hence are common to essentially any realization. The outward burst itself, by definition, is one such feature, and hence any inflationary model comes with a bang.” 286-287. For fuller treatment of inflationary cosmology specific to what I have stated in the body of this work, see Greene, “Deconstructing the Bang,” 272-293.

stages. Under the conditions described above, matter and energy are first pushed out into space (inflation/repulsive gravitational force), followed by matter and antimatter filling the newly formed cosmos. From here, expansion slows down, temperatures begin to drop, and gravitational forces attract particles together instead of repulsing them. The result of positive gravitational force is the gradual formation of stars, galaxies, and planets evolving into the universe as theorized in standard Big Bang cosmology.

Had conditions in the earliest moment of the universe been less exacting (a billion-and-one to a billion imbalance between matter and antimatter) there would be no story to tell, “all mass would have self-annihilated, leaving a cosmos made of photons and nothing else . . .”³³ However, such was not the case. For several hundred million years the universe continued to expand, and cool. For a billion years after the Big Bang stars more massive than the sun were formed, only to explode, enriching the galaxy with heavier elements. Nine billion years later a star called the sun was born.³⁴

The initial condition of the universe, the ratio of matter and expansion was critical in the evolution of the cosmos, particularly as concerns life on earth.

The following quote by Neil deGrasse Tyson illustrates this well:

As less and less accretable matter remained in the solar system, planetary surfaces began to cool. The one we call Earth formed a kind of Goldilocks zone around the sun, where oceans remain largely in liquid form. Had the Earth been much closer to the sun, the oceans would have evaporated. Had either been much farther away, the

³³ Neil de Grasse Tyson, *Astrophysics For People in a Hurry* (New York: W. W. Norton and Co., 2017), 26.

³⁴ *Ibid.*, 28-29.

oceans would have frozen. In either case, life as we know it would not have evolved.³⁵

Up to this point we have described a universe that began as a simple, singular point and then grew rapidly complex. We observe a universe in which the conditions at $t=0$ were precisely what was needed in order for the universe to be what it is today, including conditions for evolution of the human being. More will be said about this below.

The Anthropic Principle: Life & the Universe

The *Anthropic Principle* refers to the theory that in order for life to exist in this vast universe it could only have been possible if the precise conditions necessary for it occurred. A planet we call earth was just the right distance from the sun, a planet with chemically rich oceans, and molecules capable of transitioning into “self-replicating life.”³⁶ The latter, *self-replicating life* falls into the realm of evolutionary biology, life that is interdependent cosmological evolution. As such, it bears saying that the unique chemical balance of primordial earth and all creatures that have evolved in its environment have origins, in some sense, in the Big Bang: together we share particles common to the history of the universe. What this means from a scientific perspective is that just the right (perfect) balance of law (laws of physics) and circumstances had to have taken place. Concerning evolution, life and the cosmos Russell writes:

³⁵ Tyson, 28.

³⁶ Ibid., 30.

“Through processes of physical evolution, the basis is ultimately laid for evolution of planets, some of which develop atmospheres and oceans and revolve at reasonable distances around moderate suns. In some of these cataclysmic processes enough energy is released to produce macromolecules and organic soup – the primordial womb of life. And in the case of one gentle green world the species, which evolved, includes humankind.”³⁷

The difference between an inhabitable versus uninhabitable universe is attributed to remarkable fine-tuning of conditions such as the expansion rate, formation of elements, and particle/antiparticle ratio. For example, if the expansion of the rate of the universe from the time of the Big Bang on had been “less by even one part in a thousand billion, the universe would have collapsed again before the temperatures had fallen below 10,000 degrees. On the other hand, if the rate had been greater by one part in a million, the universe would have expanded too rapidly for stars and planets to form.”³⁸ Likewise, such fine-tuning is associated with the formation of elements such as hydrogen, helium, carbon, and countless other elements comprising the physicality of the universe, including properties of particular elements that are crucial to organic life as we know it.³⁹ Similarly, as concerns particle/antiparticle ratio, “For every billion antiprotons in the early universe, there were one-billion-and one protons. The billion pairs annihilated one another to produce radiation, with just *one* proton left over.

A greater or smaller number of survivors – or no survivors at all if they had

³⁷ Russell, *Cosmology: From Alpha to Omega: The Creative Mutual Interaction of Science and Theology* (Minneapolis: Fortress Press, 2008), 237.

³⁸ Ian G. Barbour, “Creation and Cosmology,” *Cosmos As Creation: Theology and Science in Consonance*, ed. Ted Peters, (Nashville: Abingdon Press, 1989), 130-31.

³⁹ *Ibid.*, 130-31.

*been evenly matched – would have made our kind of material world impossible” (italicized type mine).*⁴⁰

While this is an oversimplification of the Anthropic Principle, it nonetheless is sufficient to draw a picture of the infinitely complex nature of the relationship of elements and laws of physics that were necessary for the universe, as we know it, to come into being. Physicist, Stephen Hawking, says, “The odds against a universe like ours emerging out of something like the Big Bang are enormous. I think there are clearly religious implications.”⁴¹

Even with a most basic understanding of the anthropic principle we begin to see how finely balanced the physicality of the universe is, so much so that Barbour says, “the cosmos seems to be balanced on a knife-edge.”⁴²

Cosmological Evolution & the role of Entropy & the Second Law of Thermodynamics

Throughout this study the terms entropy and the second law of thermodynamics will be encountered. Together, these terms (which work in unison) will be discussed in context of their importance to evolutionary systems.

Entropy is disorder, or more precisely, “a measure of the amount of disorder in a physical system.”⁴³ “The tendency of physical systems to evolve toward higher states of *entropy* is known as the second law of

⁴⁰ Ibid., 131.

⁴¹ Stephen Hawking cited in, “Creation and Cosmology,” 131.

⁴² Ibid., 130.

⁴³ Ibid., 153.

thermodynamics.”⁴⁴ The dictum that entropy increases with time means physical systems, over time, whether the cosmos or our body, are subject to an increased state of disorder. Disorder, as the term is used here, refers to the dissipation of energy and subsequent break down of matter.

So what does entropy have to do with cosmological evolution and big bang cosmology? Going all the way back to the beginning ($t=0$) and the Big Bang, entropy was at its lowest value (zero), which means the universe (though the size of a dot) was at its highest state of order.⁴⁵ With the Big Bang came the disordering of the initial condition of the universe resulting in evolution of the cosmos. This disordering (entropy) was possible only because expansion of the universe gave it room to increase, in other words, “Entropy [increases] only if it is given room to increase.”⁴⁶ As described above, the repulsive push of gravity in the early inflationary period expanded space, thus creating room for increased entropy and disorder. As space continues to increase in size, entropy is always increasing. This in turn allows for a very, very long duration of disorder before entropy reaches maximum disorder and predicted heat death (cooling of the universe and end of life for everything in

⁴⁴ Brian Greene, *The Fabric of the Cosmos*, 156.

⁴⁵ A simple formula for understanding entropy is as follows: “Low entropy means *high* order and that *high* entropy means *low* order (equivalently, high disorder).” For a detailed explanation of entropy as a measurement of disorder in physical systems see Brian Greene in “Entropy,” 151-162. (*Simple formula*, 155).

⁴⁶ Greene 270. For full context see Greene where he says” [I]f the universe started out in a thoroughly disordered, high-entropy state, further cosmic evolution would merely maintain the disorder . . . Even though particular symmetries have been lost through cosmic phase transitions, the overall entropy of the universe has steadily increased. In the beginning, the universe must have been highly ordered.” 270-271.

it).⁴⁷ With high entropy comes low order, or another way of looking at it, high entropy results in rearrangement of the fundamental constituents of space (atoms, subatomic particles and so forth). From an evolutionary standpoint, high entropy allowed for the possibility of life in the universe.

When understood as the dissipation of energy, which in turn fuels growth and life, the second law is fully consonant with the *anthropic principle*. Taking this a step further, life did not automatically emerge on earth unfettered simply because cosmic background conditions were in place. To the contrary, something more needed to happen, all of which brings us to the second law of thermodynamics in context of natural selection, adaptation and evolution of species.

Biological Evolution & the Role of Entropy & the Second Law of Thermodynamics

The same law that was responsible for evolution of the cosmos is responsible for evolution of life on earth. In this way we can see how the second law is integrated with the entirety of life and the cosmos at both a macro and micro level. But how can a natural law that leads to increased disorder of physical systems, and thus death and decay, also be responsible for the evolution of

⁴⁷ Jorge Cham and David Whiteson, *We Have No Idea: A Guide to the Unknown Universe* (New York: Riverhead Books, 2017), 133. See Whiteson where he says: "At every moment in the past, the universe has less entropy (more order) than it does now, all the way back to the moment of the Big Bang . . . This initial condition of the universe, when entropy was lowest, determines how much time there is between the birth and heat death of the universe. If the universe had begun with a huge amount of disorder, there would not be much time left before the heat death. In our case, it appears that the universe started out as very highly ordered, giving us a lot of time before we get to maximum entropy." 133.

complex life forms? The two (evolution and entropy—the second law) seem diametrically opposed. The answer is in looking at thermodynamics closely: The basic principle of thermodynamics is that energy tends to spread out. Dissipation of energy (heat) provides fuel for new life forms to evolve even as existing forms die off. In very simple and crude terms, there is a leap-frogging effect of death, life, death and so on. With this simple analogy a chain of events can be seen. Lets begin with the sources of energy.

Earth's ecosystem runs on energy and heat. Energy is derived first and foremost from the sun. Energy and heat are derived through fissures in the core of the earth as well. In addition, decaying matter provides energy as it is consumed by living beings. Here, this leap-frogging effect can be seen more clearly: decaying matter, whether it be a plant or living being, is the result of disorder of its physical system (entropy). While the dissipation of energy destroys one physical system it fuels another. This chain of events holds true whether we are speaking about simple organisms or complex life forms.

At base level one can envision simple life forms evolving into ever more complex life forms over time. In this way, it can be said, "Earth's whole ecosystem comprises organisms expending energy collectively, competing, and developing new forms."⁴⁸

Evolution is the consequence of natural selection. Natural selection is a process of elimination. Organisms and creatures that lack the ability to thrive

⁴⁸ William Nye, *Undeniable: Evolution and the Science of Creation*, ed. Corey S. Powell (New York: St. Martin's Griffin, 2015), 23. For full text where Nye argues contra-creationism, see "Creationism and the Second Law of Thermodynamics," 19-24. Here, Nye cites the Second Law as "a wonderful way to approach evolution." 22.

their environment die off altogether. Conversely, organisms (and their mutations) that are more effective at overcoming a hostile environment live on to propagate. Organisms or species that survive the entropic action of natural selection live on (including its various mutations) to reproduce with further modifications and diversity of species. The effect of this process is cumulative as diversification of life fills the biosphere. This is because natural selection occurs not in one locale, but in different areas of the ecosphere, what follows is an expansion of its effect, essentially filling the ecospace.⁴⁹ “Thus thermodynamics provides a explanation for the direction and rate of evolution.”⁵⁰ From this perspective, following the thermodynamic principle of energy spreading out, it can be said that life runs on energy, and thus evolution runs on energy.

Human Evolutionary Development

What has been said above with regard to natural selection, thermodynamics and evolution applies to human evolutionary development as well, thus there is no need to repeat it here. Rather, this section briefly focuses on human evolutionary development, sketching its trajectory from seven million years

⁴⁹ Keith R Skene, “Life’s a Gas: A Thermodynamic Theory of Biological Evolution,” www.mdpi.com/journal/entropy, Biosphere Research Institute, 5A The Den, Letham, Angus, DD8 2PY, UK, 2015. In this research paper Skene postulates a theory that within an ecosystem that moves towards maximizing energy, it follows that biological diversity likewise moves toward a maximum level of entropic production. The theory is that the expanse of life into the biosphere is commensurate with the second law of thermodynamics.

⁵⁰ Ibid.

ago to present. A good place to start is in acknowledging the advancements made in twenty-first century research of human evolution.

With the advent of genome research revealing the complete DNA sequence of organisms it is now possible to determine how organisms develop and function.⁵¹ The genome of each species contains billions of bits of information in DNA, which in turn reveals how the genome evolved. This, combined with fossil records provides a record of human evolution. With such evidence “[i]t can now be justifiably said that we have more evidence of human evolution than for evolution of any other species” (Italicized type authors).⁵² How did humans get here, and to what or whom are we related?

To answer the above we have to go back about seven million years to a time of hominin relatives (yes, we are related, as we shall see).⁵³ The oldest pre – and early human fossils are found in Africa. Human DNA confirms Africa as our place of birth, so to speak.⁵⁴ Although an incomplete picture, there is enough evidence (fossils and DNA) to point the way back to an “evolutionary picture of our distant humanlike relatives.”⁵⁵

Hominin species are categorized into four groups (too numerous to list subspecies of each group). The primary groups are: Early Hominins (7 – 3.9

⁵¹ Daniel J. Fairbanks, *Evolving: The Human Effect and Why It Matters* (Amherst, NY: Prometheus Books, 2012), 25.

⁵² Ibid., 25.

⁵³ Ibid., 294. Hominin is “Any species within the hominin clade, which includes humans and their extinct relatives that lived since their ancestral lineage diverged from the panin clade, the lineage leading to the common chimpanzee and bonobo.” Hominid is, “Any species classified in the family Hominade, which includes humans and great apes, as well as their extinct relatives dating back to the common ancestors of humans and great apes.”

⁵⁴ Ibid., 75.

⁵⁵ Ibid., 75.

million years ago), Australopithecines (4.17 – 1.78 mya), Robusts (2.8 – 1.4 mya), and genus *Homo* (1.9 – 0.2 mya). The robust and genus *Homo* (the latter two groups) “diverged from common australopithecine ancestry about two million years ago in Africa.”⁵⁶ There is considerable overlapping of groups which points to diversity and complexity of evolutionary development in shared ecospace. The fourth group (genus *Homo*) is the human group. Genus *Homo* evolved in Africa beginning about two million years ago. What makes the above interesting is that *Robusts* and *Homo genus* (early humans) each diverged from the *australopithecines*, which means they share a common family tree before splitting off and diverging into two separate groups. This suggests early common ancestry with other species in evolutionary history of humans. Additionally, there was diversity within the *Homo* species. Fossil remains of the three oldest *Homo* species have been found from northern Africa to the southern tip suggesting much migration. The three groups are: *Homo erectus*, *Homo habilis*, and *Homo rudolfensis*. Based upon comparison of anatomical features of early *Homo* species to *australopithecines* it is believed that a gradual transition occurred from *australopithecines* to early humans.

While the robust group (labeled as such because of their size and strength) suffered extinction in Africa, the latter *Homo genus* (which includes early and modern humans) migrated throughout and beyond Africa.

⁵⁶ Ibid., 77.

About two million years ago migration of Homo groups out of Africa began to occur, first beginning with the Arabian Peninsula, then migrating to the Middle East and Asia, and some to Southeast Asia.⁵⁷ A second wave of migration took place about 800,000 years ago across the Straits of Gibraltar to the area of Morocco and Spain.⁵⁸ Fossils of a species named *Homo heidelbergensis* have been found throughout Europe dating 700,000 to 200,000 years ago.⁵⁹ It is believed that Neanderthals evolved from *Homo heidelbergensis* in Western Europe about 200,000 to 175,000 years ago. Much is known about Neanderthal anatomy, tools, clothing, and communities. Although evidence shows strong similarity to humans, *Homo sapiens* did not descend from them.⁶⁰ Nevertheless, comparison of Neanderthal and human DNA suggests that human-Neanderthal mating took place soon after early migration out of Africa. What is puzzling is why during the same time period humans proliferated and colonized much of the world, Neanderthals became extinct.

While the above is brief, it is meant to show that humans did not evolve from a singular, isolated ancestral tree, but rather, belong to a group of hominins that have evolved gradually over millions of years. The splitting and diverging into groups and sub-species of groups provides further evidence of humans sharing common evolutionary history with earlier, and competing species of hominins. Eventually, through the process of evolution

⁵⁷ Ibid., 88-89.

⁵⁸ Ibid., 89.

⁵⁹ Ibid., 89.

⁶⁰ Ibid., 91.

Homo sapiens emerged whereas other species were eliminated. This will become an important factor to keep in mind throughout the pages of this study, particularly as concerns first parents, original sin, evolutionary traits and human responsibility for personal and corporate sin (chapter three).

Futility of the Universe

In the above sections we have discussed evolution of the universe in terms of inflation and Big Bang cosmology as well as the Anthropic Principle and life in the universe. Furthermore, the second law of thermodynamics was cited as a universal law that is central to cosmological and biological evolutionary development. Last, we touched upon human evolutionary development, all of which is part and parcel of the full panorama of evolution, from big bang to death of the universe. This leaves us in a bit of a conundrum, and in fact leads to the crux of this study: resurrection.

The science cited in evolution of the cosmos, including life flourishing on Earth, is the same science that points to the end of the universe. Accordingly, it cannot be ignored. Russell expresses this sentiment where he writes:

The beginning of our universe at $t=0$ (the “big bang”) and the anthropic principle as a response to the universe’s fine-tuning for life are deeply consonant with the doctrine of creation ex nihilo (creation out of nothing). In the background, though, has been clear “dissonance” that would eventually need to be addressed thoroughly: if we welcome $t=0$ and the anthropic principle into the dialogue with theology we cannot ignore the challenge raised by the “freeze or fry” scenarios to Christian eschatology.⁶¹

⁶¹ Russell, *Time in Eternity*, 2-3.

As the universe continues to expand, and as entropy continues to increase with time, the disorder of the universe will reach its maximum. This is a given, a law of nature, and predicts *futility of the universe*.

Recent cosmology points to two prospects, that being “an endless expansion and exponentially decreasing temperature (freeze) or inevitable recontraction and exponentially increasing temperature (“fry”).⁶² Although it cannot be stated with absolute certainty, according to current scientific observation of the rate of expansion, the universe appears to be heading toward cosmic freeze. In fact, the rate of expansion is not slowing down, but is speeding up. This is consonant with an *open universe* model.⁶³ On this matter Stephen Hawkins says:

If the universe is open, it will continue to cool and expand forever. All traces of its early structure, from galaxies to living organisms to dust, will vanish without a trace, never to recur again.⁶⁴

Conversely, a *closed* universe model does not offer much hope either. Here, the cosmos expands to a finite size after initial expansion of 100 billion years and then retracts to a singularity of zero and infinite temperature (*big crunch*).⁶⁵ There is a third, *flat* model, one in which the universe expands forever, albeit it at a slower rate than the *open* model.

Regardless of models, be it continually expanding (*open*) or contracting (*closed*), scientific prediction is that in 5 billion years life will cease to exist

⁶² Ibid., 33.

⁶³ Ibid., 59. For more on expansion of the universe see Russell’s discussion in “The Challenge of Scientific Cosmology” in *Time in Eternity* with and accompanying diagram of Inflationary Big Bang Cosmology, 56-61.

⁶⁴ Hawking, “Eschatology and Cosmology,” *Time in Eternity*, 61.

⁶⁵ Russell, *Cosmology: From Alpha to Omega*, 282.

on earth, “the universe will darken as stars like ours turn into dwarf stars, and in the far future, all complex states of matter decay into elementary particles.”⁶⁶ From a question of Christian eschatology the above raises a serious challenges to the Christian narrative of God’s providential care of the universe, indeed questioning whether an eternal future is possible. As Pannenburg put it: “[I]f the Big Bang scenarios are correct, they could well represent a falsification of a Christian eschatology.”⁶⁷

Given the above, what are we to think? If extinction of the universe is a scientific prediction, then what are we to believe concerning Revelation 21 and the new heaven and new earth? From an eschatological point of view our concern is with this universe only, its present and future state. To quote Russell again, “Now if God is to transform the universe, it follows that God must have created it in a way that is transformable.”⁶⁸ Thus, if we are to consider its *transformability* we must understand what the stakes are, that being, overcoming cosmic death. This in essence is the crux of this study, overcoming death, ours and the universe’s.

⁶⁶ Ibid., 282.

⁶⁷ Pannenburg, *Cosmology: From Alpha to Omega*, 282.

⁶⁸ Russell, *Eschatology and Scientific Cosmology: From Conflict to Interaction* (Center for Theological Inquiry), January 2016. 26.

We began this section by drawing a scientific picture of the universe. From nothing, the universe appeared, its first instantiation being the Big Bang. From there the universe expanded until it is now observed. The Anthropic Principle points to a finely balanced ratio of matter and expansion rate in order for precise conditions for life to have emerged in the cosmos. In the previous section (A Biblical Picture of the World) biblical narratives of Jesus' resurrection and subsequent appearances were cited as examples of continuity and discontinuity. Connections to the new heaven and new earth were made. In addressing futility of the universe the scientific prognosis for the future does not point to a new heaven and new earth, but to the end; cosmic freeze.

In light of the above, Russell's statement that science has something of importance to say to theology cannot be taken lightly. On the other hand, considering the scientific prognosis for the end of the world, that theology also has something of importance to say to science is not only an understatement, it is the rock that the Christianity is built on: the rock is Jesus Christ and his resurrection from the dead. All hope for a future rests on resurrection and the implications this has for physical life not apart from, but emerging (transformed) from the present universe.

CHAPTER 2

COMFORT, RESURRECTION & BELONGING

Q1, 45, 57 & 58

Question #1

Q: What is your only comfort in life and in death?

A: That I am not my own, but belong body and soul, in life and in death to my faithful Savior, Jesus Christ.

He has fully paid for all my sins with his precious blood, and has set me free from the tyranny of the devil. He also watches over me in such a way that not a hair can fall from my head without the will of my Father in heaven: in fact, all things must work together for my salvation.

Because I belong to him, Christ, by his Holy Spirit, assures me of eternal life and he makes me wholeheartedly willing and ready from now on to live for him

Belonging to Christ in Life & in Death

Q1. What is your only comfort in life and in death?

A. First stanza

That I am not my own, but belong – body and soul, in life and in death – to my faithful Savior, Jesus Christ.

I Am Not My Own: A 21st Century View

What does it mean to say that *I am not my own* when we are bombarded with message after message that tells us the opposite; it is all about *Me*. Individualism is *sacrosanct*, or so we are to believe. Can the Heidelberg's claim be anything more than romanticism in our age? What happens when we set out to take such a claim seriously, determined to believe that we truly are not our own, rather we are part of

something much bigger, all of which is Christ's? What happens to comfort, when we understand that long before images of Adam and Eve or Cain and Able sprang from the inspiration of the biblical writers, *Homo sapiens* emerged from the crucible of evolution? God brought humans and myriads of other creatures, from there to here, long before the scattering of humanity to the far ends of the earth. Our story is not only about belonging to Christ, but belonging in a particular age, one with a 21st century world-view. How might the catechism fare in our age? The following explores that very question.

The Inseparability of Comfort, Death & Resurrection

The first question of the Heidelberg Catechism is the seed of all questions to follow as it points to the good news of the gospel. Though not a single word is uttered about the resurrection, Q1 must be read in light of it. When we speak of comfort, resurrection cannot be far behind. More than a sign or symbol, resurrection is the coming to be of all that will be, it is the fulfillment of what has already happened in Jesus Christ. Thomas Torrance sums it up well in the following:

Everything in the Christian gospel, now regarded in the light of Easter, was seen to pivot finally upon the empty tomb – that Jesus arose in body, arose as very man in the fullness and integrity of his human nature, but human nature which through the Spirit of holiness has been stripped of corroding forces of corruption and clad in the incorruptible garment of deathlessness.⁶⁹

All that haunts humanity and unfulfilled lives, all that plagues the fruitfulness of being (illness and disease), all that wages uncertainty and havoc (natural

⁶⁹ Thomas F. Torrance, "Incarnation and Resurrection in the Theology of Thomas F. Torrance" in *Incarnation and Resurrection: Toward a Contemporary Understanding*, ed. Paul D. Molnar (Grand Rapids: Wm. B. Eerdmans Publishing Co., 2007), 117.

disasters), and all that wages horror (aggression and injustice), is dissolved in the Easter event. In the resurrection of Jesus time and space are transcended. It is here where the believer finds real comfort, for we belong to the risen Christ in life, in death, and *after* death. Resurrection is more than life *relived*; it is fulfillment of life as God intends for us to have it.

When speaking of comfort in life it is done so with hope in Christ, believing that as he was resurrected to new life, so too will we. Death cannot hold us captive. Only in light of Christ's resurrection does the question make sense, only with an eschatological view toward eternity can we say with comfort and assurance, *I am not my own, but belong body and soul, in life and in death to my faithful Savior, Jesus Christ*. It is against the specter of death that the benefit of Christ's resurrection is not a distant proposition, but rather is felt in the immediacy of this lifetime. This means that even now, death must be reinterpreted. Instead of being at odds with the Creator, tension between life and death is better understood as part of the evolutionary process as creation moves toward final consummation. To quote Russell:

[T]he 3.8 billion years of biological evolution on earth is God's way of creating life . . . Thus God not only creates but guides and directs the evolution of life towards the fulfilling of God's overall, eschatological, purposes.⁷⁰

If biological evolution is God's way of creating life, then resurrection must be understood as the hinge upon which life and death turn, not as adversaries, but as

⁷⁰ Russell, "Evolution is the Way God Did It!" in *Evolution From Creation to New Creation: Conflict, Conversation, and Convergence*, eds. Ted Peters and Martinez Hewlett (Nashville: Abingdon Press, 2003), 150-155.

co-dependent companions in God's overarching eschatological purpose for creation. Though difficult for the human heart and mind to fathom, God says YES to the temporality of death in order that a final decree of eternal YES may be given to life.

Ultimately, the physicality of creation, inclusive of biological evolution is taken up in the resurrection of Jesus Christ and transformed into a new creation. In light of Q1 and comfort, it is in the physicality of flesh and bone that we belong to Christ in life and in death not as an end, but in continuity with a future.

It is only within the context of the imperishable post-resurrected body of Jesus Christ that the full contour of cosmological and biological evolutionary history is theologically properly grounded. It is in continuity of present and future that Christ has overcome death, not only human biological death, but cosmological death as well. The latter is crucial, as in order for the human being to *belong* there must be something to belong to, there must be a sphere in which humanity can function and love. The eschaton does not point toward a gnostic future, but rather the physicality of a new creation wherein we live, thrive and worship God with imperishable (transformed) bodies.

In retrospect, an alternative answer to the first stanza of the catechism might be to say:

Q1. *Alternative Answer*

That I am not my own, but belong to my faithful Savior, Jesus Christ, not in this lifetime only, but eternally, having escaped death in resurrection with him.

Resurrection, Belonging & Salvation

Thus far a connection has been made between the physicality of the universe and the body of believers. Humans are not body-less creatures, but are physical beings subject to the laws of physics not apart from, but within a cosmic scope of creation. Humans (and all creatures) are not saved apart from, but within the cosmos on the day of the general resurrection.

Since the beginning of time God has been drawing creation toward its end, the new heaven and new earth. It is against the backdrop of God's patient work, creating an environment open to, and then sustaining life within the parameters of evolution, chance, and mutation that species emerged, inclusive of hominids evolved from primitive creatures to complex *Homo-sapiens*. All such life is solely due to God's providential care, providing not only raw material, but also the means by which matter takes shape, inclusive of living organisms of which the human being is the most complex. As such, our *belonging body and soul, in life and in death to our faithful Savior* is best understood in the full panorama of *Homo sapiens* journey from primitive being to sentient God-conscious humanity. This leads to a question concerning resurrection and belonging, that being, who exactly belongs to Christ?

From the perspective of this study, the answer to the above question is that all humanity from the beginning to end of time belongs to Christ. This is based on God electing the cosmos and all in it to God's self through Jesus Christ, that is, "in Christ God was reconciling the world to himself, not counting their trespasses against them ..." (2 Corinthians 5:19). The cosmic Christology of Ephesians speaks of a plan in the fullness of time to unite all things in him, things in heaven and things on earth (Eph.

1:10), as does Colossians where all things, whether on earth or in heaven are reconciled to him by the blood of his cross (Col. 1:20). In context of cosmological resurrection, *all things* must be understood in terms of cosmic salvation and a transformed universe, the new heaven and new earth.

It has been stressed that humanity is not saved apart from, but within the physicality of the universe, thus salvation is cosmic and universal. It is in this context that the cosmic theology of Jürgen Moltmann undergirds the eschatological and soteriological outlook of this study. The following quote by Moltmann speaks to both the cosmic and universal tone of salvation:

The resurrection of Christ manifests that universal rejection has been overcome by election, which applies equally universally to all human beings. Predestination does not mean a symmetry of Yes and No, electing and rejecting; it means the a-symmetry of a Yes, which proceeds out of a confuted No. Because Christ has borne 'the sins of the world' and the whole rejection of the cross, all human beings are in Christ 'objectively' reconciled, whether they know it or not.⁷¹

It is in Christ reconciling the world to himself through his death where resurrection has *all* people of all times in view. Universalism, as I am applying it refers to diversity of peoples and plurality of societies in pre-history, ancient, and present time. This is not to imply that in the vast number of peoples not one will be lost; only that in God's sovereign freedom there is the potential for all to be saved. This naturally leads to the question concerning of what benefit is it to the Christian in belonging to Christ if salvation is open to all. This is best addressed in context of baptism.

⁷¹ Moltmann, *The Coming of God*, 249.

The Distinctiveness of Belonging & Baptism

While all belong to Christ, not all belong in the same way. Traditionally, baptism signifies the distinctiveness of Christian belonging. More particularly, it is understood as being incorporated into the body of Christ. There is value and meaning in baptism that is unique to the Christian alone. Baptism is an initiation into the life of Christ as well as into the church where Christ speaks through his Word and gathers believers around the Eucharistic Table where he makes himself present. While all belong to Christ, only Christians share in this benefit. The benefit of Christ initiated in baptism is one of dying with him in the baptismal waters so as to rise with him in new life. "That is why baptism is once for all, and essentially unrepeatable, just because it symbolizes as continual dying-with-Christ and rising-with-him."⁷² Baptism prefigures new life to come whereupon the old has passed away as the new is gathered together in Christ.

While all peoples of all times share in the benefit of Christ's resurrection for a future time, it is Christians who share the benefit of Christ in a unique way in this present time. The former are reconciled in Christ though they do not know it, whereas the latter are reconciled in Christ and knowingly share the good news of salvation, peace, and at-one-ment with God. "Baptism is primarily a sign not of human action toward God, but of God's actions toward humans, and thus of divine grace."⁷³ According to Oscar Cullmann, "The decisive general baptism for all is

⁷² Moltmann, *The Coming of God*, 233.

⁷³ Jan Rohls, *Reformed Confessions: Theology From Zurich to Barmen* (Louisville: Westminster John Knox Press, 1987) 206.

achieved at Golgotha . . .”⁷⁴ From the perspective of this study, this opens up decisive ground whereby *all* of universalism and *all* of baptism share something in common, that being, *Golgotha* and the restoration of all things. In a similar way, Moltmann examines this line of thought in the following passage:

If we follow the method of providing christological answers for eschatological questions, then in trying to measure the breadth of Christian hope we must not wander off into far-off-realms, but must submerge ourselves in the depths of Christ’s death on the cross of Golgotha. It is only there that we find the certainty of reconciliation without limits, and true ground for the hope for ‘the restoration of all things’, for universal salvation, and for the world newly created to become the eternal kingdom.⁷⁵

Here it is not a question of less, but more, as both universalism and baptism share in the benefits of Christ. Nevertheless, as concerns the distinctiveness of Christianity, the One who is to judge is the same One who reconciles all things to himself, and is the same into whom Christians are incorporated through baptism. In every respect this is a comfort unique to the Christian.

I have said that not a single word about resurrection is uttered in Q1, as such, the above topics have been indirectly drawn into conversation with it; the opposite is true of Q45, 57 and 58. Here, resurrection is addressed in context of benefit and comfort. What is implied in Q1 becomes explicit in questions 45, 57 and 58, which address resurrection and eternal life.

⁷⁴ Oscar Cullmann, *Baptism in the New Testament: Studies in Biblical Theology* (London:SCM Press LTD, 1950), 30.

⁷⁵ Moltmann, *The Coming of God*, 250.

COSMOLOGICAL RESURRECTION IN JESUS CHRIST

Reading Q45, 57 & 58 in Context of Resurrection & Q1

Q45. How does Christ's resurrection benefit us?

- A. First, by his resurrection he has overcome death, so that he might make us share in the righteousness he obtained for us by his death.

Second, by his power we too are already raised to a new life.

Third, Christ's resurrection is a sure pledge to us of our blessed resurrection.

Whereas Q1 asks about comfort in life and death, but is silent about resurrection,

Q45 asks a similar question in direct connection with the resurrection of Christ.

Whereas Q1 addresses comfort, Q45 addresses benefit: *How does Christ's resurrection benefit us?* Though the questions are different, both have to do with freedom from death through Jesus Christ. In this sense Q1 and Q45 are complimentary questions. However, unlike Q1, no alternative answer is necessary here, as the second stanza of Q45 reads; *by his power we too are raised to new life* (in Jesus Christ).

The bodily resurrection of Jesus Christ has been cited as reason for hope that we too will be resurrected in the context of cosmological transformation. Immediately, beginning with the catechism's response to the question the reader is confronted with a scientifically impossible proposition; *Christ has overcome death*.

In light of what has been said thus far, what do these questions mean to us today? Given what present-day science reveals about ourselves, and the universe, we may give further consideration to how Christ's resurrection benefits the believer. How the universe operates within the parameters of science is not separate and apart from the resurrection, rather it is central to it, right down to the cells of Jesus' body. Scripture testifies to the raising of Jesus from the dead not outside of creation, but within it. The nature of Jesus' body in terms of matter and laws of physics was not a concern of the catechism, only that the tomb was empty and that the Lord had risen. The latter is the crux of the Easter event and reason for Christian hope for a future. In this respect, in light of science and theology there is every reason to read the biblical narrative in context of bodily resurrection and transformation of the universe. As said at the onset of this study, in response to the scientific prognosis of futility of the universe, hope for a future is based on the bodily resurrection of Jesus Christ as transformed matter with corresponding change in the laws of physics. Essentially, Jesus Christ has overcome death, not only his own, but that of the universe. But, on what kind of bold assertion can hope for such a future be predicated? Is this a case of theology alone, a kind of spiritual hope, or is there reason to suggest that from the side of science a change in the laws of physics is a possibility? Briefly, this will be considered in the next section in the context of empirical research.

Resurrection & Corresponding Changes in the Laws of Physics

Note: A review of “Cosmological Evolution & the Role of Entropy & the Second Law of Thermodynamics,” as well as “Biological Evolution & the Role of Entropy & the Second Law of Thermodynamics,” chapter 1 will be helpful in connection with this section.

The resurrection of Jesus’ body has no parallel in nature, thus there is no comparison to draw on. The assertion that matter and the laws of physics had changed in Christ’s bodily resurrection (the premise of this study) is purely speculative. In addition, it can rightfully be argued that the second law has thus far proven to hold true, both cosmologically and biologically. Nevertheless, as cogent as the second law is, it is based on statistical probability, thus unexpected outcomes cannot be ruled out.

Working with the only science we have, provisional as it may be, if Jesus’ body were to be imperishable, and likewise the cosmos following suit, then a change in thermodynamics would seem necessary, (or at the very least warrant strong consideration). So how far fetched a possibility is this? Is this a case of theology having something to say to science, but science having nothing yet (in the affirmative) to say to theology?

While the following by no means is intended as evidence to prove what transpired at the resurrection of Jesus, it nevertheless is a scientific, testable theory that suggests that a change in the conditions under which the laws of physics apply could altar the outcome.

In a recent study (2017) conducted in association with the Brazilian National Institute of Science and Technology for Quantum Information, a reversal of the

second law of thermodynamics was observed.⁷⁶ According to the second law, entropy increases over time, evolving from an initial state of low entropy to one of high entropy. For example, heat flows from hot to cold. This directional flow is called the *arrow of time*. However, under experimental conditions it was demonstrated that a reversal of entropic conditions, that is, flowing from *cold to hot* was possible. As a result of the findings, it was found that “the arrow of time is not an absolute but a relative concept that depends on the choice of conditions.”⁷⁷ The question remains as to what consequences this might have for the cosmological arrow of time. This is particularly insightful in light of the resurrection of Jesus, as well as transformation of the universe, the new heaven and new earth.

While the above does not prove the resurrection of Jesus (that was not the intention), it does suggest that a reversal of entropy and the second law of thermodynamics is not a scientific impossibility. Therefore, it can be said that bodily and cosmological resurrection is more than just theological speculation; rather, it is

⁷⁶ Note: Information for the above was cited in, “Reversing the Thermodynamic Arrow of Time Using Quantum Correlation,” eds. Kaonan Micadei, John P. S. Peterson, Alexandre M. Souza, Roberto S. Sarthour, Ivan S. Oliveira, Gabriel T. Landi, Tiago B. Batalhão, Roberto M. Serra, Eric Lutz. 9 Nov. 2017.

The abstract for the articles reads as follows:

The second law permits the prediction of the direction of natural processes, thus defining a thermodynamic arrow of time. However, standard thermodynamics presupposes the absence of initial correlations between interacting systems. We here experimentally demonstrate the reversal of the arrow of time for two initially quantum correlated spins-1/2, prepared in local thermal states at different temperatures, employing a Nuclear Magnetic Resonance setup. We observe a spontaneous heat flow from the cold to the hot system. This process is enabled by a trade off between correlations and entropy that we quantify with information-theoretical quantities.

For full text see Cornell University Library, Reverse Entropy Aka, Reverse Time: <https://arxiv.org/abs/1711.03323>

⁷⁷ Ibid., 4.

speculation that does not violate the bounds of science. Of course, going from a quantum level of testing in less than a millisecond, to the bodily resurrection of Jesus is quite a leap. However, it is not beyond reason to conceive of cosmological resurrection not in a flash, like the resurrection of Jesus, but from the bottom up at a microscopic level over time. In this realm quantum physics opens a window of the universe at the subatomic level.

In light of God sustaining and transforming the universe Robert Russell proposes the possibility of God working at the subatomic level, in what he calls “bottom up,” *non-interventionist objective divine action* (NIODA). The theory is that God operates at the subatomic realm of nature. If this is the case, then it could be said that God acts at the *quantum* level (guiding and sustaining nature) whereas God’s action is indirect at the *macroscopic* level where nature evolves according to the laws of physics. Russell puts it this way:

God’s action in light of quantum physics would be mediated through and co-operative with natural causes: It would involve ‘a continuous creative (divine) presence within each quantum event, co-determining the outcome of these elementary physical processes.’⁷⁸

This presupposes billions of years of evolution from one state to another, whereas the body of Jesus is transformed over the course of three days. This being the case, transformation of Jesus’ body was direct action at the macroscopic level. Might the transformation of Jesus’ body represent something akin to a microcosm made manifest within a macrocosm? This would allow us to consider the resurrection of

⁷⁸ Russell, *Cosmology: From Alpha to Omega*, 156. For full text where Russell builds a case for God acting at the microscopic level see, “Non-interventionist Divine Action,” chapter five, 156-211. For text more specific to the above see 155-157.

Jesus not apart from, but within the context of physics. The importance of this cannot be overstated, as the thesis of this study is that if the resurrection of Jesus was possible then resurrection must be possible for the universe as well, not by magic, but in serious consideration of nature, matter, and the laws that God has governed the universe with for billions of years. Russell sees God working at the subatomic level in quantum events in connection with the process of *creatio continua* (continuing creation).⁷⁹ In continuity with creation, the question can be raised as to whether these quantum events will extend beyond the realm of *creatio continua*, and into the realm of *creatio ex vetere* (creation from existing matter)?

While we can ask the above questions, at some point we concede that we have reached the limits of science. God is wholly other, we do not know what we cannot know; we can only speculate. We believe, not depending on science, but on faith that Jesus overcame death. In this case, it is a matter of theology having something to say to science, but as has been stated above, not outside the bounds of science.

The Ramifications of Jesus Overcoming Death

What does it mean to say, “*by his resurrection he overcame death?*” For this to be possible, as suggested above, the 2nd law of thermodynamics and entropy had to be suspended or modified in some way so as to abolish death. Only in this way can the promise of Revelation 21 come true where it is said, “There will be no more death or mourning or crying or pain, for the old order of things has passed away.” In this respect an alternative answer to Q45 would greatly benefit from inclusion of

⁷⁹ Ibid., 168-169.

overcoming cosmic death, especially as the future of humanity has been so closely identified with integration of the universe in its physicality.

As an alternative response to the catechism, the issue of overcoming death in the cosmological sense is important, as the dichotomy between what science forecasts and what scripture promises cannot be more contrary. If we adhere to a literal interpretation of the resurrection narrative, (the stated position of this study) then we cannot ignore the parameters of science, as to do so undermines the magnitude of Christ's resurrection as a benefit to us. Death that Q45 speaks of overcoming pertains not only to Jesus, but to humanity as well, for the man Jesus was subject to the same laws of physics that we are. If we are to fully appreciate hypostatic union – the *fully human-fully divine* Jesus, then his humanity must be taken seriously, commensurate with all physical limitations. Otherwise the death of our Lord would suffer a loss of meaning when divorced from an empirical understanding of the universe. Following this line of thought the bodily resurrection of Jesus can be understood as a microcosm (new matter – new creation) existing within a macrocosm (old matter – old creation). Believing the resurrection narrative to be true, what happened to Jesus must happen to the entire cosmos if there is to be everlasting life.

COMFORT & EVERLASTING LIFE

Reading Q57 & 58 as a Pair in Context of Resurrection & Q1

Q57. How does “the resurrection of the body” comfort you?

- A. Not only will my soul be taken after this life to Christ its head, but also my very flesh will be raised by the power of Christ, reunited with my soul, and made like Christ’s glorious body.

Q58. How does the article concerning “life everlasting comfort you?

- A. Even as I already now experience in my heart the beginning of eternal joy, so after this life I will have perfect blessedness such as no eye has seen, no ear has heard, no human heart has ever imagined: blessedness in which to praise God forever!

A longstanding practice in HC commentary has been to read Q57 and 58 as a pair. It makes perfect sense to continue to do so. Like Q45, resurrection is the stated subject of Q57 and 58. Likewise we notice continuity between Q1, 57 and 58 where comfort is a theme in all three. In this respect Q57 and 58 amplify Q1. Whereas the answer to Q1 left resurrection unstated, Q57 and 58 take it full on, raising the prospect of resurrection not only to the level of “perfect blessedness,” but also comfort derived from “resurrection of the body” (Q57), and to “life everlasting” (Q58).

Thus the picture that Q1 begins to paint, Q45, 57 and 58 complete. Yet as we have seen, in reading the Heidelberg Catechism through the lens of mutual interaction of science and theology, the picture is capable of changing. The way we see and

perceive the world and scripture leaves room for renewed vision, or to put it another way, faith that seeks understanding.

As concerns Q57 and resurrection of the body, we have already spoken about this in the context of creation, matter, and new creation *ex vetere*. It should be noted that Q57 differs from Q45 in that Q57 refers to resurrection of the believer's body whereas Q45 speaks to the resurrection of Jesus Christ. What has been said with regard to cosmological resurrection and the believer's body in the context of Q45 applies to Q57 and 58 as well.

While the question of body, flesh, and matter, has been considered, something needs to be said about the soul in connection with Q57, as the catechism speaks not only of the body, but also the soul taken to Christ its head.

BODY, SOUL & LIFE EVERLASTING

Q's 57 & 58

Q57. How does, "the resurrection of the body" comfort you?

- A.** Not only will my soul be taken immediately after this life to Christ its head, but also my very flesh will be raised by the power of Christ, reunited with my soul, and made like Christ's glorious body.

Q57: Resurrection, Comfort & the Soul

In context of resurrection, the catechism speaks not only of the body raised by the power of Christ, but also the soul taken up to Christ its head. A question that follows

is; what is a soul? From the perspective of this study the model of soul that I am putting forth is one that is consonant with the Hebrew *nephesh*, which refers to the whole person, one embodied, living human being complete with life history. For example, Genesis 2:7 the *soul* (*nephesh* – נִפְשׁ) becomes a living being by God’s breathing (נִפְשׁ – life-soul) into the nostrils of man. Likewise in Genesis 35:18 (the death of Rachel in child labor) refers to end of life where the passage reads; *and it came to pass when her soul was going forth* (for she died).⁸⁰ *Nephesh* is often cited in passages calling for deliverance of one’s life (soul) from She’ol. Such is the case in Job 33 where in four instances alone redemption of the soul from the pit (She’ol) is cited.⁸¹

By contrast, the Greek understanding of the soul, *psyche* (ψυχή), consists of parts, not whole. From a Greek philosophical perspective (which influenced New Testament writing) the question wasn’t whether the make up of the human being was part or whole, rather the question was the *nature* of the parts.⁸² The Greek-English lexicon renders soul, *psyche* (ψυχή), as life, inner self, “a quality without which a body is physically dead . . . or that which is integral to be a person beyond

⁸⁰ *The Brown-Driver-Briggs Hebrew and English Lexicon*, eds., F. Brown, S. Driver and C. Briggs (Peabody MA: Hendrickson Publishing, 2008) 659. Accordingly, the lexicon defines *nephesh* (נִפְשׁ) as soul, living being, self, person, that which breathes. For a full range of meanings from the root word נִפְשׁ and corresponding passages see *BDB* 659-661.

⁸¹ *Ibid.*, See Job 33:18, 22, 28, 30 as well as Is. 38:17, 659. *In addition to life Nephesh* can also take on the meaning of blood, desire, or reference to emotions and feelings, or occasionally for mental acts. 661.

⁸² For example, Plato believed in immortality of the soul, that life of the soul existed before the body and continued to exist after death of the body. Home for the immortal soul was a realm that Plato referred to as, “the Kingdom of Ideas,” or the “World of Forms. Cited in *Roots of Wisdom: A Tapestry of Philosophical Traditions*, ed. Hellen Buss Mitchell (CT: Stamford: Cengage Learning Center, 2015), 30, 151.

mere physical function.”⁸³ In this respect, the Greek philosophical understanding of the human being differs sharply from that of the Hebrews.

Why is the above important? From the perspective of this study, the *soul*, as I am using it, is a metaphor for what it means to be a human being, including life history (similar to the Hebrew *nephesh*). In keeping with the methodology of mutual interaction of science and theology the Hebrew concept of the soul corresponds nicely with a contemporary understanding of the human being as a biologically-neurologically unified creature. Whereas animation and stimulation of the body in terms of locomotion, appetite and emotion were formerly attributed to the soul, it is now re-directed to the brain.

In her book, *Bodies and Souls, or Spirited Bodies?* Nancey Murphy argues for a position of *physicalism*, which can be interpreted as a whole, undivided body (person). Her thesis is, “we are our bodies – there is no additional metaphysical element such as a mind or soul or spirit.”⁸⁴ This is further elaborated where she says:

[A]ll of the human capacities once attributed to the mind or soul are now being fruitfully studied as brain processes – or, more accurately, I should say, processes involving the brain, the rest of the nervous system and other bodily systems, all interacting with the socio-cultural world.⁸⁵

⁸³ *The Concise Greek-English Lexicon of the New Testament*, ed. Frederick William Danker (Chicago: The University of Chicago Press, 2009), 388.

⁸⁴ Nancey Murphy, *Bodies and Souls, or Spirited Bodies?* (New York: Cambridge University Press, 2006), ix.

⁸⁵ *Ibid.*, 56.

Having redirected attributes of the soul to the brain, Murphy then, along the lines of Thomistic hierarchical understanding of the soul, re-contextualizes hierarchy in a biological-neurological framework where she says:

The physicalist thesis is that as we go up the hierarchy of increasingly complex organisms, all of their capacities once attributed to the soul will also turn out to be products of complex organization, rather than properties of a non-material entity.⁸⁶

In context of the above, it can be concluded that a dualist conception of body and soul not only is unnecessary, but also minimizes what science tells us about ourselves, and thus how God has created us. If the term soul must be used, I am using it in the sense that it refers to a whole, undivided person, inclusive of life history. It is the history of a person's life that is taken to God after death. This differs radically from the dualist interpretation of the body and soul as separate entities. All attributes formerly attributed to the soul are redirected to the brain as understood through the neurosciences. It is the body-brain function that stimulates our senses and animates the body. Inclusive of brain function is memory and life history in relation to the world around us, all of which constitutes human make up, what and who we are.

In the above, the question of dualism and the soul has been addressed. However, a question that remains is; if the soul is not a separate entity, then what is re-united with our body after resurrection? The answer to this is explored below.

⁸⁶ Ibid., 57.

Memory, Life History & the Divine Mind of God

From the Introduction through Chapter 2 a point that has been emphasized is that matter of the existing universe will be transformed into the new creation, inclusive of biological life on earth, not apart from, but in continuity with the new creation. As such, cosmological resurrection has been presented as being consonant with imperishable bodies *made like Christ's glorious body* (Q57). In continuity with resurrection of the body and transformed matter, the question arises; having interpreted the soul as a biological-neurological self as opposed to a separate entity, what happens when we die? It is possible that upon death the human being enters into a state of total unconsciousness. Unconsciousness is to be differentiated from *nothingness*, as nothingness suggests that there is no identity of the dead; that the dead simply vanish from history. This cannot be the case as God has predestined the world to resurrection through the Son. The possibility then exists that upon resurrection the full biological-neurological self, inclusive of memory and life history will be restored, albeit biologically imperishable. In such case there is no intermediate state. The dead are unconscious until raised. However, there is another possibility, one that like the first, acknowledges a scientific understanding of the human being, but also appeals to divine fellowship and the divine mind of God. By divine fellowship I mean God's desire to have intimacy with creation and most notably humanity. This is based on the history of God in the incarnation and well as the poetic narrative of Adam, Eve and God in the garden (Genesis 1 -3). It is this second possibility that I find preferable, and as such, is put forth in this study in connection with resurrection.

The Divine Mind of God & the Soul as an Information-Bearing Pattern

God remembers. Upon death our life history is stored in the mind of God later to be joined with our resurrected body. In this regard John Polkinghorne has developed a robust understanding of the soul as an “information-bearing pattern.” This is why he can say, “‘What I am’ is not simply carried by my body, but also by the nexus of relationships within which my life develops.”⁸⁷

If there is to be embodied personhood after resurrection, as well as a form of intimacy (whether we call it life or not) with God during the intermediate state between death and resurrection then the history of our life must not vanish as neurological functions give way to the 2nd law of thermodynamics. In keeping with mutual interaction of science and theology, Polkinghorne offers an intriguing way forward where he speaks not only of an *information-bearing pattern* (on the human side), but also of divine memory, meaning the divine mind of God (on God’s side).

Here, he makes a compelling argument grounded in the faithfulness of God:

[I]t seems an entirely coherent belief that the everlastingly faithful God will hold that pattern perfectly preserved in the divine memory, and then re-embodiment it in the ultimate divine eschatological act of resurrection at the last day, as new creation enters into the unfolding fullness of time.⁸⁸

In this vein I suggest the comfort of Q57 is the comfort of knowing that not only will our body be reconstituted from the raw material of this present cosmos, but just as

⁸⁷ Polkinghorne, “Eschatological Credibility” in *Resurrection: Theological and Scientific Assessments*, eds. Ted Peters, Robert John Russell and Michael Welker (Grand Rapids: William B. Eerdmans Publishing Co., 2002), 52.

⁸⁸ *Ibid.*, 52.

important, our life is not erased after death, it is not *another life*. Rather, it is life held safely in the divine mind of God until such time that our *nephesh-soul* (*our whole embodied being, inclusive of life history*) imbues and animates our new imperishable body complete with the history of who we are.

In light of what has been said, I suggest that it is entirely possible to provide an alternative answer to Q57 that incorporates elements of the scientific-philosophical conversation about body and soul. As such, omitting reference to the soul and replacing it with *memory of life* (as discussed) rectifies the problem of dualism embedded in the catechism. In this way the answer captures the essence of belonging to Christ while at the same time diminishing the idea that the soul has life apart from the body. In addition, consistent with transformation of matter, changing “Christ’s glorious body” to *Christ’s imperishable body* emphasizes transformation of the body (matter) resulting in eternal life. A full alternative answer might read as follows:

Q57. Alternative Answer

Not only will the memory and history of my life be taken to Christ upon death, but also by Christ’s power, at the moment of resurrection, the substance of my body will be transformed and made like Christ’s imperishable body whereupon I will live a fulfilled life.

Essentially, the alternative answer encapsulates everything that has been said thus far with regard to body, soul, memory, and material transformation.

LIFE EVERLASTING

Q58. How does the article concerning life everlasting comfort you?

- A.** Even as I already now experience in my heart the beginning of eternal joy, so after this life I will have perfect blessedness such as no eye has seen, no ear has heard, no human heart has ever imagined: blessedness in which to praise God forever!

Comfort & Life Everlasting

“Life everlasting” is post-resurrected life, yet it begins before then. Everlasting life begins at the moment of birth, and continues with life history of the whole life of the human being, from infant to old person. Death marks the end of mortal life, but at the same time makes way for a new beginning. As Cosmic Christ, all time, past, present, and future belong to him. It has been said that the life history of a person is held in the divine mind of God. Though this history is not life itself, it is a record and map of a specific, unique (me-you, I-thou) life. Q58 encapsulates the cosmic history that God has given to the world. This is history with purpose; God’s purpose for the world as it continues to unfold, reaching its goal in the new heaven and new earth. As such, one cannot separate the saving works of God throughout history as though they occur in unrelated epochs; together, as a unified act of God, time, creation and history march toward the final consummation that began with the bodily resurrection of Christ. Thus, consummation comes to a head in Q58, where together

with Q57 a hymn of joy is expressed in a doxological song of redemption, where *the perfect blessedness of human beings consists in praising God forever!*⁸⁹

The hymn of Q58 is the story of redemption. The canonic memory of the Bible as God is revealed through the Word must coincide not only with history, but also with the physicality of the world as we know it, lest we miss what God is doing as Creator-Redeemer. The *blessedness* for which God is praised is the blessedness of *this* world when it reaches final consummation. Only in this sense, in its completion is the term “good” fully realized.⁹⁰

Having said as much, an alternative answer would benefit greatly by addressing more than the self. The cosmological dimensions of resurrection and the resultant consummation of life (the new creation) must include reconciliation between all peoples. In addition, language that incorporates *new creation* does much to dispel any notion of “life everlasting” referring to heaven (or some ethereal place). This last is critical, as it is transformation of the universe that is to be stressed in light of Q58 and comfort. An alternative answer incorporating a full motif of the above might read as:

Q58. *Alternative Answer*

Even as I already now experience in my heart the beginning of eternal joy, upon resurrection and the new creation, all humanity will be

⁸⁹ Ernst-Habib, *But Why Are You Called a Christian*. On the question of blessedness see the full text where Ernst-Habib says, “The Heidelberg Catechism is very concrete and specific in its answer, which concurs with other central catechism’s of the Reformed tradition (such as the Westminster and Calvin’s Geneva, for example). The perfect blessedness of human beings, their ultimate goal and chief end, consists in praising God forever (see also question 6); maybe a somewhat eccentric thought for our time, which is so preoccupied with self-fulfillment, but certainly characteristically Reformed.” 97.

⁹⁰ Cited in the broader context of theodicy See Pannenberg in *The Groaning of Creation* where he is quoted as saying, “Only in the light of eschatological consummation may [the verdict] “very good” be said of our world as it is in its confusion and pain.” 16.

reconciled, having perfect blessedness such as no eye has seen, no ear has heard, no human heart has ever imagined: a blessedness in which we will praise God.

It was said above that Q58 encapsulates cosmic history that God has given to the world as it reaches its goal in the new heaven and new earth. In this respect, Q 58 and Q1 are a pair, as apart from the resurrection the Christian has no sure, everlasting comfort . As such, we may say that resurrection is the head of Christian eschatology, and thus belongs at the head of the catechism in discussion with Q1.

In this respect every Christ-event leading up to the resurrection is a prior event, whereas the resurrection is a new, final event in Jesus Christ for the world, one that begins at a precise historical moment in time while finding consummation in eschatological time. This last, eschatological time has to do with cosmic post-resurrection of the world, life everlasting. This is our sure comfort in life and in death.

Thus, when all parts make a whole, it can be said that together Q45, 57 and 58 form a grand exposition of Q&A 1, *Our Only Comfort*. We shall see what happens to comfort though, when all things do not seem quite right. The subject of the providence of God and care of the creature and creation will be explored in the following chapter in context of Q1.

CHAPTER 3

THE PROVIDENCE OF GOD

Part 1

Q1: THE PROVIDENCE OF GOD & THE PROBLEM OF (NATURAL) EVIL

God's providential care for creation is ongoing. God does not create *ex nihilo* only to abandon creation and let it run its course ungoverned. Rather, God's interaction with creation is continuous, drawing creation (inclusive of history and creatures) toward God's end for the world. In this way it is not the laws of physics as an independent entity that guides the universe. Rather, the laws of physics might be better understood as God's instrument for governing the universe according to the pleasure and will of God as Creator, Sustainer and Redeemer. Central to God's providential care for creation (which must not be separated from new creation) is the death and resurrection of Jesus Christ.

Up until this point Q1 has been addressed in terms of comfort as it relates to resurrection. Resurrection has been framed not only in personal terms, but also cosmological. It has been said that creation is in need of transformation, which can be interpreted as redemption from futility, (death of the universe). A question that follows is, why, has something gone wrong? The catechism wastes no time identifying the reason behind the world's problems; death, suffering, and decay are

the consequences of sin for which we deserve condemnation. Sin and misery, the subject of Q2, follows quickly on the heels of comfort in Q1. Note the text of Q2:

Q2. What must you know to live and die in the joy of this comfort?

A. Three things:

- first, how great my sin and misery are;
- second, how I am set free from all my sins and misery;
- third, how I am to thank God for such deliverance.

It is in response to sin that Q1 encompasses the full scope of woman and man living under the providential care of God, ascending from a state of misery to one of hope and assurance of salvation. If freedom from bondage of sin were all that Q1 addressed there would be no problem, it would end on a note of comfort only. However, this is not the case. As concerns the providence of God the second stanza in response to Q1 presents some difficulties. It reads as follows:

He has fully paid for my **sins** with his precious blood, and has set me free from the tyranny of the devil. *He also watches over me in such a way that not a hair can fall from my head without the will of my Father in heaven.* In fact, all things must work together for my **salvation**.

It is striking how theologically dense the answer is, as sin is addressed on one end and salvation on the other. Sandwiched in between the two is the question of providential care: *He also watches over me in such a way that not a hair can fall from my head without the will of my Father in heaven.*

In the first part of this chapter the providence of God and the problem of evil will be discussed in context of entropy and the second law of thermodynamics. In the second part the providence of God and the problem of sin in context of human

evolutionary development, moral consciousness will be discussed. In both cases distinctions will be made between a biblical and scientific world-view.

When the catechism speaks of the providence of God it presupposes a biblical world-view, and thus it is this *biblical* world that God watches over. The problem is, the world that God brought into existence from nothing (*ex nihilo*), inclusive of its cosmological and biological evolutionary history differs from the Bible's understanding of the world. While both world-views attest to creaturely suffering, death and decay, the reason and purpose for it differs. Whereas the biblical view identifies suffering and death as the consequences of sin, the scientific view identifies both of these with an evolutionary process that promotes life. Concerning the second, evolution, the question may be asked as to whether suffering, death, and decay as a necessary part of evolution constitutes a form of evil. In order to do both of these subjects justice, a brief overview of creation from the perspective of physics is necessary.

CREATION & THE LAWS OF PHYSICS

Before there was a universe, there was God. In the beginning the universe was a spec in space, the spec was space until it expanded exponentially into the cosmos. Concerning time, ($t=0$) the beginning of the universe is dated 13.7 billion years ago, a lot longer than the six-day biblical account. Yet just as certainly, it was (and continues to be) God's creation. God is the God of physics every bit as much as God is the God of speech creating the universe *ex nihilo*. The poetic language of the Bible

testifies to God's creative power in Genesis 1, "And God said, 'let there be light,' and there was light." Likewise, the language of physics has something to say, it tells a different story about the universe in its early moments through present.

The story physics tells begins with a universe (space) the size of a dot and an event called the big bang (see chapter one, "Cosmological Evolution: Inflationary & Big Bang Cosmology"). All mass, energy, and forces needed to create the universe was contained within this spec. Within 10^{-35} seconds after the big bang repulsive gravitational forces filled expanding space with radiation, matter, and antimatter. Within a trillionth of a second after the bang, space was filled with matter such as quarks and leptons followed by heavy particles called hadrons, which in turn produced protons and neutrons as well as other particles. A half million years later matter began to cluster together forming galaxies. Gradually the universe developed over billions of years into what it is now. For the universe to have evolved as it has, conditions in the first 10^{-35} seconds after the big bang had to be precise. In chapter one it was said that had conditions in the earliest moment of the universe been only slightly different there would be no story to tell, there would be no universe, as "all mass would have self-annihilated, leaving a cosmos made of photons and nothing else . . ." ⁹¹

Digressing from science for a moment, from a theological perspective, this *exactness* can be interpreted as the providence of God; it is God's ultra-fine care of the universe. It is a big-picture view, far more real in terms of what God has done than the catechism was able to imagine. The fine-tuned care of God *watching over*

⁹¹ Neil de Grasse Tyson, *Astrophysics For People in a Hurry*, 26.

me in such a way that not a hair can fall from my head . . . is replaced by God's fine-tuning of the universe and life that results from it.

Returning to science, the *anthropic principle* (see chapter one "Terms") refers conditions in the universe that had to have been present in order for life to emerge. In short, the physics of the universe had to have been fine-tuned in such a way that life was possible. On this subject Russell writes:

[T]he age of the universe must be consistent with the rate of stellar evolution, the production of the heavy elements in stars and the novae that spill these elements into the surrounding space, the birth of a second generation of stars and planets, the evolution of life on these planets. Hence, a much younger universe would not have produced life; a much older one would long since be barren and cooling.⁹²

God's providential care for the universe, including the creatures that would emerge over time, speaks of God's omnipotence (God's supernatural power bringing the universe into existence), it speaks of God's omniscience (God's infinite wisdom and foreknowledge of the conditions necessary for life), and of God's omnipresence (God was there before the beginning, at the beginning, and throughout all ages of the universe). In this way, God is not only creator, but also sustainer of creation.

God sustains the universe fundamentally through the law of physics, including the laws of thermodynamics which govern evolution of the universe, including biological life on earth.

The 2nd law of thermodynamics states that the overall disorder of the universe increases over time. The Bible tells a story about thorns, thistles and death entering a *fallen* world (Genesis 3). In Romans 8: 22 the apostle Paul

⁹² Russell, *Cosmology: From Alpha to Omega*, 47.

famously says, “For we know that the whole creation has been groaning together in pains of childbirth until now.” Evolution too, tells a story suffering, death, and decay, but this is an evolutionary fall upward, toward more complex life forms, including the elimination of life in the process (natural selection).

THE PROBLEM & NATURE OF EVIL

God and Natural Evil

The question explored here is whether the natural process of suffering and death intrinsic to evolution, natural selection and finitude of creaturely life constitute evil.

In his *Systematic Theology*, Wolfhart Pannenberg addresses the question of creaturely finitude. He writes:

The future toward which creative forms move in the duration of their existence has for them an ambivalent face. On the one hand, for the preservation, development and consummation of their nature, they are referred to a future in which they have little or no control, while on the other hand, since they are finite, the future threatens to end and dissolve their independent form.⁹³

Concerning finitude, Pannenberg cites the “thermodynamic principle of increased entropy” as the ultimate breaking down of energy and the universe.⁹⁴ Intrinsic to this process is the problem of evil and responsibility that the Creator bears for it.

⁹³ Wolfhart Pannenberg, *Systematic Theology: Volume II* (Grand Rapids: William B. Eerdmans Publishing, 1994), 96.

⁹⁴ *Ibid.*, 97.

Pannenberg addresses the problem, not by freeing it from the hands of the Creator, rather, by placing the problem of evil squarely in God's domain, turning it for the good, where he says, "In the hands of the Creator and his world government, of course, physical evil is a means to bring forth new forms."⁹⁵ Pannenberg's view is consonant with the work of Russell. He writes:

[A]lthough life and evolution cost the environment in terms of increased entropy, the value of life and indirectly the value of entropy as a necessary component to life cannot be dismissed . . . Through processes of physical evolution, the basis is ultimately laid for evolution of planets, some of which develop atmospheres and oceans and revolve at reasonable distances around moderate suns. In some of these cataclysmic processes enough energy is released to produce macromolecules and organic soup – the primordial womb of life. And in the case of one gentle green world the species, which evolved, includes humankind.⁹⁶

In line with Pannenberg and Russell, Southgate writes:

[T]he sort of universe that we have, in which complexity emerges in a process governed by thermodynamic necessity and Darwinian natural selection, and therefore by death, pain, predation, and self-assertion, is the only sort of universe that could give rise to the range, beauty, complexity, and diversity of creatures the Earth has produced (Italicized type the authors).⁹⁷

What is clear, and beyond debate, is that the evolutionary process of the universe is dependent upon the principle of thermodynamics. However, the question that may be asked is whether the principle itself can justifiably be labeled as evil. This is an important consideration as it is God the Creator who is responsible for governing the universe, and as we have seen, thermodynamics and entropy are integral to the order of God's governing. Broadening the question, can suffering and death of

⁹⁵ Ibid., 97.

⁹⁶ Russell, *Cosmology: From Alpha to Omega*, 237.

⁹⁷ Southgate, 29.

innocent creatures, particularly where it is disproportionate to life enjoyed, be justified as the work of a divine Creator, or is it simply evil? The question can be reversed as well; “Can God be justified in the face of a divinely created world that contains natural evil?”⁹⁸ The question is not easily resolved, if at all. Panneberg fleshes this out in the following statement:

So long as the world looks only at its uncompleted and unredeemed present on the one hand, and from the standpoint of its original emergence from the hands of the Creator on the other, the fact of evil and wickedness in the world remains an insoluble riddle and offense.⁹⁹

In reference to the above statement, distinction needs to be made between “wickedness” in the world as a result of human morally conscious decision making as opposed to natural evil. While the former is evil (as it is outside the purview of the Creator), the latter is a matter of debate.

The formal position of the study is that the 2nd law of thermodynamics, entropy and resulting disorder cannot be labeled as evil, for evil is a moral question. Both nature and science cannot be subjected to moral values, as nature exists independent of any such value. Likewise, science reports what it empirically observes; there is no moral value here either. As such, evil in nature does not exist. However, if not evil, then what can be said with regard to creaturely pain and suffering, for certainly this is not benign. Although not a panacea, the approach taken here seeks to bring resolution to the problem of evil by addressing it at two levels, the first being a question of terminology, the second being teleological.

⁹⁸ Ted Peters and Martinez Hewlett, *Evolution From Creation to New Creation: Conflict, Conversation, and Convergence* (Nashville: Abingdon Press, 2003), 206.

⁹⁹ Pannenberg, *Systematic Theology: Volume 2*, 164.

The Nature of Entropy & Evil

Understanding that thermodynamics and increasing entropy are intrinsic to the rise of order that leads to new life, the question may be asked whether it is justifiable to refer to suffering and death, (which is part of this process) as evil? It seems somewhat misleading to do so. That illness, disease, suffering and death are deeply disturbing to our psyche is not in question. Rather, the question is whether there is a better way to describe it. These events, to my estimation, are tragic, but not evil. By *tragic*, I mean to say that they arrest us, taking hold of our senses at a visceral level. Often that which is tragic is found to be horrifying. Horror in the face of pain, death and suffering is an emotional response to what is observed or experienced, whereas evil is a value judgment of what is observed. For example, murder is an evil act. Additionally, the person committing murder may be considered to be evil as well. These are value judgments that as morally conscious beings we are able to make. On the other hand, a lion killing its prey, no matter how horrifying the act, is simply following a natural process. There is no evil here. In a similar way, entropy has no more a life of its own than does evil, as “entropy is a property of matter,” not a thing in itself. The dissimilarity between entropy and evil (or what I would call tragedy), is fleshed out by Russell in the following:

[A]lthough thermodynamics makes possible the biological process which we call natural evil (suffering, disease, death, extinction, etc.), here the *dissimilarity* between evil and entropy shows itself most fully: Without thermodynamics the process we call *good* would not be possible either: health, exercise, growth, the pleasure of eating, communicating, sexual reproduction, and so on. Without thermodynamics the evolution of more complex species with capacities for sentience and, in humans at least, self-consciousness and with it rationality and the capacity for moral goodness and evil, would not have been possible. So thermodynamics displays a

fundamental bivalence: it underlies what we mean theologically by speaking of God's creation as good and yet taking with radical seriousness natural evil, for moral goodness and evil, would not have been possible.¹⁰⁰

It should be noted at this point, whereas I agree with the above statement as regards entropy and evil, I do not hold the same position as Russell, and for that matter Pannenberg as concerns so-called natural evil. Clearly, I have been arguing against the notion of natural evil on the grounds that evil is a value (moral) judgment. Russell refers to this position as, "Theodicy lite," referring to the idea that "natural evil is just a normal part of biological evolution," a position that Russell sees as "a denial (or at least de-escalation) of the reality of evil."¹⁰¹ On the question of natural evil, Russell goes on to say, "It would be impossible to affirm the theological significance of moral evil while dismissing the theological significance of natural evil."¹⁰² From my perspective (viewed through the lens of science) there is no theological equivalence here, as moral evil and natural evil are not the same. Nevertheless, this is not to say that God is not responsible for pain, suffering and death, inclusive of natural disasters, natural selection and extinction of scores of species in connection with evolution. What are we to make of this?

¹⁰⁰ Russell, *Eschatology and Scientific Cosmology: From Conflict to Interaction*, 18. For a fuller discussion on thermodynamics, entropy, theodicy and evil in the context of eschatology, reconstructive theology and scientific cosmology see Russell in this same essay, with regard to the nature of entropy and evil, Russell states the following: "Entropy, like evil, is not 'real', with an ontology of its own. It is not a thing, but a 'property' of matter. Its lack of an independent ontological status is similar to the lack of ontological status given evil by the Augustinian tradition . . ." 17.

¹⁰¹ Robert Russell, "Natural Theodicy in an Evolutionary Context" in *Theodicy and Eschatology*, eds. Bruce Barber and David Neville (Adelaide, Australia: ATF Press, 2005), 128.

¹⁰² *Ibid.*, 131.

The conundrum of a good and caring God vs. God who allows disorder (suffering, death and decay) can be resolved only in the eschatological scope of creation to new creation. If this present creation were all there is, if science turns out to be correct that the universe has no future, then at the very least, it would be difficult to say that God is love, for what teleological purpose could there be to justify pain and suffering in creation? This being the case, in context of God's providential plan for the universe, we might then attempt to grasp what God's intention is with regard to the laws of physics, the second law of thermodynamics, entropy and so forth. It is in asking this question that we come to see these laws as an integral, indispensable part of nature, the evolutionary process as a whole, both in terms of cosmological and human evolutionary development.

This still leaves us with the question of sin, the catechism's explanation for the conditions of the world that at times seem hostile toward life. What can be said about the origin of sin (to use biblical language), its reality and presence, what is it, and where does it come from? To answer these questions both a biblical and scientific view are necessary.

Part 2

Q1: THE PROVIDENCE OF GOD & THE PROBLEM OF SIN

The Laws of Physics & Human Evolutionary Development

The same principle, (the second law of thermodynamics) that is responsible for cosmological evolution is likewise at work on earth. From multiple groups of early homonins, our early ancestors emerged, that being, genus *Homo*. Thanks to recent advances in genome research, DNA samples provide billions of bits of information that provide an evolutionary history of species. In light of evolution and the providence of God it should not be overlooked that hominins and early humans suffered (and benefitted) from natural selection, a process of elimination, extinction, and propagation of species (see chapter one, “Biological Evolution & the Role of Entropy & the Second Law of Thermodynamics”).

Over the course of seven million years of hominin-human evolutionary development many species branched out from a common family tree, some to advance through mutations, others to become extinct. The two most prolific survivors of natural selection, Neanderthals and humans, rose to the top of the evolutionary chain, cohabitating space from the Middle East to Europe, inclusive of human-Neanderthal mating. The question is; why did

humans colonize the world whereas Neanderthals went extinct? The following question arises:

How did modern humans manage to spread throughout the earth, increasing in numbers at the same time Neanderthals dwindled and ultimately went extinct? Much speculation exists about the role humans might have played in the Neanderthal demise. Did humans drive Neanderthals to extinction through competition and possibly genocide, were Neanderthals assimilated into human populations through interbreeding, or did Neanderthals go extinct from some other assault that humans were better able to endure, such as disease or climate change?¹⁰³

There are no complete answers to the above questions, but the scenarios do raise other legitimate questions, such as: Was human endurance simply the consequence of evolution? When did humans become morally conscious? Was this anatomically determined? Lastly, what is God's responsibility for hominin-human behavior from early development to morally conscious human beings? This is a question that cannot be answered in absolute terms, but is one that will be pursued in the following sections for the simple reason, what God creates, God also cares for. But then, what are we to make of suffering and death in God's creation, and in what sense does sin have a role in this? We shall see.

¹⁰³ Fairbanks, *Evolution*, 98.

CONTEMPLATING SIN: THE BIBLE & SCIENCE

The Reality & Presence of Sin

In this section, the biblical narrative of Adam and Eve as first parents, the Fall, cursed ground and God's role in it will be explored. As such, it is not only sin that is in question, but also theodicy in context of it.

How often in a Bible study, conversation or counseling are death and suffering attributed to the biblical narrative of the Fall, cursed ground, and consequences of first parents sin. Even when not understood in absolute literal terms, the narrative nevertheless informs and shapes notions of original sin and subsequent suffering. Such an interpretation often overlooks evolution and the complexities of human beings living as creatures in the universe. It is in response to suffering and the need to find a reason for it that the question of sin deserves serious attention. The catechism believes this to be the case. A cursory look at the world leads us to believe the same today. While sin might not have its origin in a fabled garden, it does exist, and as such, warrants the question why, is there an origin, an *original* sin?

Sin, Science, First Parents & A Fallen World

The world may indeed at times look to be fallen. With the rise in terrorism in a post 9/11 world we have not been spared anxiety of generations before us. In reaction to threats and perceived threats destabilization of world order has increased suspicion and vilification of ethnic and religious groups. In today's climate it's easy to believe that somehow the events of the world and people's actions in it are driven by an

innate propensity to do evil. Is it possible that in the Christian context this *innateness*, something driven from within, is a type of *original* (or inherited) sin?

While this study rejects any notion of original sin transmitted by first parents, it does not reject the idea that within the human being there is something innate that drives us to function as self-assertive creatures. Yet the same impulse enables us to function productively within social structures, nature, and the world. At what point did the instinct for survival transmute into a will to conquer, and when did the drive to find shelter and gather food turn into greed and lust for power? And when did the need to protect and defend devolve into vengeance and murder? Taken seriously, the catechism speaks to the human dilemma, the person living in *the garden* (the world) commensurate with events and circumstances where we participate in sin, be it as perpetrators or victims, personally or institutionally.

In context of anthropological history, we may metaphorically ask when it was that Eve reached for the mythological fruit, and when did her fellow being, Adam, conspire with her, together opening the door to sin and misery that the catechism speaks of? This study defines sin in terms of moral consciousness when we transition from that which instills life and stability in person, community, or nature, to that which undercuts life and creates instability: When a morally conscious human being had carried out these events, sin has occurred in a formal sense. The question remains, at what point in human evolutionary development did sin in the formal sense (as I have described it) begin to emerge? This in all likelihood is an impossible riddle to answer, for only God knows what we were like when first created, by this, I mean the *coming-to-be* of hominid species across the annals of

evolutionary history. While science can hypothesize, even where it can do so fairly accurately, only God knows the precise drama of evolution.

From the point of science, disproving the idea of historical first parents as a single pair is not so difficult to do. However, understanding exactly at what point in the evolutionary process *Homo sapiens* became morally conscious, and thus responsible for our behavior is a question that might forever elude us. Nevertheless, some understanding of anthropology is helpful.

Sin, First Parents & Monogenism

How far back can we trace the family tree? Apparently, not back to a single pair of humans. Monogenism refers to the hypothesis that the entire human race descended from a single pair of human beings, whereas evolutionary science points to genetic variety that could not possibly have been transmitted to us by way of a single human couple.¹⁰⁴ Based upon data concerning genealogy and DNA lineage, geneticist Francisco Ayala arrives at the following:

If 32 DRBI gene lineages have persisted since 6 [million years ago], it follows that no fewer than 16 individuals could have ever lived at any given time over that long span. The minimum number of individuals must have been much larger, because the probability is effectively zero that all 16 individuals in a population would be heterozygotes (that is, carrying two different genes), each for two genes different from all others.¹⁰⁵

¹⁰⁴ Daryl P. Domning, *Original Selfishness: Original Sin and Evil in Light of Evolution*, eds. Daryl P. Domning and Monica K. Hellwig (Burlington, VT: Ashgate Publishing, Co., 2006), 70-74.

¹⁰⁵ Francisco Ayala cited in, "No More Adam and Eve: Science Refutes Monogenism," *Original Selfishness*, 72.

In light of Ayala's study, it is reasonable to conclude that the theory of monogenism is scientifically untenable. Yet, while we may reject the idea of sin entering the world as result of disobedience by first parents, we may not dismiss our own disobedience to the will of God and subsequent suffering that ensues as a result of it. While finitude is part of natural life, the evil of sin adds to suffering and death.

While theologians may reject monogenism on grounds of natural science, the idea of original sin, in some sense retains valuable meaning. It is in context of *meaning* that the Adamic figure may be understood as the "prototype, embodiment, mythical ancestor, the pure human being, but not the direct historical ancestor of all humans."¹⁰⁶ Based upon his work in the area of mutual interaction of science and theology, Pannenberg concludes, "at heart sin is human self-centeredness." He goes on to say, "imputation theories of the transmission of original or universal sin" are rejected.¹⁰⁷ I have defined sin as that moment when morally consciousness human beings transition from that which instills life and stability in person, community, or nature, to that which undercuts life and creates instability. On the question of its origin, we may conceive it as "the structure that lies behind and precedes" human decisions that undermine life and well being. However, regarding its nature, "it is not transmitted or imputed but is radically universal because it is rooted within the very structure of human behavior."¹⁰⁸

¹⁰⁶ Mark Worthing, "The Emergence of Guilt and 'Sin' in Human Evolution in *Sin and Salvation: Task of Theology Today III*, Duncan Reid and Mark Worthing. ed. (Adelaide, Australia: Openbook Press, 2003), 117.

¹⁰⁷ Pannenberg, "The Emergence of Guilt and 'Sin' in Human Evolution," 117.

¹⁰⁸ Ibid., 117. (Note, with regard to sin and human decisions, Worthing understands sin as "the structure that lies behind and precedes all human decisions," whereas I identify sin as the structure that lies behind and precedes human decisions that undermine life and well

While the above is not a definitive explanation of sin, it is consonant with the model of sin I am putting forth, one that speaks of innate traits that sometimes are amplified in grotesque ways where human action results in loss of life, well being and wholeness. In examining sin it is important to differentiate innateness of biological, evolutionary traits that drive the human being, as opposed to morally conscious decision-making. Whereas the first has to do with nature and as such is not sin, the latter is sin in the formal sense. Human beings are responsible for our actions and their consequences.

In context of evolution and the structure of human behavior, we may consider not only the emergence of first humans (plural), but also the emergence of biological traits (the selfish gene) that are necessary to adaptation, survival and propagation of *Homo sapiens*. From both a scientific and theological perspective the complexity of the above is expressed in the following statement:

God (who had decided to create by means of an evolutionary process driven by selfishness) was perfectly aware of the limitations of the first human beings who would emerge from that process. Only one step up from the apes, with no previous human history to guide them, they were surely the least likely of all people to avoid moral mistakes. Of all humans who would ever exist, they bore the least resemblance to the preternaturally-endowed, superhuman Adam of my childhood

being. This is commensurate with my understanding that the human being is intrinsically good. This position is based upon Genesis 1:31 "God saw all that he made, and it was very good." As a word of caution, any behavior, even that which produces destruction as a part of natural selection is a normal part of the evolutionary process of genus *Homo*. Therefore, negativity associated with early human development cannot be called sin. By contrast, modern *Homo sapiens* have evolved into morally conscious creatures whose fundamental character leans toward doing that which is good. The *goodness* of humanity is evidenced in the building of societies, cultures, families, and humanitarian acts, all which defines the general framework of humanity. By contrast, all acts that undermine life are abnormalities as opposed to normative human behavior, often with great consequences. When this occurs, sin in the formal sense has been committed, either individually or communally. This is what makes atrocities like Auschwitz, 9/11, Sandy Hook, as well as a recent spat of mass-shootings so horrific.

catechesis; and it is not credible that God could have considered their sins more momentous than subsequent miscreants, or held them accountable for any special moral “headship” of the entire human race.¹⁰⁹

As creatures participating in the upward climb of human evolutionary history, it is reasonable to assume that development of moral consciousness in the earliest stages would not have been on a par with primal instinct, necessary for survival and propagation. However, this cannot be said for *Homo sapiens* today. The scale of human evolutionary development has been tipped. While innate evolutionary traits critical to human behavior are part of our DNA, we nonetheless are morally conscious beings, capable of moral decision-making. The latter separates us from earlier pre-history epochs of human development. From this perspective it can be said that the origin of sin is within each of us. Such a position seeks to hold natural sciences, concerning human evolutionary development and personal decision-making (responsibility) in tension. While the human being (from my perspective) is intrinsically good, we are at the same time *predisposed* (due to innate evolutionary traits) to adverse behavior. This *predisposition*, bears shades of the Reformed doctrine of *total depravity*. The main difference is, *predisposition* is an underlying state that is subordinate to the intellect of a morally conscious human being. Predisposition in itself is not the cause of sin. In this sense, sin is not something inherited, but rather it is something we commit after it has formed (originated) in us. This is in contrast to the Reformed doctrine of inherited original sin corrupting human nature to such an extent that we are prone to commit sin. In the following

¹⁰⁹ Domning, *Original selfishness*, 150.

question the catechism is concise concerning sin and the corrupting effect of it on human nature:

Q7. Then where does this corrupt human nature come from?

- A. The fall and disobedience of our first parents,
Adam and Eve, in Paradise.
This fall has so poisoned our nature
that we are all conceived and born
in a sinful condition.

Whereas the catechism locates the origin of sin in Adam, I locate it in the individual.

Whereas the catechism understands sin as hereditary, I regard innate traits necessary for human development as evolutionary. The latter, as this simply is nature, in no sense can be considered to be sin. Nevertheless, natural hardship in the world cannot be denied. What is at the root of this, what more can be said?

Time, Science, Sin, & Theodicy

When considering the Adamic figure in context of evolutionary history we are forced to come to terms with evidence of violence, predation, and suffering, as well as extinction of myriads of species long before the advent of what could be the earliest development of *Homo sapiens*. Any notion of a divine curse being the cause of suffering and death must be ruled out. It is difficult to imagine that God would regard the natural processes intrinsic to human evolutionary development as sin, no less as something to be punished. On this note Arthur Peacocke writes:

Biological death can no longer be regarded as in any way the consequence of anything human beings might have been supposed to have done in the past, for evolutionary history shows it to be the very means whereby they appear, and so, for the theist, are created by God. The traditional interpretation of the third chapter of Genesis that there was a historical 'Fall,' an action by our human progenitors that is the explanation of biological death, has to be

rejected . . . There was no golden age, no perfect past, no individuals, 'Adam' or 'Eve' from whom all human beings have descended and declined and who were perfect in their relationships and behavior.¹¹⁰

At what point in evolutionary development of humans becoming sentient, self-conscious beings did sin in the formal sense arrive? While the answer to this eludes science, it does not go unanswered in the catechism. According to Q10 God is terribly angry at sin that we are born with. Questions 10 –12 are to be read in context of Q1. They are as follows:

**Q10. Does God permit
such disobedience and rebellion
to go unpunished?**

- A. Certainly not.
God is terribly angry
with the sin we are born with
as well as the sins we personally commit.

As a just judge,
God will punish them both now and in eternity,
having declared:
“Cursed is everyone who does not observe and obey
all things written in the book of the law.”

Q11. But isn't God also merciful?

- A. God is certainly merciful,
but also just.
God's justice demands
that sin, committed against his supreme majesty,
be punished with the supreme penalty –
eternal punishment of body and soul.

Q12. According to God's righteous judgment

¹¹⁰ Arthur Peacocke, “Doing Without a Fall From Paradise” in *The Groaning of Creation: God, Evolution and the Problem of Evil*, ed. Christopher Southgate (Louisville: Westminster John Knox Press, 2008), 28-35.

**we deserve punishment
both now and in eternity:
how then can we escape this punishment
and return to God's favor?**

- A. God requires that his justice be satisfied.
Therefore the claims of this justice
must be paid in full,
either by ourselves or by another.

From the catechism's perspective the *point in time* sin arrived on the scene is at the moment of disobedience in the garden, punishable by God for the sake of satisfying his anger. While this explanation has sufficed for many generations, it no longer can. If any headway is to be made in this area, the natural sciences that describe God's creation and creatures must be taken into account. On this note, Arthur Peacocke attests to the importance of doing theology in light of science where he says:

Any affirmation about God's relation to the world, any doctrine of creation, [anthropology], if it is not to become vacuous and sterile, must be about the relation of God to, the creation of God of, the world which the natural sciences describe. It seems to me that this is not a situation where Christian, or indeed any, theology has any choice.¹¹¹

Like scripture, the catechism is to be read in light of historical conditioning. This is particularly the case with Q's 10 – 12 as concerns sin, the human condition and God's response. In context of theodicy and pastoral care, discernment between science and poetic language of the Bible is critical. This is particularly the case as concerns God's anger and resulting cursed ground. In this respect, a 21st century reading of the catechism in light of science as opposed to apart from it allows the

¹¹¹ Cited in *Cosmology: From Alpha to Omega: The Creative Mutual Interaction of Science and Theology*, ed. Robert J. Russell (Minneapolis: Fortress Press, 2008), 33.

kernel to remain (theological meaning) while the husk is discarded (un-scientific historical conditioning).

In light of what has been said thus far, it has not been necessary (nor would it have been helpful) to discard the poetic narrative of Adam, Eve and the serpent, as it paints a moral-theological lesson of what it means to be misguided and blind to the will of God. Where disobedience enters the picture, sin follows, the effects of which can never be good for humanity or nature. In this respect, science and the catechism are compatible where each is appreciated for its contribution to truth.

In Genesis 3 (the Fall), not only are woman and man at odds with each other and God, but also with nature; the whole natural order is thrown into chaos. Sin, misery, grace and redemption are ever before us as part of human history. It is in re-contextualizing sin and its origin that the believer finds continued meaning, comfort and relevance in *belonging to Christ* as forgiven and beloved creatures. On the other hand, what meaning and comfort can be found in the context of an angry God who demands payment of life to satisfy his need for justice (Q's 10 – 12)? At issue is the tension between God's *righteous judgment* and God's *requirement for justice to be satisfied*. Though atonement is beyond the scope of this study, it cannot be ignored altogether, first in terms of *shared righteousness*, followed by *resurrection and the saving power of Christ*.

Christ & the Question of Shared Righteousness (Q45)

The question of *shared righteousness* has been answered along juridical lines of redemption, substitutionary atonement and resultant right standing with God.¹¹²

The catechism speaks of righteousness in connection with the death and resurrection of Christ. This is clear in Q45:

Q. How does Christ's resurrection benefit us?

A. First, by his resurrection he has overcome death, so that he might make us share in the righteousness he obtained for us by his death.

Righteousness that the catechism speaks of is a forensic, imputed righteousness, not an actual lived-out righteousness.¹¹³ As such, at question is not *right standing with God* (which can only come from God), but rather, *right living before God* as a result of human volition. Biologically and neurologically speaking, although Christ was not in need of physical change to become righteous (he always was), the same cannot be said for human beings. Within the scope of biological evolution, inclusive of evolutionary traits intrinsic to human behavior, righteousness, (in the sense that Jesus is righteous) is in tension with human nature. The same characteristics and impulses that bring the best out in humans also bring out the worst in us.

¹¹² For example, consider Barth in his commentary on the HC where he says, "In the death of Jesus Christ, God took man's place in order to suffer in his place the destruction of sinful man and, at the same time, to realize the existence of a new obedient man," in *Learning Jesus Christ Through the Heidelberg Catechism* (Grand Rapids: William B. Eerdmans Publishing Company, 1964), 72-73. Also see Klooster in "The First Benefit: Our Righteousness" where he says, "Our Lord did more than provide us an opportunity to start with a clean slate; he did more than remove our unrighteousness and return us to the sinless state of Adam and Eve before the fall. Christ did more for us than change our legal stature from "guilty" to "not guilty." For believers he changed it from "guilty" to "righteous" in *My Only Comfort: A Comprehensive Commentary on the Heidelberg Catechism* (Grand Rapids: CRC Publications, 1988), 574.

¹¹³ Klooster, "The First Benefit: Our Righteousness" See where Klooster says, "The crucified and risen Christ has fulfilled every part of God's law on behalf of every true believer, thus making the believer not only 'not guilty' but also 'righteous.'" 575.

It is a mistake to think that resurrection has only to do with transfiguring our perishable bodies to imperishable. It is more than that; it also has to do with right living in the presence of God. The righteousness we share with Christ is a *declared* righteousness as opposed to an *actual* lived righteousness. Having evolved over millions of years within the parameters of biological-neurological constraints, the human being has become a morally conscious creature with the desire to act righteously, but without the ability to do so in the fullest extent. The apostle Paul famously bears this out in his cry of lament, “Wretched man that I am, who will deliver me from this body of death? Thanks be to God through Jesus Christ our Lord! So then, I myself serve the law of God with my mind, but with my flesh I serve the law of sin” (Romans 7:24-25).

Thus resurrection must mean more than imperishable bodies, it means the nature of the resurrected being is intrinsically righteous. Only as a new creature can humanity truly be righteous as Christ is. In this respect the catechism needs to say more with regard to shared righteousness. Given what has been said with regard to science and evolution, an alternative answer might further read:

Q45 *Alternative Answer*

By his resurrection Christ has not only overcome his own death, but also that of the universe, wherein we might share in the righteousness he obtained for us by his death, in part now and in full upon our resurrection.

While the above infers shared righteousness in a *proleptic sense*, it is not actualized to the fullest extent in our present state. Differentiating imputed righteousness from actual lived-out righteousness, Christ’s death and resurrection (the two cannot be

separated) provides the future for our righteousness. This gives us reason to persevere, pressing on toward the goal for the prize of the upward call of God in Jesus Christ (Philippians 4:13). Thus sanctification of the Christian must be an ever-conscious practice of life. Although we will truly be righteous creatures upon resurrection, we nevertheless are called as Christians, in this lifetime, to put on the mind of Christ, not being conformed to this world, but by testing we may discern what is the will of God, what is good and acceptable and perfect (Romans 12:2).

In context of the above, I do not want to create the impression that as human beings we are absolved of personal responsibility for sin as a result of evolution and biological-neurological traits and thus are a people with no hope. To the contrary, believing that *Christ's resurrection is a sure pledge to us of our blessed resurrection*, we can take comfort in knowing that evolutionary traits that sometimes work for the bad will always work for the good when we, and the cosmos have reached God's end for the world: on that day, *by his power we will be raised to new life*. In this sense, the theological adage, *already, but not yet*, is a reality.

Resurrection & the Saving Power of Christ

The saving power of Christ, as put forth from the beginning of this study is identified in resurrection, not apart from creation and the physicality of the universe, but within it. As such, the salvific power of Christ encompasses not only salvation of the individual, but the cosmos as well. According to Colossians, as *first born of the dead*, Christ holds all things together in him, not only the present, but also the new creation:

For by him all things were created, in heaven and on earth, visible and invisible, whether thrones, dominions or rulers or authorities – all things were created through him and for him. And he is before all things, and in him all things hold together. And he is the head of the body, the church. He is the beginning, the first born of the dead, that in everything he might be preeminent (Colossians 1:16-19).

When considered from the perspective of the physicality of the universe, life, death and resurrection of Jesus may be understood in terms of God's eternal plan for cosmic redemption. In such a view Christ did not die on the cross to satisfy God's anger, rather, Christ died to satisfy God's plan for creation. In this respect John 3:16-17 is broadened, entailing not only redemption of the individual, but also the cosmos:

For God so loved the world, that he gave his only Son, that whoever believes in him should not perish, but have eternal life. For God did not send his Son into the world to condemn the world, but in order that the world might be saved through him (John 3:16-17).

The *giving* of the Son in cosmological context is located at the point of incarnation (not the cross) where in an act of triune love Christ is given to the world so that he might also die to the world in order for it to be raised as a new creation. It is in context of renewal of creation that Christ's death was necessary, as he is the first born of the dead, the beginning of the new order of things to come. In this economy of salvation Christ overcomes sin and death through new creation as opposed to death on the cross. From this perspective, the question of why Christ has to die (Q40) may be re-contextualized in view of cosmic redemption. Note the question below:

Q40. Why did Christ have to suffer and die?

A. Because God's justice and truth require it:

nothing else could pay for our sins
except the death of the Son of God.

Understood in context of the physicality of the universe, the salvific text of sin and salvation in Q1 is taken up into creation, new creation and the providence of God. In this sense, the love of God is re-contextualized in the economy of Trinitarian love where sin, redemption, and cosmic history are taken up into God through Jesus Christ. Such a view has a different ring to it than does the catechism; nonetheless, it takes the precious blood of Jesus no less seriously. From a pastoral care perspective, the blood of Jesus as an outpouring of God's love for creation promotes an alternative view of Christ's death where the individual and cosmos are intimately woven into God's overarching plan of salvation. This provides a far more palpable view than the punitive or testing God motif known to many Christians.

In context of science and theology, an alternative answer to Q1 inclusive of three stanzas is given below:

Q1 *Alternative Answer*

That I am not my own, but in my whole being, belong to my faithful Savior, Jesus Christ, not only in this lifetime only, but eternally, having escaped death in resurrection with him.

With his own precious blood, he has fully overcome my sins by substituting his righteousness for my unrighteousness. More than this, in his resurrection he has set me free from tyranny of death. As he is, so also shall I be, in fact, by the eternal plan of my Father in heaven, all things will work together for salvation of the world.

Because I belong to him, Christ, by his Holy Spirit, assures me of eternal life whereupon he not only gives me the desire to live for him in this lifetime, but also the ability to fully do so upon resurrection to new life.

With regard to the above, the wording in the second stanza intentionally moves away from the language of atonement as penal-substitution and toward a *renewal (transformation) of creation* theory framed in the economic Trinity's love for the world. In addition, reference of the devil has been omitted and replaced with the proposition of death. By doing so, freedom from tyranny of death is shifted away from superstition of the devil and rather, is grounded in the reality of resurrection in Jesus Christ to new life (see chapter 2, "Cosmological Resurrection in Jesus Christ," and "The Ramifications of Jesus Overcoming Death," as well as this chapter, "Resurrection & the Saving Power of Christ". The structure of this part of the answer also moves away from the view of a prescriptive God (i.e., *the will of God* directly orchestrating world and individual events) toward a descriptive view, meaning, God who creates and cares for *creation to new creation*. The intention of this change is to supplement the view of direct divine intervention (i.e., *right down to the hair on my head*) with a universal view whereupon *all things working together* relates not solely to salvation of the individual, but more so, salvation of the world in cosmic history.

Regarding the third stanza, differentiation between *willingness* as opposed to *ability* to fully live for Christ has been incorporated into the answer to negate the idea that because we are *wholeheartedly willing* (due to the power of the Holy Spirit), we are likewise *ready* from now on to live for Christ; such is not the case. Though we are willing, we lack the ability. This is critical discernment to be understood in anthropological terms as discussed in this chapter in context of sin and evolutionary traits, as well as moral-ethical lapses in human behavior.

Another key element to take note of is the inclusion of *resurrection*, as it addresses the question of willingness and ability; (we will be able to fully live for Christ, but not until after the resurrection when the human creature, who truly lives as a new being in harmony with creation will be fully able to live for Christ).

CHAPTER 4

THEODICY & THE CRUCIFIED GOD: SUBSUMING THEODICY INTO THE THEOLOGY OF JÜRGEN MOLTSMANN

A touchstone of this study has been whenever resurrection is spoken of, so too must creation and new creation be addressed. The providence of God is contextualized in old creation to new creation with the bodily resurrected Jesus actualized as the new beginning and transformation of the universe. By contrast, the catechism's questions, Q1, 26,27 and 28, speak to the present creation only, detaching old from new. It is only when the two have become seamless that the problem of evil is resolved in the context of providential care of a suffering God who is in solidarity with creation. It is in God's suffering love that creation, (the cosmos, all human beings and creatures) are given a future. This future comes at a cost not only to creation, but also to God at the cross. This is why Moltmann can say, "He who has died with Christ is crucified to the world and the world to him."¹¹⁴ It is for the sake of the world that Christ empties himself at the cross. This is not only a soteriological question (which it has largely been confined to), but also providential as well as eschatological. "To think eschatologically," Moltmann says, "means to think a matter

¹¹⁴ Jürgen Moltmann, *The Crucified God: The Cross of Christ as the Foundation and Criticism of Christian Theology* (New York: SCM Press LTD., 1974), 56.

through to the end.”¹¹⁵ Thinking the matter through to the end has been challenging, if not problematic for Christian theology as concerns attributing evil to God, as is well expressed in the following:

Christian theology has been unwilling to attribute the existence of evil to God, except in the most oblique way; instead it prefers to attribute it to creaturely beings, angelic or human. However, the concern to absolve God from responsibility is, at best, only partially successful for even where the blame is laid with angels or humankind, the Creator brought into being – arguably for good reasons – this particular world with this particular possibility.¹¹⁶

Angels notwithstanding, that the Creator brought into being this particular world with this particular *possibility for life* is undeniable. Contrary to absolving God of responsibility for suffering and death in the world, the intention here is to fully acknowledge it. However, it is critical that my position regarding *natural evil* as opposed to *moral evil* is clear from the start, as this will have an impact on how I am integrating theodicy into Moltmann’s eschatology. In chapter three (“The Nature of Entropy & Evil”) I argued for a neutral understanding of natural evil, in effect denying that nature, in any way is evil (the reasons were cited).

Nevertheless, while I have neutralized natural evil by addressing it as a natural process of evolution, I have not denied the problem it poses for the creature.

Suffering endured by scores of innocent creatures in the life and death struggle of nature cannot be brushed aside simply because it is a natural process. Likewise, the deep grief experienced by humans when news of illness or death of a loved one is announced is disruptive to the very core of our being. Though this is not evil per se,

¹¹⁵ Ibid., 257.

¹¹⁶ Christiaan Mostert, “Theodicy and Eschatology” in *Theodicy and Eschatology*, eds. Bruce Barber and David Neville (Adelaide, Australia: ATF Press, 2005), 107-108.

it nevertheless is tragic, and disruptive to both individual and community. Added to this dimension is the existence of moral evil, carried out by human agency. While both pose a problem for creatures, they do so for different reasons. While God bears responsibility for first (natural suffering and death), humanity bears responsibility for the latter, moral evil. *By humanity, I am not referring to the human race at large, but specifically those individuals whose actions undermine life and well being of other individuals, community, or nature, (this study's formal definition of sin).* Both of these are taken up into Moltmann's theology of the suffering God: In the first instance God suffers in solidarity with nature. In the second, God suffers in solidarity with humanity as a result of human agency. In so doing, God assumes responsibility for the affairs of all creation.

There is yet another problem (or question) to deal with before moving on. Concerning creation, the question arises, is this creation the only sort of world God could have created? Why would God create a world full of pain and suffering; was it not possible that God could have created some other kind of world? While this might seem like a pointless question, since it can never be answered with any certainty, it nevertheless is not only valid, but also a critical question to ask in context of theodicy. The positions on this are; *the only way proposition* (the only way God could do it; *the best possible way proposition* (the best possible of all ways for God to create); and last, *it is impious to ask the question* (does the clay ask the potter why did you make me this way?). For the purposes of this study I feel that it is necessary to both ask and answer the question. This study is working from the position of *the only way argument* on grounds that an all-knowing, all-powerful, and all-loving God

in wisdom and fidelity with creation created in the only way possible. This is based on the rationale that the idea of God having choices opens up the possibility that one of them might not have included pain and suffering known to this creation. If this were a possibility not taken, then truly, God would be evil. Although there is much suffering in creation, there also is great beauty. The question is, is the tradeoff worth the cost? For most (although not all), the answer is affirmative, not in the context of this creation alone, but in context of continuity of this creation and new creation when all life will be fulfilled. In light of creaturely fulfillment Moltmann passionately says:

... I would think that eternal life gives the broken and impaired and those whose lives have been destroyed space and time and strength to live the life which they were intended for, and for which they were born. I think this, not for selfish reasons, for the sake of my personal completion, and not morally, for the sake of some kind of purification; I think it for the sake of the justice which I believe is God's concern and his first option.¹¹⁷

Let us follow Moltmann's hope-filled teaching.

SUBSUMING THEODICY INTO THE THEOLOGY OF JÜRGEN MOLTSMANN

God is love. Therefore God suffers. In the incarnation, God attached himself to creaturely experience and so knows suffering from the inside out. The course followed is one that builds on Moltmann's theology of the cross, expanding his motif to include creation as a place of triune suffering where God suffers not only at the cross as the *Crucified God*, but also in the cruciform transformation from *creation to*

¹¹⁷ Moltmann, *The Coming of God*, 118.

new creation. Moltmann's theology of the cross is summarized in the following statement:

If the Christian thinks in Trinitarian terms, it says that forsaken [human beings] are already taken up by Christ's forsakenness into the divine history and that we 'live in God,' because we participate in the eschatological life of God by virtue of the death of Christ. God is, God is in us, God suffers in us, where love suffers.¹¹⁸

While Moltmann's eschatology certainly is concerned about the cosmic implications of Jesus' resurrection, his emphasis in *The Crucified God*, nonetheless is on the human side.¹¹⁹ Nowhere is this clearer than in the following statement where he speaks of Trinitarian suffering giving rise to new life for *forsaken men*:

The Son suffers in his love being forsaken by the Father as he dies. The Father suffers in his love the grief of the death of the Son. In that case, whatever proceeds from the event between the Father and the Son must be understood as the spirit of the surrender of the Father and the Son, as the spirit which creates love for forsaken men, as the spirit which brings the dead alive.¹²⁰

Whereas the above speaks concretely to the divine-human relationship, our concern for a broader theology (if we are to be concerned with creation in terms of theodicy) must include a similar theology of the suffering God. To this point, Moltmann's theology is foundational insofar as interpreting suffering, death and decay through the lens of the suffering God who bears responsibility for creation as a selfless act of

¹¹⁸ Moltmann, *The Crucified God*, 255.

¹¹⁹ For a full appreciation of Moltmann's theology regarding Christ and cosmic resurrection see Jürgen Moltmann, "The Cosmic Christ" in *The Way of Jesus Christ: Christology in Messianic Dimensions* (New York: Harper Collins, 190), 274-312. In particular see 287-292 where Moltmann argues against a previous one-sidedness of cosmic Christology where "creation and redemption cleave apart and become two separate things" (286). Contra one-sidedness Moltmann stresses what he refers to as, "a unified creation process, which begins with creation-in-the-beginning, continues in the history of creation, and is perfected in the new creation of all things." 286.

¹²⁰ Jürgen Moltmann, *The Crucified God*, 245.

triune love. In this latter motif, *the spirit which brings the dead alive* is not limited to the human sphere, but is inclusive of all creation. As such, the emphasis on divine co-suffering must include a full teleological scope of creation to new creation unless we are to accept that God is affected by divine love for the human, but not for the rest of creaturely life. This is a key consideration, as it is in keeping with *belonging* to Christ not apart from, but within the full scope of creation to new creation.

Moltmann does not see the crucifixion as Christ's suffering alone, abandoned by the Father. Rather he sees such suffering as wholly Trinitarian; Father, Son, and Holy Spirit are suffering together.¹²¹ In terms of the cross and the economy of the Trinity, Moltmann says:

Here we have interpreted the event of the cross in Trinitarian terms as an event concerned with a relationship between persons in which these persons constitute themselves in their relationship with each other. In so doing we have not just seen one person of the Trinity suffer the event of the cross, as though the Trinity were already present in itself, in the divine nature. And we have not interpreted the death of Jesus as a divine-human event, but as a Trinitarian event between the Son and the Father."¹²²

Though Christ appears alone on the cross, Moltmann's theology of the cross "understands God as the suffering God in the suffering of Christ in which he cries out with the godforsaken God, 'My God, why have you forsaken me?'"¹²³ The importance of this theological position cannot be overstated in context of creation, theodicy, and

¹²¹ This is an essential feature as Moltmann echoes Karl Rahner's theological dictum, *the economic Trinity is the immanent Trinity, and the immanent Trinity is the economic Trinity*. Moltmann refers to the thesis of Karl Rahner where speaking of the nature of God he formulates: 1. The Trinity is the nature of God and the nature of God is the Trinity. 2. The economic Trinity is the immanent Trinity, and the immanent Trinity is the economic Trinity. Cited in *The Crucified God*, 240.

¹²² Moltmann, *The Crucified God*, 245.

¹²³ *Ibid.*, 227.

the providence of God. Because the economic trinity is the immanent trinity, it is the same God who does not forsake what appears to be a forsaken creation, but rather, is intimately open to it. It is here where a transposition of much of Moltmann's theology of a crucified God extends beyond the cross and into a divinely created world governed by death-inducing forces as well as disrupted by the malevolence of human beings. If God were only open to suffering in solidarity with humanity, but not with all created beings, it would be difficult to speak of God as a God of love.¹²⁴ From the context of cosmic eschatology Moltmann speaks of a "universal 'law' of creation, not merely for human beings, but for animals, plants, stones and all cosmic life systems as well."¹²⁵ How Moltmann's theology may be applied to the providence of God, creation, and theodicy is fleshed out in greater detail below.

Creation, Incarnation, and Cross: God Crucified & Transcendent

God is free; God transcends the laws of nature. Nevertheless, God enters into the physicality of creation (with and through the Son) for the sake of humanity and future consummation of creation. From the incarnation through the cross God suffers. It is here, in light of pain, suffering, and God's responsibility for the natural causes of it where an adaptation of Jürgen Moltmann's theology of the cross

¹²⁴ In context of God, suffering and love, Moltmann writes: "There is unwilling suffering, there is accepted suffering and there is the suffering of love. Were God incapable of suffering in any respect, and therefore in an absolute sense, then he would also be incapable of love. If love is the acceptance of the other without regard to one's own well-being, then it contains within itself the possibility of sharing in suffering and freedom to suffer as a result of the otherness of the other. Incapability of suffering in this sense would contradict the fundamental Christian assertion that God is love . . . The one who is capable of love is also capable of suffering, for he also opens himself to the suffering which is involved in love, and yet remains superior to it by virtue of his love." Moltmann, *The Crucified God*, 230.

¹²⁵ Moltmann, *The Way of Jesus Christ*, 258.

provides a comforting way forward. In an act of divine love and kenosis, God enters into creation for the sake of new creation. The combination of *kenosis* and evolutionary eschatology provides the framework for God entering into the physicality of the world, both cosmologically and biologically. This self-emptying happens at the incarnation and at the cross, the first to biological life, and the second to death. In this way, theodicy takes evolution into account because God is in full solidarity with all creaturely suffering.

Robert Russell offers criteria necessary for this theological understanding:¹²⁶

(a). *"God suffers voluntarily with the world."* (b). *"The involuntary suffering of all nature . . . must be taken up into the voluntary suffering of Jesus Christ on the cross (theopassionism) and through it voluntary suffering of the father (patripassionism)."*¹²⁷

In keeping with the above, the point of contact between incarnation and the cross cannot be overstated. This is why Moltmann can say, "There can be no theology of incarnation which does not become a theology of the cross."¹²⁸ However, to this I would add, as soon as you say incarnation, you not only say cross, but also creation (both present and new), for the incarnation and event of the cross does not take place outside of creation, but within it. Here God subjects himself to the laws of

¹²⁶ Note: Robert Russell has outlined a program that was helpful in my conception of integrating evolutionary eschatology and *kenosis* with theodicy. From there it was a matter of incorporating the process into Moltmann's theological program. See Russell, "Natural Theodicy in an Evolutionary Context," 7.2 *"Sketching an eschatology which, when combined with kenosis, will lead to a robust evolutionary theodicy."* For full text where Russell outlines eight criteria see 147-148.

¹²⁷ Ibid., 147-148.

¹²⁸ Ibid., 205.

physics and then transcends them in an act of selfless triune love for the world through the death of the Son.

Only here, in God's self-emptying at the cross can the 2nd law of thermodynamics, entropy, and all forms of natural destruction be fully realized as necessary to a world of possibilities, a world that has its new beginning in the resurrection of the Son.¹²⁹ Concerning the cross, creation, and new creation Colin Gunton writes:

Jesus Christ is the one through whom all things take their shape and to whom the Spirit directs them. . . Only through his cross is the creation 'redeemed from its fault and shame' so that it may be perfected in praise of its creator and redeemer . . . The teleology of the whole creation, past, present and to come is shaped through Christ: begun through him, reordered to its end through his self-emptying, and directed to him as its end.¹³⁰

This is God's ultimate annihilation of the cross and YES to life where God reconciles the world to God's self. It is in God's transcendence, being wholly *other*, that God bears the physicality of creation in the body and blood of Jesus Christ. God's intervention in the laws of physics and atomistic structure of matter in the risen Christ is not to be seen as an annihilation of creation, but rather as transformation of it. In this respect the cross is seen as death of the old order, whereas Jesus Christ's resurrection is the beginning of a new one. It is only with a proleptic view of the new creation that the providential care of God is fully contextualized. Only in this way does death and suffering find eschatological purpose. Nevertheless, between old and

¹²⁹ In a similar way, Russell sees God embracing the world not apart from it, but rather in love, suffering with it. He says: "If God enters into physical and biological process of the world through the incarnation, it is through the crucifixion of Jesus that God experiences the suffering of all life and offers it the possibility of redemption." Robert Russell, "Natural Theodicy in an Evolutionary Context" in *Theodicy and Eschatology*, eds. Bruce Barber and David Neville (Adelaide, Australia: ATF Press, 2005), 54.

¹³⁰ Colin E. Gunton, *Christ and Creation* (Eugene, OR: Wipf and Stock, 2005), 97-98.

new creation, there is still the problem of suffering and God's responsibility for it. More needs to be said about this.

The Problem of Suffering, Death & Theodicy,

In chapter one ("Scientific Terms") and three ("Creation & the Laws of Physics") the role of entropy and the second law of thermodynamics was discussed in context of suffering and death commensurate with evolution. In addition, it was said that entropy and resulting disorder cannot be evil, as evil is a moral value that cannot be placed on nature (chapter 3, "God & natural Evil"). The following then can be surmised: where there is no evil there also is no question of theodicy (with respect to so-called natural evil).¹³¹ Nevertheless, evil or not, suffering and death commensurate with evolution comes with a cost, and dread to the creature, thus more needs to be said regarding God's role in it.

While we can speak of death in scientific terms, and as such, deal with it in a rational way, we cannot defer to science as concerns death with respect to God's judgment, as this is purely a theological consideration. Yet, God's judgment is also a matter of providence. This is because when we speak of God's judgment we also speak about God's justice. As such, creaturely suffering can only be justified in eschatological terms of creation to new creation. On this point, Moltmann speaks only of the *coming of God's YES* as concerns humanity's future. He says:

Faith may be able to free us from the religious fear of death, if that means fear of judgment (although it must be admitted that in history the Christian faith has done more to spread the fear of death and

¹³¹ Here, it bears mentioning that I am referring to Natural vs. moral evil, as they are not the same. I recognize moral evil for what it is, human sin.

judgment than remove them). But *love* brings us into solidarity with the whole sad and sighing creation. We die into the earth, which is in need of redemption and awaits it. *Hope*, finally, means that we cannot come to terms with dying at all, or with any death whatsoever, but remain inconsolable until redemption comes.¹³²

The *inconsolable* that Moltmann refers to is of course, the resistance that the human spirit has to loss of life. Repeatedly throughout this study the loss of life has been integrated into the horizon of hope, resurrection, and eternal life, admittedly to lessen the sting of death. Here, the added dimension of God's love as death's companion places death further still in connection with resurrection. If death were a punitive act of God, then truly it would be the enemy, and God could not be a God of love. To the contrary, in an act of love, God enters into death for the sake of life. Moltmann's *dying into the earth* is perhaps a more poetic way of saying we are part of the grand creation, the cosmos that awaits redemption (transformation – *creatio ex vetere*). When life and death are understood in context of creation that is not fixed, but open to a future, only then is the darkness of death removed and the light of God's providence allowed to shine. Or to put it another way:

Only then does "The immanence of the transcendent God of Christian theism become clearer and more awe-inspiring as the ongoing processes of creation are more fully understood. To paraphrase the psalmist: Even the subatomic particles and the farthest galaxies display the glory and immanence of God."¹³³

In light of the above we will consider creation to new creation in context of God to the world and the world drawn toward God in an act of triune co-suffering love for the sake of creation, the creature, and the fullness of God's glory.

¹³² Jürgen Moltmann, *The Coming of God*, 93.

¹³³ Mark Worthing, *God, Creation, and Contemporary Physics*, (Minneapolis: Augsburg Fortress, 1996), 158.

Concerning God's ultimate goal with regard to creation, Moltmann asks, "*Is it the world in God, or God in the world?*"¹³⁴ Alternatively, the question may be asked whether consummation of the world takes place "within the divine Trinity, or whether the divine Trinity communicates itself and goes out of itself into history and the consummation of the world's salvation," Moltmann opts for the latter.¹³⁵ This is a key point concerning space and the indwelling of God from the perspective of theodicy if one is to take the position that God will indwell the new creation with the shekinah of God's glory.

In terms of continuity and discontinuity, old creation and new creation, it is contradictory to the nature of God to prepare evil as a constituent to the dwelling space of God. Moltmann speaks of indwelling and the Christian doctrine of the incarnation of Jesus Christ, citing "The infinite God can certainly 'indwell' his finite creation, its salvation history and its consummation, as once he indwelt Solomon's temple, and can interpenetrate everything human as in the God-human being Jesus Christ."¹³⁶ Citing Isaiah 6:3, "The whole earth is full of his glory," Moltmann asserts that "God undertook a first kenosis: God involved himself in this endangered creation, and entered into it through his Word and Wisdom."¹³⁷ From this perspective, suffering and death that is commensurate with the biological evolutionary process, as well natural catastrophic disorder that leads to new order

¹³⁴ Moltmann raises this question in an essay, "The World in God or God in the World," in *God Will Be All In All: The Eschatology of Jürgen Moltmann*, ed. Richard Bauckham (Edinburgh: T&T Clark, 1999), 37.

¹³⁵ Ibid., 37.

¹³⁶ Ibid., 37.

¹³⁷ Ibid., 39.

cannot be said to be evil, for God does not indwell evil, but overcomes it. The only evil that exists for certain is evil that humanity, in freedom, is responsible for.

Concerning theodicy and the question of evil, it is in view of the glory and radiance of God filling the space of new creation that the curtain of darkness belonging to this present creation is torn down. Sin and evil that humanity is responsible for will be overcome when humanity (with the cosmos) is resurrected and transformed into beings that live in the fullness of the image and likeness of God. From the perspective of God's providential care for humanity, all creatures and the universe, redemption takes place within creation to new creation, not apart from God, but with God co-suffering in a supreme act of kenosis.

In Summary

To summarize all that has been said, that eschatology that arrives at God in creation allows no room for a gnostic view of a new heaven and new earth. In light of suffering commensurate with this green planet such a view seriously calls into question what purpose could be found in billions of years of evolutionary history, and whether God is indeed a good God. To the contrary, a theology of divine participation and co-suffering in the world, from incarnation to cross and resurrection may be understood as divine kenosis bearing the sacramental marks of God's presence "in, with, and under" creation.¹³⁸ Such participation need not give way to any thought of pantheism. Rather, it is better understood that the risen

¹³⁸ Arthur Peacocke, "Summary: God's Continuing Activity in the Universe in Light of Contemporary Physics," in *God, Creation, and Contemporary Physics*, ed. Mark William Worthing (Minneapolis: Augsburg Fortress, 1996), 157.

Christ is, “integrally related to the rest of material creation,” so that with his resurrection and new life all creation is renewed with him, in him, and through him.¹³⁹ Christ is Lord of the universe.

In light of what has been said above it will be fruitful at this point to consider Q1, 26, 27 & 28 in context of the providence of God, as together they form a theological statement embedded in the catechism.

Q1. What is your only comfort in life and in death?

Second part of answer

A. He has fully paid for my sins with his precious blood, and has set me free from the tyranny of the devil. He also watches over me in such a way that not a hair can fall from my head without the will of my Father in heaven. In fact, all things must work together for my salvation.

Q26. What do you believe when you say, “I believe in God, the Father almighty, creator of heaven and earth?”

A. That the eternal Father of our Lord Jesus Christ, who out of nothing created heaven and earth and everything in them, who still upholds and rules them by his eternal counsel and providence, is my God and Father because of Christ the Son.

I trust God so much that I do not doubt he will provide whatever I need for body and soul, and will turn to my good whatever adversity he sends upon me in this sad world.

God is able to do this because he is almighty God and desires to do this because he is a faithful Father.

Q27. What do you understand by the providence of God?

A. The almighty and ever present power of God by which God upholds, as with his hand, heaven, and earth, and all creatures, and so rules them that leaf and blade, rain and drought, fruitful and lean

¹³⁹ Richard Baucham, “Eschatology in the Coming of God” in *God Will be All in All*, 7.

years, food and drink, health and sickness, prosperity and poverty – all things, in fact, come to us not by chance but by his fatherly hand.

Q28. How does the knowledge of God's providence help us?

A. We can be patient when things go against us, thankful when things go well, and for the future we can have good confidence in our faithful God and Father that nothing in creation will separate us from his love. For all creatures are so completely in God's hand that without his will nothing can neither move nor be moved.

The dominant theme running throughout Q1, 26, 27, and 28 centers on God as almighty Creator able to do all things according to his will, all things in heaven and in earth, affecting leaf, blade, body and soul, not by chance, but by his direct will. If we were to select key phrases from each of the answers, a theological thesis concerning the providence of God might read as follows:

[Q1] Not a hair can fall from my head without the will of my Father in heaven [Q1], the eternal Father of our Lord Jesus Christ, who out of nothing created heaven and earth and everything in them, who still upholds and rules them by his eternal counsel and providence [Q26], and ever present power of God by which God upholds, as with his hand, heaven, and earth, and all creatures, and so rules them not by chance but by his fatherly hand [Q27]. For all creatures are so completely in God's hand that without his will nothing can neither move nor be moved [Q28].

What a remarkably ecumenical treatise concerning the providence of God these four Q&A's make. This is no incidental point, for together the above picture of God is not uncommon regardless of faith tradition. However, given what has been said up until this point, from the perspective of science informing theology, it is possible to synthesize all of Q1, 26, 27 and 28 in the eschatological context of the new heaven and new earth. With a contemporary understanding of how the universe works, and

an eschatological understanding of God's purpose for the world, the tension embedded in the catechism between theology and human experience can be resolved.

While a full alternative answer to Q1 has been given, the three remaining questions regarding the providence of God may now be put in alternative context as well. Beginning with Q26 and God, the Father Almighty, creator of Heaven and earth, an alternative answer reads as follows:

Q26. *Alternative Answer*

That the eternal Father of our Lord Jesus Christ, who out of nothing created heaven and earth and everything in them, who upholds and rules creation by his eternal counsel and providence, is my God and Father because of Christ the Son.

I trust God so much, that I believe because of his love for the world, his desire is that every need, including that of my own life, would be met. Nevertheless, beyond this yet incomplete and imperfect world, in anticipation of the new creation, I believe all life will be fully lived.

God is able to do this because he is almighty God and desires this as his purpose for the world because he is a faithful creator.

No revision to the first stanza is necessary as it is tenable in every sense. However, language in the second stanza suggesting that God's provision for the creature is personal and prescriptive is replaced with a view of God's overarching desire to provide for creation. In this respect the impression of direct divine intervention at the personal level, whether to provide or not to provide, is tempered by God's overarching provision for creation. This allows for a perception of God operating at both a micro and macro level, thus acknowledging the sovereignty and mystery of God. Additionally, similar to the first point, the idea of God "[turning] to my good whatever he sends upon me in this sad world" is countered by the view that this

present, incomplete world (universally) will be turned for the good (inclusive of the human being in it) in the new creation. The third stanza is sound in every respect; thus nothing has been changed.

Q27. *Alternative Answer*

The almighty and ever present power of God upholds and governs heaven and earth, providing a sphere of freedom in which creation and creatures evolve such that both fruitful and lean years, food and drink, health and sickness, prosperity and poverty – in fact, life and existence comes to creation by the fatherly hand of the creator.

Consistent with Q26, the problem of a prescriptive God directly orchestrating the fate of the world, inclusive of all creatures, right down to a blade of grass is contrasted by a view of God who provides a sphere of freedom (as understood in an evolutionary and natural sense). The alternative answer agrees with the catechism where it says that, “all things come to us not by *chance*, but by the hand of the father.” However, this last is understood in the context of freedom in which creation operates, meaning within the natural laws of nature where death, life, sickness, health, new birth and extinction are a natural, selective part of the process (for example, see “God & Natural Evil,” also “The Nature of Entropy & Evil” in chapter 3). For this reason *Chance* has been omitted from the alternative answer so as to avoid any confusion with *chance* as it applies to randomness associated with natural selection.

Q28. *Alternative Answer*

We can be patient when things go against us, thankful for when things go well, and for the future we can have good confidence in our faithful God and Father that nothing in creation will separate us from his love. For without the over-arching providence of God no creature could move nor be moved.

Here too, as in Q1, 26 and 27 it is acknowledged that without the providence of God no creature could have existence, no less be moved. However, this is not to imply direct divine intervention of each and every individual creature, rather, God upholds creation in the teleological sense.

Comfort & Faith

Beginning with the first page, and every page thereafter, all attempt has been made to draw science and theology together in context of the Heidelberg Catechism in an effort to provide alternative answers to old questions. What has not been mentioned, and has been saved for last, is the question of faith. Though faith too can be analyzed within a scientific-sociological framework; that is not the intention here. Apart from faith, all that has been said thus far amounts to little more than dead orthodoxy, even as orthodoxy itself is reshaped by science and newer theologies.

We believe that God is the Creator par excellence. What can be said of the future that awaits us, a future we have not seen? Responding to this question concerning the raising of the dead, the apostle Paul exhorts us where he says:

*Now hope that is seen is not hope. For who hopes for what he sees? But if we hope for what we do not see, we wait for it with patience.*¹⁴⁰

There is a direct correspondence between faith and comfort. Where science ends, that is, where the limits of knowledge are reached, faith is all there is, it is all that we can have. So we may say in the end, despite

¹⁴⁰ Romans 8:24b-25.

acknowledging science as a source of revelation, it comes down to faith. I believe because the Spirit of God enables me to believe. Mine is not an unquestioning belief, but a belief full of questions, full of curiosity. At the same time, it is not idle curiosity, but one that patiently places God at the center of our life. It is in wonderment and wondering, that we ultimately worship and glorify God. And, it is in this moment of wonderment that we find our true place under the sun, rooted in firm belief that we will enter into an eternal moment where the sun never fades, never grows cold, but will be with us eternally.

Belief in life after resurrection is not *escapism*, it is pastoral care, care of the soul (the whole person), it is a theology of hope based upon the providence of God who will provide a sphere in which God's creation will function happily. Isaiah's holy mountain is a picture that confounds the order of the day; *the wolf lies with the lamb*. On the mountain, the inharmonious state that has dictated their existence is resurrected into unity, harmony, and peace; a new order, a new day.¹⁴¹

¹⁴¹ Isaiah 11:9, 65: 25

CONCLUSION

From the beginning of this study, science has been a companion to theology in search of understanding about life and the universe before us, not apart from, but in direct response to the Heidelberg Catechism's questions. Most notably, Q1 has been the preeminent question from which all other questions emanate. In chapter one I spoke of a jigsaw puzzle with so many pieces almost fitting, but not quite. The quest was to find a way to speak about scripture, God, nature, humanity and the universe in a way that was unified.

Several chapters and many words later, it is my hope that this dissertation has provided a pathway to that unity. Following the methodology of mutual interaction of science and theology, I believe it can be concluded that two distinct tracks (science and theology) have run in parallel into the future. Science and theology have found, at least in part, a mutual voice giving clarity to the world and creatures that dwell in it. Along this journey, questions posed by the catechism have been examined through multiple lenses. In many cases symmetry between biblical proclamation and scientific investigation has provided a way forward for theological thinking that is in line with a 21st century world-view.

In responding to Q1 and related questions, the thrust of this study has been keyed on resurrection, beginning with that of Jesus Christ, followed by our own and that of the rest of creation in terms of cosmological transformation. Consequently, all that has been discussed has been done in context of God, Creator and Redeemer, calling the universe into existence 13.8 billion years ago. In the context of

providential care, God continues to call until the *last days* run their course and the new heaven and new earth are firmly established. The scope of creation to new creation has been the eschatological horizon of this study. In this respect both resurrection and the providence of God have been addressed in terms of old and new creation, continuity and discontinuity, and Jesus Christ as the first fruits of the new eon whereby death and decay are banished. It is perhaps in regard to comfort, that death and decay, the 2nd law and entropy, have taken on so central an importance in light of science, theology and the catechism.

However, what has risen to the fore, I believe, is the centrality of evolution as the key to understanding both the providence of God and the problem of (so-called) evil. More than this, the magnitude of God's investment in creation, not apart from, but through the incarnation reveals a God rarely spoken of, a God who empties himself of glory and suffers in and with creation for the sake of new creation.

The outcome of taking evolution seriously in context of the catechism's questions is one of grace, gratitude and awareness of the tremendous cost of getting from *there to here*, from the most primitive life form to life as we know it. The writer of Job sums it up well: "Where were you when I laid the foundation of the earth? Tell me if you have any understanding" (Job 38:4).

A model that has served this study well is one that is based on the evolutionary theodicy of Christopher Southgate, what one could call an evolutionary theodicy of divine fellowship and co-suffering of God for the world.¹⁴² When considering the

¹⁴² A truncated, but still fuller outline of Southgate's tenets, central to evolutionary theodicy reads as: a). Acknowledging the goodness of creation in giving rise to all sorts of values. b). Acknowledging pain, suffering, death, and extinction intrinsic to creation. c). Affirming

scientific account of emergence of species and the great cost at which it came, mindful that the reality of the world in its billions of years of evolution has much to tell about God, I can only stand back in awe, in a posture of immense gratitude. It is in wrestling with God and the world that the Heidelberg Catechism's questions remain relevant as ever. Answers to such questions, provisional as they may be, cannot escape the brutal reality of how God does it, how God is a God that allows, and at the point of incarnation, how God participates in the groaning of creation.

When we consider the biblical edict of Genesis 1:31 that creation is "very good," it must be asked, how so, in what sense is it good? Consider the following quote:

"The evolutionary process presents us with the fact of the suffering of myriad creatures (the "ontological problem") and, even worse, the thought that this suffering serves a purpose, in refining species and spurring them on to new and ever more complex and ingenious evolutionary strategies, including those of rationality and consciousness. The victims of evolution, therefore, seem to be merely means to the divine end (the 'teleological problem')." ¹⁴³

As troubling a proposition the above is to the six-day creation account, the evolutionary process nonetheless is a reality, and thus what we are to deal with in terms of God and creation. While science gives us a good understanding of why suffering and death occur, as explained through the 2nd law of thermodynamics and entropy, it tells us nothing as to why God chose to create this way. Given what is known about the 4.5 billion-year evolution of the earth and the subtle rise of

God's co-suffering with every sentient being in creation. d). Taking the cross of Christ to be the epitome of divine compassion. e). Stressing the importance of giving some account of eschatological fulfillment of creatures that have no flourishing in this life. f). Advocating a high doctrine of humanity if divine fellowship with creatures such as ourselves is in any sense a goal of evolutionary creation. Christopher Southgate, *The Groaning of Creation*, 16.

¹⁴³ Ibid., 14.

sentient creatures, it is entirely possible that evolution is the only way open to God. On the other hand, while it is possible to know much about the creatures and universe before us, we can never be sure of what God could or could not do. To do so would impose a limitation on the power of God, and in some sense, make us gods. Having said such, it is best not to speak in absolute terms, but to leave oneself open to scripture, science, and the mystery of God.¹⁴⁴

In coming to terms with creation in the context of a scientific understanding of evolution, the theological truth of God-the-Creator consummating all creation in the risen Christ allows us to place value in creaturely suffering and death. Though death is tragic in the sense that it involves loss of life, it nevertheless is a thermodynamic necessity to biological new life. In this sense, natural death can be understood to have purpose. On the other hand, unfulfilled life is to be lamented, for what purpose could be found in that?¹⁴⁵

Could we ever understand the struggle that ensued in the making of creation? On the altar of evolution scores of creatures creeping along the annals of time are engaged in the drama of evolving to ever higher life forms in an upward call to become all that the Creator would have creation be. This came at a cost, not to you and me, but most particularly to a chain of simple hominin beings, brutes carving out life on the edge of time, a time before life would be fulfilled. Theirs would be *life in process, life for the sake of evolving upward*; these would only know extinction. I

¹⁴⁴ For excellent dialogue on this subject see, Southgate in "Doing Without a Fall From Paradise," *The Groaning of Creation*, 30-35.

¹⁴⁵ *Ibid.*, 8.

am grateful for all that came before me, for the tremendous sacrifice that made it possible for me to be me.

Likewise, who can comprehend the cost of God's co-suffering in the process of evolution, the infinite measure of attention and empathy that an all-powerful, *life-giving* God vested in the process of creation, that God alone was there to witness the high-stakes drama of life for the sake of emerging new life? Who could comprehend the depth of God's love for creation, that the Son, the Incarnate One, would be subject to death and the laws of physics, but only for a time to prepare for all time?

With the bodily-resurrection of Jesus, evolution has come a step closer to final consummation, thus reaching God's end for the world. God has taken us faithfully from *there* (an ancient, pre-history time) to *there*, (a proleptic time of fullness). Yet for you and me it is this time, the now and here, the present creation where we are not our own, but rather, *belong body and soul, in life and in death to our faithful Savior, Jesus Christ*. As all creation groans, it is only in God's purpose for the world that life that finds meaning. On the altar of evolution all belongs to God, humans not the least, as we are with Christ, hidden in God (Colossians 3:3). In this sense, creation might be understood as a sacramental act *blessed* and consecrated by God for the sake of the Son, *as all things were created through him and for him* (Genesis 1: 22-23, 28-30, Colossians 1:16-17, John 1:3). In retrospect, an alternative reading of Q1 has framed comfort and belonging in the full panorama of creation to new creation, not with God as an observer, but rather with God participating as we fully live in the presence of God.

This study began with the premise that science matters. Science has something of importance to say to theology. Theology has something to say not only to science, but also to the world. Theology as it pertains to the Heidelberg Catechism matters. In our attempt to provide alternative answers we seem to have come full circle in employing mutual interaction of science and theology, a process that was not totally alien to the Reformers. The science of their day concerning the physicality of the universe (as is our concern too) was not quantum physics or other natural sciences known today, rather, it was the astronomical study of their time. The tension between *sola scriptura* and what we know of the natural world is not altogether a 21st century phenomenon. Perhaps more so than his counter-parts, Johannes Kepler exemplified the interaction of science and theology where he acknowledged the impact of science on scripture and thus the interaction that follows. In her book, *Science and Theology in the Reformation*, Charlotte Methuen cites Kepler on this subject whereupon reflecting on his own words he hopes to have provided the following:

[To] have satisfied those with religious scruples, provided that they approach their decisions at this point with sufficient intelligence and knowledge of astronomy for the glory of God's works, which are themselves visible, to be safely entrusted to our protection.¹⁴⁶

To the above Methuen adds, "For Kepler, the distinction between the Books of Scripture and Nature reveals that they are intended by God to witness to different aspects of God's nature and work."¹⁴⁷ Further, of Kepler, Methuen says, "He was a

¹⁴⁶ Johannes Kepler, *Mysterium Cosmographicum*, cited in *Science and Theology in the Reformation: Studies in Interpretations of Astronomical Observation in Sixteenth Century Germany*, ed. Charlotte Methuen (London: T&T Clark Publishing, 2008), 88.

¹⁴⁷ *Ibid.*, 88.

Reformer whose reforms were to be measured by the *liber naturae* rather than the *liber scripturae*. He was a Reformer whose understanding of *sola scriptura* ended with *sola natura* – and who, despite his appeals to ancient authority, was aware that he had produced an *astronomia nova* and was prepared to justify that break with tradition.”¹⁴⁸

While not stating it as forcefully as Kepler in his *Mysterium Cosmographicum*, the point nonetheless is the same. Throughout this study every attempt has been made to differentiate theological truth of scripture from truth (as we provisionally understand it) concerning the universe as God has made it and continues to govern it. Though the “break with tradition” is not nearly comparable to that which Kepler surmounted, this study, nevertheless, represents an attempt to counter continued reluctance to embracing the sciences, or worse yet, willfully ignoring them in light of how they might illumine our understanding of God as Creator, and humanity and the universe as God’s creation.

With the above in mind I return to the statement made in the Introduction. I said that I wished I had answers that made sense of the tragedies that caused so much suffering and pain, answers that were truthful and didn’t seek to paint a rosy picture of God that is detached from God’s ongoing activity for creation. We have worked toward that end, and in the process have learned something about how God creates and sustains the cosmos and creatures. Life, death, cosmology, thermodynamics, entropy, evolution, anthropology, sin and moral consciousness have been brought into dialogue with the catechism. Would any of the findings have made a difference

¹⁴⁸ Ibid., 93.

for the woman who told me that she lost her husband “*to God*” – “*he took him*,” she said. “Why did he take him?” She and her husband were obedient to God, she assured me “It must have been God’s will,” she insisted. “God must have a reason,” the woman asserted, with a troubled look on her face. Nevertheless, despite desperately wanting to accept God’s will, she grieved the loss of her husband. She was lonely, *God took him*.

And then there was the immigrant family who were torn apart, the detainee’s wife seated opposite him, and the pastor looking on. There they sat; a circle of six inter-locked hands praying, appealing to God’s mercy; save him! A grieving wife asked the pastor why it was that God had chosen to separate them. Desperate to find a reason why life turned out as it did, the woman turned to the pastor, saying, “God must have a reason; God knows what is best. “We have to obey,” the woman assures or wants to convince the pastor, or possibly herself. No anger, no resentment, no disappointment toward God, only faith, an incredible, amazing too-real faith to call *blind faith*. The man was deported without seeing his wife one last time, despite prayer, despite appealing to God. It must have been God’s will, we might conclude, *for not a hair can fall from our head without the will of our father in heaven*; the catechism says so. Was the God of the catechism not listening, or was there simply a misunderstanding of God’s acting in the world?

In the case of one, the immigrant wife, there was time for follow up, for thoughtful conversation and pastoral care that differentiated the providence of God from the problem of sinful institutionalized policies that were at the root of the family’s separation. In the case of the other, the woman who lost her husband, the pastor

never saw her again. The image of God she had most likely was engraved forever in her head; what else would God take from her?

The reason the woman lost her husband had absolutely nothing to do with God, there was no direct divine intervention calling for the man's life; no "time's up!" Biological evolution, entropy and the second law of thermodynamics took its toll on the man's organs as they became increasingly disordered and ceased to function. Any talk of the providence of God, the Bible, science, or any other well meaning words would have to wait for another day. What was needed in her time was for someone to sit and hold her hand, maybe even cry a little with her; all things the pastor could do.

While the above pastoral vignettes are only two situations, they nonetheless are not unlike so many others that fill the space and time of the pastor and the pastorate. The resounding question after listening to people is, what could have been different for them had they been taught differently about God and the world? Repair work is difficult; undoing what has been done (or said) is much more difficult and complex than laying a proper foundation from the start. The time for catechesis that acknowledges the world as God has created it is at the start of the Christian life, regardless of what age one enters into it. This is the task of the church. It will require new names and new ways of conveying new theologies in order for the faithful to have a new understanding of God in and for the world as a faithful creator. Creative mutual interaction of science and theology is a process that works toward that end.

In reflecting on all that has been said, the writer of Ecclesiastes comes to mind where he claims in the twelfth chapter, “Of making many books there is no end, and much study is a weariness of the flesh” (Eccl. 12:12). Yet, much study is required in search of truth. And so here we end, concluding with the understanding that as the Heidelberg Catechism was intended to provide answers that offer a measure of comfort for the believer, it must continue to function as such in our day. This is the task, challenging as it may be. Nevertheless, every endeavor must be made to find a way to reclaim comfort for the believer not over and against scripture or science, but in fruitful interaction of the two. It will be this way until creation is complete. To use the apostle Paul’s words, “For now we see in a mirror dimly, but then face to face. Now I know in part; then I shall know fully, even as I have been fully known” (1 Corinthians 13:12).

TABLE OF ALTERNATIVE ANSWERS

Old Questions: Alternative Answers

Question #1

Q: What is your only comfort in life and in death?

A: That I am not my own, but belong body and soul, in life and in death to my faithful Savior, Jesus Christ.

He has fully paid for all my sins with his precious blood, and has set me free from the tyranny of the devil. He also watches over me in such a way that not a hair can fall from my head without the will of my Father in heaven: in fact, all things must work together for my salvation.

Because I belong to him, Christ, by his Holy Spirit, assures me of eternal life and he makes me wholeheartedly willing and ready from now on to live for him.

Alternative Answer

A: *That I am not my own, but in my whole being, belong to my faithful Savior, Jesus Christ, not only in this lifetime only, but eternally, having escaped death in resurrection with him.*

With his own precious blood, he has fully overcome my sins by substituting his righteousness for my unrighteousness. More than this, in his resurrection he has set me free from tyranny of death. As he is, so also shall I be, in fact, by the eternal plan of my Father in heaven, all things will work together for salvation of the world.

Because I belong to him, Christ, by his Holy Spirit, assures me of eternal life whereupon he not only gives me the desire to live for him in this lifetime, but also the ability to fully do so upon resurrection to new life.

Question # 26

Q: What do you believe when you say, "I believe in God, the Father almighty, creator of heaven and earth?"

A: That the eternal Father of our Lord Jesus Christ, who out of nothing created heaven and earth and everything in them, who still upholds and rules them by his eternal counsel and providence, is my God and Father because of Christ the Son.

I trust God so much that I do not doubt he will provide whatever I need for body and soul, and will turn to my good whatever he sends upon me in this sad world.

God is able to this because he is almighty God and desires to do this because he is a faithful father.

Alternative Answer

A: *That the eternal Father of our Lord Jesus Christ, who out of nothing created heaven and earth and everything in them, who upholds and rules creation by his eternal counsel and providence, is my God and Father because of Christ the Son.*

I trust God so much, that I believe because of his love for the world, his desire is that every need, including that of my own life, would be met. Nevertheless, beyond this yet incomplete and imperfect world, in anticipation of the new creation, I believe all life will be fully lived.

God is able to do this because he is almighty God and desires this as his purpose for the world because he is a faithful creator.

Question # 27

Q: What do you understand by the providence of God?

A: The almighty and ever present power of God by which God upholds, as with his hand, heaven and earth and all creatures, and so rules them that leaf and blade, rain and drought, fruitful and lean years, food and drink, health and sickness, prosperity and poverty – all things, in fact, come to us not by chance but by his fatherly hand.

Alternative Answer

A: *The almighty and ever present power of God upholds and governs heaven and earth, providing a sphere of freedom in which creation and creatures evolve in both fruitful and lean years, food and drink, health and sickness, prosperity and poverty – in fact, life and existence comes to creation not by chance, but by the fatherly hand of the creator.*

Question # 28

Q: How does the knowledge of God's creation and providence help us?

A: We can be patient when things go against us, thankful for when things go well, and for the future we can have good confidence in our faithful God and Father that nothing in creation will separate us from his love. For all creatures are so completely **in God's** hand that without his **will** they can neither move nor be moved.

Alternative Answer

A: *We can be patient when things go against us, thankful for when things go well, and for the future we can have good confidence in our faithful God and Father that nothing in creation will separate us from his love. For without the overarching providence of God no creature could move nor be moved.*

Question # 45

Q: How does Christ's resurrection benefit us?

A: First, by his resurrection he has overcome death, so that he might make us share in the righteousness he obtained for us by his death.

Second, by his power we too are already raised to a new life.

Third, Christ's resurrection is a sure pledge to us of our blessed resurrection.

Alternative Answer

By his resurrection Christ has not only overcome his own death, but also that of the universe, wherein we might share in the righteousness he obtained for us by his death, in part now and in full upon our resurrection. As such, Christ's resurrection is a sure pledge to us of our resurrection.

Question # 57

Q: How does, "the resurrection of the body" comfort you?

A: Not only will my soul be taken immediately after this life to Christ its head, but also my very flesh will be raised by the power of Christ, reunited with my soul, and made like Christ's glorious body.

Alternative Answer

A: *Not only will the memory and history of my life be taken to Christ upon death, but also by Christ's power, at the moment of resurrection, the substance of my body will be transformed and made like Christ's imperishable body whereupon I will live a fulfilled life.*

Question # 58

Q: How does the article concerning “life everlasting” comfort you?

A: Even as I already now experience in my heart the beginning of eternal joy, so after this life I will have perfect blessedness such as no eye has seen, no ear has heard, no human heart has ever imagined: a blessedness in which to praise God.

Alternative Answer

A: *Even as I already now experience in my heart the beginning of eternal joy, upon resurrection and the new creation, all humanity will be reconciled, having perfect blessedness such as no eye has seen, no ear has heard, no human heart has ever imagined: a blessedness in which we will praise God.*

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