In the Darkness Grows the Green:
The Promise of a New Cosmological Horizon of Meaning Within a Critical Inquiry of Human Suffering and the Cross

by

Catherine A. Wright

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Abstract
Humans have been called “mud of the earth,” organic stardust animated by the Ruah of our Creator, and microcosms of the macrocosm. Since we now understand in captivating detail how humanity has emerged from the cosmos, then we must awaken to how humanity is “of the earth” in all the magnificence and brokenness that this entails. This thesis will demonstrate that there are no easy answers nor complete theological systems to derive satisfying answers to the mystery of human suffering. Rather, this thesis will uncover aspects of sacred revelation offered in and through creation that could mould distinct biospiritual human imaginations and cultivate the Earth literacy required to construct an ecological theological anthropology (ETA). It is this ecocentric interpretive framework that could serve as vital sustenance and a vision of hope for transformation when suffering befalls us. Embracing an Earth-centred context for engaging human suffering could allow believers the ability to recognize the sacred depth and richness of meaning in the cosmos – including its violent, destructive processes – and reconnect sufferers to

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the transformative grace, the green, laying hidden in the darkness of their experience of suffering.\textsuperscript{iv}

\textsuperscript{iv} This author is indebted to Magdelna Gomez’s imagery from her poem “In Darkness Grows the Green” in \textit{Community of Religions: Voices and Images of the Parliament of the World Religions}, ed. W. Teasdale and G.F. Cairns (New York, NY: Continuum, 1996), 76.
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To the many wise and passionate, fellow sojourners open to the great cosmic adventure
Thank you to all those who have sustained, encouraged, challenged, and loved me and my project
into existence ...

know that I am, and will always be, immensely grateful
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Introduction

Classic, pre-Copernican and Newtonian inspired theological anthropologies attempted to articulate the human story in ways that made sense in their own particular moment, and this is reflected in the questions they asked and the answers they found.\(^1\) Today we dwell in a post-Copernican, post-Newtonian, evolutionary, and organic world but we are still living out of older, classic cosmological constructs, especially in how we describe and interpret human suffering.\(^2\) Our evolutionary context has yet to become the living matrix out of which our understanding of God, creation, and the human creature emerges – including the experience of human suffering.\(^3\) Contemporary believers also struggle to make sense of their suffering because our planet is in crisis due to the actions of humanity. Earth’s life systems are destabilizing due to human behaviours which in turn are intensifying human suffering, especially for the most vulnerable. Thus, the realization of Earth as a cosmic, complex, interdependent, living, evolutionary entity under siege by the human species, necessitates that we ask new theological questions, such as: how does cosmogenesis impact the way theology describes God and human existence; what impact do these descriptions have on our interpretations of suffering; how does cosmogenesis inspire the metanoia needed to realize the just, loving, and mutually empowering relations that will re-stabilize our planetary

\(^1\) Conradie, 2-4.

\(^2\) For example, Thomas Berry writes of how economics is caught up in a Newtonian mechanistic world view (cosmology) and this only allows us to envision humanity as the managers of the world with Earth contributing or adding nothing (as an object). Thomas Berry, *The Dream of the Earth* (San Francisco, CA: Sierra Club Books, 1988), 78. Brian Swimme also attends to this when he speaks of our current “cultural schizophrenia,” our “diseased mindscapes” as the “most terrifying pathology in the history of humanity.” Brian Swimme, *The Universe Is a Green Dragon: A Cosmic Creation Story* (Santa Fe, N.M.: Bear, 1985), 17.

\(^3\) Thomas Berry affirms this when he indicates that we must “awaken to the numinous powers present in the phenomenal world” and create a more functional cosmology. Berry, *Dream*, 211. To achieve this, Berry indicates that our attentiveness to the “curvature of the emergent universe” will enable humanity to create this new cosmology. Ibid., 213.
communities and bring a deep abiding peace? This thesis desires to contribute to theological discourses that are asking these questions and attempting to find meaningful answers. Suffering will always be interpreted and thus, this thesis is not attempting to indicate that there are definitively or ultimately right or wrong, distorted or accurate, or dysfunctional or functional responses to suffering. This is too simplistic and idealistic; what is asserted is that some classic understandings of suffering (e.g., suffering as punishment for sin) have compounded the suffering of some individuals, and in light of cosmogenesis, these do not make sense and need to be addressed. This thesis desires to allow this new cosmological horizon to affect our theological imaginations in order to offer new, perhaps more adequate or coherent descriptions and interpretations of human suffering. The inquiry that captivates my imagination in this thesis is neither the existence of suffering nor the exposition of a systematic rational solution for it (as in discussions of theodicy).[^4] Instead, my primary area of interest is the ways in which contemporary theologians coherently and faithfully describe, understand, and interpret experiences of human suffering in a twenty-first century evolutionary world perfused with incalculable levels of suffering, violence, and death spanning 13.8 billion years of cosmic history. It will be proposed that a neglected or overlooked element within contemporary theological conversations concerning human suffering is the pain, suffering, and death that existed prior to *Homo sapien sapiens* and continues to be integral and necessary attributes of our evolutionary world. This thesis also affirms in both content and method, that when theologians serious attend to the suffering inherent to our evolutionary world some sufferers will be able to continue to believe in a God.
who is “creative, redemptive and all loving” even in their darkest hour.\(^5\) What will be offered are numerous ways in which cosmogenesis promises a novel way of forming Christian biospiritual imaginations that are able to envision a new ecologically grounded theological anthropology. This is a vital precursor for seriously attending to the suffering inherent to cosmogenesis and interpreting suffering more coherently and compassionately in an evolutionary world.

**Classic Cosmology and Its Dysfunction**

The prevailing, classical, Western understanding of how and why the universe came to be, how human beings fit into the grand odyssey of the universe, and whether there is a direction or purpose for creation, requires re-imagination in light of modern scientific understandings of our world.\(^6\) Rosemary Radford Ruether and Elizabeth Johnson both argue that this prevailing Western cosmology understands creation as a mechanical, static, purely material universe, the Creator of this universe as a male, apathetic, “Unmoved Mover” who is radically separate from the universe and humanity as the sentient, rational beings made in the image of God who are the dispassionate lords over creation.\(^7\) The roots of this dysfunctional cosmology that extends back to the dualism and anthropocentrism advocated by Plato and Aristotle, intensified when it was coupled with the Hellenistic vision of an

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\(^6\) This Western understanding of the world is not limited geographically to the West but is found in any region that has essentially adopted the particular cosmological vision and values associated with Western mindscapes.

ordered, materialistic and individualistic world and the power of Roman authority under imperial law. Thus armed with an anthropocentric worldview and the power and structure to enforce it, human supremacy and well-being was stressed to the detriment of all other planetary life forms and systems.

Humanity’s erroneous understanding of being separate from the created order may have begun with the integration of classical anthropocentric philosophy within spiritual traditions but, according to Thomas Berry, by the fourteenth century it had escalated. The immense fear and sense of helplessness experienced during the great plagues in Europe had stimulated a disenchantment with, and resentment of, the fragility of the human condition. This context of fear and discontent fuelled the scientific revolution and Western civilization’s growing confidence in the saving power of science to control the cruel and destructive forces

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9 Contextual and liberation theologies also illustrate that is a stratification and hierarchy of worth within the human species. Supremacy and well-being is only attributed to the ruling race (white), class (affluent), and gender (male) while human beings that fell outside of this privileged group, such as those with disabilities, women, indigenous peoples, and the poor, are exploited, oppressed, or in some cases eliminated. See: Irene Diamond and Gloria Feman Orenstein, Reweaving the World: The Emergence of Ecofeminism (San Francisco: Sierra Club Books, 1990); Leonardo Boff, Cry of the Earth, Cry of the Poor, trans., Phillip Berryman, Ecology and Justice Series, eds. Mary Evelyn Tucker et al (Maryknoll, NY: Orbis Books, 1997); Jean Vanier, Community and Growth: Our Pilgrimage Together (Toronto: Griffin House, 1979).

10 In The Dream of the Earth, Thomas Berry indicates that the confusion and insecurity caused by the events of the Black plague – “a central traumatic moment in Western history” – ushered in a “transitional period” that moved religious and secular thought in two directions: i) redemption out of the tragic world, and ii) greater control of the physical world. Berry, Dream of the Earth, 125. Also, see Thomas Berry, The Great Work: Our Way into the Future, 1st ed. (New York: Bell Tower, 1999), 77-78.

11 The greatest pandemic in Europe was the Black Death which reached its apex in the mid fourteenth century. However, the plague epidemic spanned from 1346 until 1844 and was present in some European location every year during this period. This disease attacked all ages, races, and economic levels but struck most viciously in children and the poor. This biological and medical phenomenon affected all circles of social life, economics, politics, religion, health, and is even called the most important ‘engine of change’ between the 14th and 17th century. It indelibly changed the social fabric of society and how God, disease, church, government, and the healing arts, including the body, are perceived. See: J. N. Hays, “Epidemics and Pandemics: Their Impacts on Human History,” (Santa Barbara California: ABC-CLIO, 2005), 41-59.

12 Berry, Dream of the Earth, 125.
of nature. It is not coincidental that the germination of the Scientific Revolution\textsuperscript{13} occurs within a period of religious upheaval manifest in the sixteenth century Protestant Reformation and the Thirty Years War.\textsuperscript{14} This destabilizing matrix fostered a rigorous, experimentally-based re-examination of scientific principles as well a re-imagination of theological principles describing humanity’s relationship with the rest of creation and the Creator. Both scientific and theological movements cultivated a detachment from and distrust of the material world as a living source of physical or spiritual health or wholeness. By the nineteenth century our anthropocentric imaginations had become entranced with an industrial, extractive and consumptive economy, and this sanctioned the use of technological innovations to change the very face of Earth and the natural forces acting within it. Modern Western industrial society relinquished its connectivity to, and understanding of how it is embedded within, Earth and allowed any experience of creation to be mediated by human engineers with great technical proficiency. Thus, Western society arrogantly came to believe that the world was better off under the control of human technicians of science and as a result, the classic, dysfunctional cosmology that reinforced alienation and apathy dominated the imaginations of humanity.

This anthropocentric\textsuperscript{15} cosmological framework relegates creation and all those associated with Earth to a position of being merely an object or machine, and a commodity to

\textsuperscript{13} The Scientific Revolution was a long, complex period spanning from 1484 to 1716 but its public beginnings crystallized around discoveries occurring circa 1543. During this time Polish astronomer Nicholas Copernicus (1473-1543), Flemish anatomist Andreas Vesalius (1514-1564), French philosopher Rene Descartes (1596-1650) and British mathematician Isaac Newton (1642-1727) made many discoveries that challenged the authority of Aristotle (384-322), Ptolemy (c.90-168) and Galen (c.130-201). Carolyn Merchant, \textit{The Death of Nature: Women, Ecology and the Scientific Revolution} (San Francisco: Harper & Row, 1980), x-xi.

\textsuperscript{14} This period of conflict was documented as extending from 1618 to 1648. Peter H. Wilson, “The Thirty Years War,” \textit{Historically Speaking} 8, no. 1 (September/October 2006): 24.

\textsuperscript{15} Androcentric and eurocentric are two other adjectives that accurately describe the classic Western anthropocentric cosmology. These both illustrate the privilege held by European and North American white
be exploited. Western Christianity was not immune from the effects of this dysfunctional cosmology, and this displaced creation from “vigorous and creative” theological reflection, relegating it instead to the margins as either a corrupt material substance to be avoided (or denied in the case of one’s own embodiment) or a stage for the great drama of human salvation. This has had numerous ramifications: the diminishment of a sense of males in this worldview. Thus, the term “humans” cannot be understood as a homogenous category with every human possessing equivalent power and worth. Rather, this heterogeneous group that constitutes Homo sapiens sapiens is organized hierarchically via the interdependent categories of race, gender, class, and sexual orientation. However for this thesis, the predominant category that will be explored is the binary of human and other-than-human.

Ecofeminists such as Rosemary Radford Ruether, Elizabeth Johnson, and Heather Eaton would qualify this by indicating that power relations in human social systems also place dominant, affluent, white males as the sole possessors of moral agency and intrinsic worth. In this system of power relations, those outside this category (women, people with disabilities, those living in poverty, Earth) are lacking full subjectivity, agency, and worth. Thus they argue that racial, economic, political, and gender structures of social domination (hierarchies of male over female, owner over worker, rich over poor, abled over disabled) reflect the pattern of domination of other-than-human nature by humanity. See: Rosemary Radford Ruether, New Woman/New Earth: Sexist Ideologies and Human Liberation (New York, NY: Seabury Press, 1975); Elizabeth A. Johnson, Women, Earth, and Creator Spirit, Madeleva Lecture in Spirituality (New York, NY: Paulist Press, 1993); Heather Eaton, Introducing Ecofeminist Theologies, ed. Mary Grey, Lisa Isherwood, and Janet Wootton, Introductions in Feminist Theologies Series (New York, NY: T & T Clark International, 2005).


Michael Dowd argues that from the creation stories of Genesis humanity has come to understand that a) we were placed on a fixed, ready-made Earth over which we were to have dominion, b) we were made in the image of God who was transcendent to creation, c) humanity was called to a spiritual relationship with God (and this was the only thing that mattered), d) other living things were only matter and not spiritual thus were not as valued as humanity, e) nature was corrupt (due to Fall) but God would eventually restore creation to its
urgency to address the concerns of the Earth within religious thought and ritual; the advocacy of a passive, spiritual interiority\textsuperscript{20} that promoted a false sense of detachment from one’s own embodied, relational selfhood as well as an apathy towards the material needs and suffering of the “other” including the exploitation and destruction of Earth’s life systems; the cooperation of religion in the uncritical and militant advancement of the goal of avoiding all perceived suffering that has left humanity unable to articulate and respond to the many forms of suffering; the erosion of any sense that a Christian way of life is relevant in an evolutionary world.\textsuperscript{21}

Nevertheless, there has been a gradual shift in Western consciousness towards a new dynamic, interdependent, and organic understanding of Earth and this new understanding of the cosmos assigns theologians today with the task of speaking coherently of faith in a God who can bring life even out of the chaos of cosmogenic and anthropogenic suffering.\textsuperscript{22} We dwell in a complex, evolutionary reality and this challenges classic, purely anthropocentric, accounts of suffering within theology that are grounded in a dysfunctional cosmology. A

\textbf{New Cosmology: Cosmogenesis}

Recently, a new, functional cosmological story is emerging that can coherently intertwine the empirical data offered by modern science with the sacred wisdom

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\textsuperscript{20} Beverly Wildung Harrison accentuates how the \textit{androcentrism} in classic theological constructs lead to the sanctification of static and passive qualities, the equating of spirituality with non-intervention and contemplation, and the interpretation of life-sustaining activities in daily life (undertaken by women) as mundane and “unimportant religiously.” Beverly Wilding Harrison, “The Power of Anger in the Work of Love: Christian Ethics for Women and Other Strangers” in \textit{Making the Connections: Essays in Feminist Social Ethics}, ed., Carol S. Robb (Boston, MA: Beacon Press, 1985), 9 These are implications of embracing the distorted classic cosmology and do not authentically reflect the experience of women.

\textsuperscript{21} Berry, “Christianity’s Role in the Earth Project,” 132-133.

\textsuperscript{22} Douglas John Hall, \textit{The Cross in Our Context: Jesus and the Suffering World} (Minneapolis, MN: Fortress Press, 2003), 186.
encapsulated within faith traditions. The task for scientists and theologians alike is to offer the language, images, and metaphors that enunciate this new sacred horizon of meaning that seriously accepts creation as a book of revelation and listens to the marginalized voices in our planetary community. Thanks to modern scientific discoveries, humanity has come to know the vast age, size, and complexity of the universe as well as how uncertainty, ambiguity and vulnerability are vital components of the continually creative, unfinished universe. Humans are also becoming able to articulate how evolutionary forces have influenced, and continue to shape, the intertwined and interdependent continuum of life extending from the macrocosmic and galactic down to the subatomic and quantum dimensions of life. This has gifted humanity with the data to be able to describe creation as an evolutionary, irreversible, “cosmogenetic process” rather than a cyclical, static, singular, human-centred solar system. This new understanding of creation is the foundation of the new, more functional cosmology defined as cosmogenesis. This term can be defined as the ever-unfolding, irreversible, costly, biospiritual universe story, or a creation narrative that includes both empirical meaning derived from scientific data and sacred meaningfulness endowed by the spirituality of faith traditions. Cosmogenesis reflects a novel relation of cosmos and genesis; the universe can be understood as both a snapshot (a compilation of particular, singular, momentarily, static events of being or cosmos) as well as digital and

23 Berry, Dream of the Earth, 123.


26 Some, such as Richard Dawkins and Stephen Gould, would argue that cosmogenesis is not a “sacred story” and should only be understood using the data offered by science. This author and many of the authors offered in this thesis, begin with the presumption that a good, creative, and loving triune God created the world and is immanently present and working within the unfolding universe. Thus, the term ‘biospiritual’ reflects this author’s commitment to the coupling of the biological and spiritual dimensions of cosmogenesis.
video streaming (life is a continuous unfolding movement of creative emergence – becoming – or \textit{genesis}). Since cosmogenesis is a sacred narrative and encompasses both theological concepts of \textit{creatio ex nihilo} (singularity) and \textit{creatio continua} (dynamism), then Earth, as an emergent entity from the creative processes of cosmogenesis, is not only a biospiritual entity and source of divine revelation, but also the dynamic context for understanding the four traditional sources for theological reflection: scripture, tradition, reason, and experience.\footnote{Each of these sources of revelation can be represented within the two dimensional Wesleyan Quadrilateral. However, cosmogenesis re-imagines this visual relationship and offers a model of a Wesleyan “Sphere.” In this model, each of the four sources acts more like a tectonic plates – e.g., differentiated and yet fluidly interacting with each other. Each interactive and interdependent aspect of the Wesleyan Quadrilateral is firmly rooted within the larger context of meaning (the “sphere”) that represents Earth. See Appendix A.}

Thus, the immense age, size, diversity, subjectivity, and connectivity of the universe demands the repositioning of the human story alongside other, much older narratives in the \textit{odyssey} of the universe;\footnote{Carl Sagan’s cosmic clock, a model which plots the universe’s entire fifteen billion year history (closest numerical approximation of the universe’s age at the time of publication. It has been updated since then to 13.8 billion years) within one calendar year, eloquently and provocatively demonstrates that the entire recorded history of humanity is situated within the last ten seconds of December 31st. This evidence supports a repositioning of humanity within the Earth community. Carl Sagan, \textit{The Dragons of Eden: Speculations on the Evolution of Human Intelligence} (New York: Random House, 1977), 14-17.} humanity is not the zenith of creation but the “being in whom this grand diversity of the universe celebrates itself in conscious self-awareness.”\footnote{Berry, \textit{Dream of the Earth}, 198.} Thus, other-than-human and human beings are subjects in, and contributors to, the unfolding story of cosmogenesis, regardless of species, gender, race, economic status, or ability.\footnote{Eaton, \textit{Introducing Ecofeminist Theologies}, 102.} This new appreciation of role and purpose of other-than-human subjects in an unfinished universe will affect how theologians engage with human suffering today.

This thesis will consider the ways in which an appreciation and critical reading of the biospiritual narrative of cosmogenesis can cultivate a distinct Earth literacy within both science and theology. It will also examine how this form of literacy offers new Earth-centred
language, imagery and metaphors with which to construct of an integrative ecological, theological and anthropological framework for understanding the relations between God and a universe that includes human beings. Theological anthropologies that ignore both humanity’s emergence from the creative processes of cosmogenesis and Earth as a source of divine revelation are insufficient. Likewise, ecological anthropologies that do not engage the numinous dimension of the cosmos and ignore the sacred animating presence and activity of God in the emergence of novelty are also insufficient. Both of these assertions will be addressed and supported in Chapter Four. To affirm an ecological theological anthropology (ETA) that appreciates the polyvalent set of relations between God and the countless created subjects in our ancient, enduring, 13.8 billion year old family history does not denigrate classic, anthropocentric theological anthropologies nor does it suggest that an ETA is completely disconnected from traditional interpretations of God, creation or humanity. Rather, an ETA utilizes an ecological hermeneutic of retrieval and suspicion to critique the narrowing of our purviews within traditional theological anthropologies (i.e., anthropocentrism) and re-discover overlooked theological sources, ideas or language. This re-discovery will enable humanity to imagine new and faithful ways of describing God’s creative, redeeming, and loving relationship with the cosmos and all of Earth’s inhabitants. This thesis asserts that a cosmology that makes Earth the primary referent and context for theological anthropology will allow Earth’s violent moments to teach us how to participate creatively and compassionately in the wilderness of the evolutionary world about us.  

31 Berry, The Great Work, 51.
be cultivated and this may well comfort, sustain and transform human sufferers and those called to compassionately accompany them.

Our New Context for Engaging Human Suffering

In contemporary society, the context for theological engagement with the mystery of human suffering has changed. Our empirical knowledge of our ancient and ongoing story of becoming, which encompasses the fecundity and cruciformity inherent within this profoundly creative process as well as the unparalleled scope of suffering currently being inflicted by humanity upon Earth’s life systems, has confronted Christian ethics with how insufficient some classical Christian language, images and metaphors are for describing, interpreting, and responding to human suffering in the twenty-first century. Personal and immediately-lived experiences of global and planetary sacrifice and suffering were unknown to classic theologians such as Augustine, Aquinas, Scotus or the theologians of the Council of Trent. It is true that these individuals experienced the acute “death” of Roman civilization and the threatened eradication of the human population due to the plagues but even if they had a sense of the impending doom of world order and society as they had come to know it, we witness to it happening on a planetary and not just a local scale, and we know the intimate details of how it is happening and why. Since the middle of the twentieth century, humanity has lived under the very real threat of global nuclear annihilation that could destroy the entire planet and all its life systems, and thus, we have confidence in the science of the destruction at a level that they could not know. Another vital difference is that they did not possess the widespread communication systems that bring distant natural disasters and human acts of violence immediately to a person’s sphere of experience in graphic detail. When a volcano erupts, a crude oil tanker leaks, a hurricane hits, a terrorist detonates a bomb
in a crowd of spectators, or a nuclear power plant burns after a blast in one of its reactors—thanks to advancements in global media, we immediately see, hear, and know about it and its unfolding and devastating consequences. Concurrently, we come to experience first-hand how these occurrences affect the weather, economics, politics and daily activities within our own bioregion perhaps thousands of miles away from the epicentre of the event. Thus in a globalized, technocratic world, theological descriptions and interpretations of human suffering need to be engaged in new ways.  

This thesis will examine how cosmogenesis, as a new cosmological horizon of meaning, speaks boldly to the presence and necessity of violence and destruction within the continuously unfolding and meaningful universe story without either justifying the anthropogenic suffering experienced by the most vulnerable or tolerating the cultural ennui and paralysis that prevents rectifiable forms of suffering from being mitigated. One aspect that will be revealed is the way every event in this cosmogenetic story contributes to the evolution of that story, and as such, unavoidable pain, disintegration, suffering, predation, extinction, and death must be engaged as serious elements contributing to the fecundity of cosmogenesis. This serious engagement will allow some human suffering to be interpreted as “essentially creative in the larger arc of its unfolding.”

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32 This thesis will offer a “critical remembrance” of classic interpretations of suffering. This term and the imperative of its use was articulated by Douglas John Hall at the 2013 Cousland Lecture at Emmanuel College, Toronto School of Theology (October 16, 2013) entitled “The Future of the Church.” Here Hall indicated that we need to connect with the roots of Christian faith; however, this must be done in a critical manner. Thus, critical remembrance requires a thorough analysis, not a blind acceptance, of the insights offered by classic constructs and if they are unredeemable (too enmeshed within the classic cosmology), new terms, constructs, and ideas must be imagined.

33 Necessity, in this case, means that the future events (e.g., formation of water molecule) required the disintegration and loss of identity of the antecedent form (e.g., ‘loss’ of identity as a hydrogen atom). The prior events were necessary because the future moments are dependent on the past events. Thus with tragic, human experiences of loss (e.g., the loss of a child), the necessity of the event does not refer to how the event is part of a bigger, cosmic plan (e.g., God has deliberately intended the death of this child as a part of God’s bigger plan for creation); rather that this past event contributed to the formation of the mother in the present moment.

34 Berry, *Dream of the Earth*, 217.
Today, people of faith are struggling to understand their own place of belonging within a globally interconnected, evolutionary world, and to reconcile their belief in God who is Love with their personal or communal experiences of death, domestic violence, terrorism, the diminishment of their bodies, suicide, cancer, and many more moments of sacrifice and suffering in their daily lives. Cosmogenesis and our new understanding of its inherently violently creative processes inspires theological engagement of human suffering to journey beyond the parameters of purely expiatory, and anthropocentric, interpretations. The tensions between violence and creativity, sacrifice and surprise, growth and extinction, ambiguity and stability is not yet sufficiently explored within theology, but the new acuity offered by a new cosmology will lead to pronounced theological reflection on violence, destruction, and suffering beyond that implied in the myth of the Fall and other classical constructs. As a result of this shift in consciousness made possible by cosmogenesis, the microcosmic engagement of human suffering on a personal and individual level can be intimately connected to, and held in a dynamic tension with, the macrocosmic engagement with sacrifice, suffering, and grace in the sacred universe story and more specifically, Earth’s life systems.

One vital consequence of making cosmogenesis the new context for theological engagement with the mystery of human suffering is that it offers Christianity new ways to critique distorted contemporary convictions concerning suffering. For example, the dysfunctional classic anthropocentric cosmology pervading Western society suggests that

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35 For example Thomas Berry, one of the important midwives of ecotheology in the 1980s, did not systematically address this aspect of the universe story. Only in the final chapter of several of his texts does he explicitly engage the cruciformity of cosmogenesis. See “The Cosmology of Peace” in ibid., 216-223 and “Sacrifice and Grace” in Thomas Berry and Thomas E. Clarke, Befriending the Earth: A Theology of Reconciliation between Humans and the Earth (Mystic, CT: Twenty-Third Publications, 1991), 131-142. Also (but with less emphasis) in “Moments of Grace,” in Berry, The Great Work, 196-201.

36 Berry, Dream of the Earth, 216.
suffering does not exist (denial), or that some suffering is justifiable due to assumptions that privileged individuals or groups make about the moral worth or character of individuals, classes, races, or gender groups dwelling outside the small circle of privilege (discrimination), or that suffering can, and should, be always avoided via technological innovation and thereby made controllable (delusions of mastery). Biological death is also held to be a great evil to be avoided at all cost, or conversely, as a viable treatment for the experience of suffering, especially concerning those diagnosed prenatally with a disability.

37 Dorothee Sölle, in her critique of societal apathy in Suffering, indicates that in “keeping with middle class ideals” certain forms of suffering are avoided “gratuitously.” It is believed that from suffering nothing is, or can be, learned. Thus, suffering is to be avoided at all cost or hidden under a veil of denial coined as “banal optimism.” This denial of suffering occurs in a society where “a marriage that is perceived as unbearable quickly and smoothly ends in divorce; after divorce no scars remain; relationships between generations are dissolved as quickly as possible, without a struggle, without a trace; periods of mourning are ‘sensibly’ short; with haste the handicapped and sick are removed from the house and the dead from the mind.” Dorothee Sölle, Suffering, trans., Kalin Everett R. (Philadelphia, PA: Fortress Press, 1975), 38.

38 For example, feminist authors such as Elizabeth Bounds, Pamela Brubaker, and Mary Hobgood call for the need to expose critical assumptions about poor women and people of colour who are the most vulnerable members of society that informs welfare reform discussions and policies. It is racist and classist assumptions that see the suffering of poor women as the result of personal choices or acts and not the result of sinful social structures and oppressive and exploitive patterns of thinking. They indicate that “moral rhetoric about the poor is always careful to shift public attention away from critical analysis of the political economy.... Public attention continues to be maintained ... on the regulation of individual behaviour, especially female sexual behaviour.” Mary E. Hobgood, Elizabeth M. Bounds, and Pamela Brubaker, Welfare Policy: Feminist Critiques, The Pilgrim Library of Ethics (Cleveland, OH: Pilgrim Press, 1999), 2.

39 Stanley Hauerwas indicates that within a cosmology that treats a body (an extension of the world) as a machine, pain, sickness, and suffering is seen as merely a dysfunction of the body that can be ultimately controlled and eradicated by medical technicians. However, prolonged sickness, disability, terminal illness and death challenge our most cherished presumptions that we are (or at least can be) in control of our existence and that humanity (especially physicians) has become the ultimate “fixer” or god. This, coupled with a individualistic understanding of pharmaceutical or technological “fixes” to suffering (as portrayed in the media), atrophies our perception of the role communities play in the healing process. We come to believe that we “do not need a community capable of caring for the ill; all we need is an instrumental rationality made powerful by technological sophistication.” Stanley Hauerwas, Naming the Silences – God, Medicine and Suffering (Grand Rapids, MI: William B. Eerdmans Publishing Company, 1990), 63. Two others who promoted the idea of the medicalization of life and sacralization of medicine are René Dubos and Ivan Illich. See René Dubos, Mirage of Health: Utopias, Progress, and Biological Change, Anchor Books (Garden City, NY: Doubleday, 1959); Ibid., Man Medicine, and Environment (London, UK: Pall Mall Press, 1968); Ivan Illich, Limits to Medicine: Medical Nemesis, the Expropriation of Health (London, UK: Marion Boyars, 1976).

or postnatally with a terminal illness. These human concerns are intricately connected with the incessant domination and destruction of Earth for they all stem from a refusal of humanity to accept the conditions, constraints, or limitations of biological and cultural life such as finitude, loss of identity, mortality, frustration, debilitation, interdependence and vulnerability.

Cosmogenesis as a new context for understanding human suffering does not offer a complete “solution” to the tendency of Earth’s evolutionary processes to “waste” life’s potential nor “explain away” the bleakness of mass extinctions, evolutionary dead ends, and other events of destruction and death. It does, however, have the potential to awaken humanity to new ways to interpret experiences of suffering and death that do not involve denial, hierarchical systems of worth, delusions of mastery, or the vision of death as the greatest evil. The violent collapse and destruction of first generation stars created the elements from which all abiotic and biotic life were constructed. Lithospheric tectonic plate movement and violent convergence in the Pacific “Ring of Fire” is now known to be responsible for considerable earthquake and volcanic activity, and yet it is also responsible


43 This thesis does not deny the many ways humanity has attempted to make sense or interpret suffering (e.g., interpretations made in psychological, anthropological, and sociological research). Investigating these diverse avenues of interpretation would add depth to readers’s appreciation of the mystery of human suffering and represent an embrace of the second pillar of an ETA. This investigation however, was beyond the perview of this project. The aim of this constructive project to contribute images, language, and concepts to this field and not offer the definitive “explanation” of human suffering.

44 Some activities include the 1995 Kobe earthquake, the 1883 eruption of Krakatau in Indonesia, and the 1980 eruption of Mount St. Helens.
for the birth of the Japanese Archipelago and Galapagos Islands. Monarch butterflies, if they are not allowed to engage in the struggle to emerge from their chrysalis, are unable to sustain flight because hemolymph has not been adequately circulated into their wings, leaving them crippled and doomed. The independence of ancient predatory species of bacteria was sacrificed for a cooperative state of interdependency and symbiosis between host cell and bacterial invader, and this new pattern of material and mutually empowering relationship gave birth to the vital energy-producing organelles (mitochondria) in eukaryotic cells. This costly emergence of novelty signalled the advent of a great period of proliferation in complex plant and animal life-forms in the universe story. Thus, within many levels of the process of cosmogenesis, creation, fecundity, sacrifice, and destruction are linked. These sacrificial moments of great transformations spanning from the galactic to microbial to quantum can also be articulated as moments of grace that speak to purpose and meaning, “to a story and a life that is going somewhere.”

It is the prevailing distorted and dysfunctional cosmology that has informed humanity’s perspectives concerning suffering, namely attitudes of denial, discrimination, and delusions of limitless mastery or control, and has alienated humanity from this cosmogetic understanding of suffering and grace.

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45 This sacrificial, cooperative process is the core principle of the endosymbiotic theory of the cellular origin for both mitochondria and chloroplasts. For a narrative account of the emergence of mitochondria, see Brian Swimme and Thomas Berry, *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era—Celebration of the Unfolding of the Cosmos* (San Francisco, CA: Harper, 1992), 101-103. In the birth of chloroplasts approximately one billion years ago, a similar process of symbiosis occurred; photosynthetic cyanobacteria entered heterotrophic cells, enmeshing their lives together, and becoming what are now known as chloroplasts. Richard A. Fortey, *Life: A Natural History of the First Four Billion Years of Life on Earth*, 1st American ed. (New York, NY: Alfred A. Knopf, 1998), 60-61.

46 Eukaryotes became multicellular in the Precambrian period at the same time Earth’s oxygen levels were rising. An increased oxygen density together with the emergence of organelles (mitochondria) to convert this combustive, potentially fatal element into large amounts of energy (via respiration), was one of the driving forces for the explosion of life in the Cambrian period. Swimme and Berry, 81-140.

Methodology: A Cosmologically Oriented, Descriptive, Constructive, and Chronological-Historical Method

Due to the subject matter of this thesis, a multifaceted methodology must be employed for several reasons. First, any examination of how human suffering emerges from, and is located within, a larger, cosmic context of diminishment, disintegration, and suffering (i.e., cosmogenesis) requires a cosmological orientation. Second, the interpretative nature of suffering indicates that this cruciform reality can be experienced and interpreted by humans in innumerable ways. Thus a descriptive (or narrative) and chronological approach is used to highlight the many cosmic events and interlocutors that have impacted how humans experience and interpret suffering. Finally, much of the evidence that enabled humanity to understand the nature of our ancient, unfolding, evolutionary universe was unavailable to theologians working prior to the eighteenth and nineteenth centuries. Thus our new evolutionary context needs to be seriously engaged and this requires novel constructions (deeply rooted by traditional interpretations) to reveal dimensions of divine revelation previously unimaginable. Also, this thesis desires to be praxis oriented and offer sufferers Christian sources of hope, comfort, and nourishment. Consequently, a constructive dimension must be emphasized so that conversations do not become too abstract or other-worldly.

As a result of these many commitments, the methodology employed in this thesis can be classified as constructive in its narrative or descriptive portrayal of chronological-

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historical patterns and cosmological in its orientation. It is primarily synthetic, sequentially organized, intuitive, and descriptive rather than systematic and argumentative.

To date, there have been few scholarly, sustained explorations of human suffering in the context of cosmogenesis. A notable exception is Christopher Southgate’s text *The Groaning of Creation*. Here he offers a systematic appraisal of evolutionary theodicy; this form of theodicy systematically addresses the challenge that specific cases of acute innocent suffering in cosmogenesis pose to the claim that God is infinite love. He asks his readers a poignant question:

> Is it not more honest and coherent monotheism to accept that both types of effects – enrichment and catastrophe – are functions of the same creative process, and that the [December 2004] tsunami should not be seen therefore not as an outrage against the love of God but a tragedy of this fecund and beautiful world, a tragedy of course made worse by human improvidence?

This thesis serves as a precursory project to cultivate or form the theological imaginations of Christians so that they will be capable of describing and interpreting God, creation and a

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49 This project proceeds by way of investigating a whole range of disciplines, attitudes, beliefs, etc., that feed into a cosmological vision. The numerous and diverse range of authors used will offer a kind of ‘snap shot’ of visions that taken together build a cumulative case for my proposal.

50 This thesis will not only make use of scientific and theological descriptions, but also, it will seek to deduce patterns by describing ideas or theories by non-exhaustive consensuses among authors from various disciplines. What detracts from this approach is that an in-depth analysis of potential conflicts within the work of each author (or between authors) cannot be explored. However, much of the investigative work to determine the suitability of each author could not be offered here, but future scholarly digging into the sources offered would make for stimulating conversations and contribute to theological engagement with the mystery of human suffering. For example, in Chapters Two and Three, many biological and theological encounters with Earth are woven together to “prove” or demonstrate, non-exhaustively, the emergence of Earth literacy. The validity of this approach does not hinge upon the systematic examination of all alternative propositions, nor is this thesis attempting to offer “the” answer to suffering or an ideology; rather, this descriptive narrative evokes alternative interpretations by cultivating the imaginations, or mindscapes, of readers. This thesis is not a systematic argument; a core premise of this project is that the asking of new questions and the envisioning of new ways of living and loving as planetary citizens requires new ways of describing our encounters with Earth. The attempt of this thesis was thus: to expose new ideas and to offer new interpretations that emerge from these new experiences. Once new ideas, language, and images become part of our theological conversations, new questions can be generated, and thus, new conversations concerning suffering can arise.

51 The term constructive is used to describe this project’s desire to fashion a cohesive vision, which involves a synthetic-aesthetic, even poetic, sense.

52 Southgate, 34.
tsunami (and other comparable events) as Southgate requires for his more systematic project. Hence, this thesis is part of an important germinal stage in the scholarly process of understanding human suffering in our novel, cosmological context: an evolutionary world in an ecological crisis. Hopefully this thesis will inspire other analyses to rectify the “neglect” of both the development of robust biospiritual moral imaginations and those willing and able to engage evolutionary theodicy. Both are needed to help inspire humanity to respond more compassionately to the many forms of suffering in our world.

**Cosmological Orientation**

My method is intentionally cosmological in orientation. This project embraces new contextual, or cosmological orientations that address both the how and what of creation in its exploration of the why of the universe’s birth. When science and theology are brought into conversation, new questions have been asked and the exploration of how to answer these questions cultivates novel ways of describing, interpreting, and responding to human suffering. New questions have arisen due to my adoption of cosmogenesis as the context for a theological investigation of human suffering: who are we as unique sentient Homo sapiens and what role do we have as participants within this ancient unfolding narrative; what is the meaningfulness of our relationship with the Creator of this cosmic narrative; why is suffering a part of this universe story (e.g., destruction of stars, extinction, and complex trophic relations), and more particularly, what is the meaning of suffering for human beings? In addition to new questions being asked, the adoption of a new cosmological framework for

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53 Southgate laments the neglect of evolutionary theodicy but this thesis also adds the neglect of forming imaginations capable of envisioning what this new form of theodicy entails. Ibid., 11-12.

54 I am also indebted to Anne Primavesi and her cosmological orientation, for she taught me how “human independence is a political, not a biological concept.” Anne Primavesi, Sacred Gaia (London, UK: Routledge, 2000), 6. This understanding guided this project’s understanding of how highly integrative the reality of suffering is within the Earth community. This broadened cosmological horizon of suffering could then include moments of suffering and grace from the very origins of existence that are “far removed from us in time and in emergent processes.” Ibid., xviii.
understanding the world allows for a critique of prevailing cosmologies. An exemplar of someone who employs a cosmological orientation is Thomas Berry and this enables him to describe the prevailing anthropocentric cosmology that affects theological discourse.\textsuperscript{55} Thus, employing a cosmological orientation to frame my methodology is similar to Berry’s and helps to expose the incompleteness or inadequacy of some classic interpretations of suffering. This approach invites readers to new levels of creativity by advocating a suspension, not a rejection, of some classic language used to describe and engage the experience of suffering due to its rootedness in a distorted, anthropocentric cosmological context. I am also in debt to Raimon Panikkar for his help in heightening my appreciation of the origins, history, and context of words. In an introduction to Panikkar’s work, readers are reminded that words are tremendous “repositories of human experience” and receptacles of the values associated with the prevailing cosmology.\textsuperscript{56} As a result, the origin and history of words, imagery, and metaphors used in theological doctrine cannot be isolated from their generative context, namely “all those generations of thinking and feeling human beings who have poured something of themselves into [those words].”\textsuperscript{57} Thus my cosmological orientation will help this thesis to begin the process of both pouring new meaning into classic literary vessels (such as sin, redemption, and the cross) and creating new literary receptacles. My method can evoke new intuitions in readers and hopefully human suffering can be seen anew as “enmeshed in the dust of the earth.” It also allows our cruciform and creative Earth (including our finite human bodies and communities that have emerged from Earth) to be

\textsuperscript{55} See: Footnote 19.


\textsuperscript{57} Ibid.
understood anew as a place where God walks, labouring to bring life from death.\footnote{Ivone Gebara. \textit{Out of the Depths: Women’s Experience of Evil and Salvation} (Minneapolis, MN: Fortress Press, 2002), 131.} This is necessary because many human sufferers intuitively appreciate God’s presence as they sit under the stars or at the water’s edge; however, they are unfamiliar with the appropriate theological language to describe this experience of the sacred and they are unskilled in connecting this intuition with their experience of suffering.\footnote{For example, some people are unfamiliar with Celtic Christianity, which offers a very ancient and embodied Earth-centred spirituality and praxis that holds in tension joy and pain, celebration and suffering.} Others may be fearful to couple their experiences of God in creation and Scripture because they believe their institutional Church does not recognize or appreciate this form of sacred revelation.\footnote{For most individuals whom I have worked with, the term “Church” means the official teaching magisterium of the Roman Catholic Church. However, the term can apply to other Christian denominations as well.} Thus, the methodology employed in this thesis attempts to diminish fears of scandal by reconnecting sufferers with historical sources within Christianity, often overlooked or forgotten, that faithfully embrace revelation found in Scripture and the Book of Creation. This cosmic orientation will best suit a major goal of this thesis, namely to help reconnect human sufferers to Earth, their biospiritual home where God walks, and enable them to understand anew how their mourning can turn into dancing.\footnote{John 1:5; Ps.30:11. For this dynamic vision of transformation and hope, see: The Peace Prayer attributed to St. Francis. Available at \url{http://www.franciscan-archive.org/franciscana/peace.html}, Accessed January 25, 2014.}

\textit{Descriptive/Narrative}

As a participant in and a commentator on cosmogenesis, my work here cannot be a purely objective, theoretical investigation. I have intentionally chosen a liberative, ecofeminist, and constructive hermeneutic as well as a descriptive or narrative methodology. This requires a recognition of my personal narrative and social location. Delores Williams, in
Sisters in the Wilderness, indicates that “theologians, in their attempt to talk to and about
religious communities, ought to give readers some sense of their autobiographies” and thus, I
will follow her lead and offer my readers a glimpse of mine.62 My story has many
intertwining contours as a Caucasian, Canadian woman who grew up in a small, rural
community in Ontario within a Roman Catholic family in the 1970s. After losing my mother
to throat cancer at nineteen, I occupied the position of the solitary female at the margins of a
patriarchal household. This often-alienating experience informed my growing ethical
predilection for creating just, mutually empowering relations. As I followed my passion for
understanding the inner and outer workings of the created world around me, I also desired to
know God more intimately. As a result, I began to appreciate the deep continuity between
theology and science as I discerned my unique vocation to academia (which is the setting for
my ministry).63 Thus, I have carved out a unique, unconventional niche that transects many
boundaries. However, despite my proficiency in several academic and athletic realms, I
never felt “at home” in any one of them. My commitment to constructing new ways of
thinking about God and cosmic and human relations was met with resistance and joy, and the
wisdom I discovered emerged from hearing “God calling across the boundaries of
difference.”64 I believe that our home on Earth has many rooms for all of creation’s diversity

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63 Both these endeavours are reflected in my Bachelor of Science, with a specialization in zoology and a Masters of Divinity, specializing in Christian ethics. Another aspect of my ministry was affected by my deep love of competitive sports. As a twenty year veteran of women’s competitive football (www.tfont.com), I have had the privilege of playing with and against many extraordinary women from diverse ethnicities, economic backgrounds, sexual orientations, and professions, all of whom embrace varying visions of love, life, family, commitment, relationships, religion, and God. Together, we were victorious and suffered defeat; we were inspired and berated by coaches and opponents alike; we loved passionately, celebrated unabashedly, and felt loss deeply as teammates, family members, and friends succumbed to injury, illness, and death due to domestic violence and cancer. It was here that I learned of, and lived, “solidarity” most concretely and passionately.

to co-dwell, and following in the analytical footsteps of feminist Rosemary Tong, I realized that if my teaching and scholarly work was to be meaningful, the walls containing my own perspectives as a white, middle class, educated, North American woman must be thin enough that the voices from the margins could be heard – especially Earth’s many voices.  

This theological project is guided by my commitment to be formed by and to make space for the voices of those deemed “other.” Thus Earth’s many subjects are given primacy in this project. This accountability directs and sustains my task to adequately describe and address the suffering inherent to our evolutionary world; I desire to articulate how my daughter, and all Earth’s children, can enjoy abundant life (within the unique parameters of their own species’ coding) in spite of the cruciformity of creation and the sinfulness of humanity. This task involves cultivating just, loving, and mutually empowering relations that can appreciate some suffering as a cornerstone of powerful creative and theological activity. I am able to describe the high price a person, and those he/she lives in relation with, can pay when he or she chooses to embrace an androcentric, rigorously individualistic system of values isolated from the wisdom of Earth. I can also narrate how abundant, fruitful, 

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65 Rosemarie Tong, Feminist Thought: A Comprehensive Introduction (Boulder, CO: Westview Press, 1989), 7. The literary term “Earth” encompasses both the diversity of material components on this particular planet, ranging from the microscopic and quantum to the macroscopic and planetary, but it also refers to the creative processes through which new materials and behaviours emerge. This duality is an extension of cosmic principles of emergence. Thus, the Earth “voice” includes human ecology, (i.e., the diverse biological, social, cultural processes and expressions that characterize the human population), but is in no way limited to this.

66 Christian feminist Beverly Wildung Harrison wrote that the “longest revolution” for feminism is the realization of the dream where “every female child in each and every community and culture will be born to share a full horizon of human possibility, that she will have the same range of life options as every male child.” Harrison, 7. The project of ecofeminists (and this thesis) is to expand the parameters of this dream of well-being and flourishing (as per their genetic and cultural coding) to every creature in our planetary community.

67 Harrison indicates that feminist and liberationist theologies “contend that what is authentic in the history of faith arises only out of the crucible of human struggle.” She claims, albeit controversially, that “the locus of divine revelation is in the concrete struggles of groups and communities to lay hold of the gift of life and to unloose what denies life…” Ibid., 8. Again, this thesis will expand the horizons of engagement beyond human communities to illustrate that divine revelation and hope in transformation is lying hidden in the struggle undertaken in our evolutionary world. This, too, has “astonishing” implications for Christian ethics.
and transformative life, suffering, and even death can be when it is lived in right relation with God, creation, and other human persons.

As I walked into the emergency room, the skeleton of my father lay curled up on a stretcher. He contorted as he cried out, desperate for the feeling of the transforming power of love, knowing at a level far deeper than his intellect that his worldview, which had no room for vulnerability, dependency, error, forgiveness, humility, or the gift of the “other,” was failing him. Thus, I knew it was my task to witness this. When I walked the halls of the high school where I was employed after two teenagers had died in a car crash, or when I cradled the friends of a young girl who had committed suicide, their cries of agony pierced my soul.

However death and diminishment was not the end of the story; I also saw what gave those asked to cope with these tragedies the strength to live anew – i.e., a vitality hidden deep in the embodied connectivity and interdependency encountered in the prayers and rituals of healing, purpose, and belonging that were enacted within their friend-circles, their school community, their family, and their community of faith. Thus, I knew it was my task to be witness to this as well. I have looked into the abyss of darkness in myself, in my social communities, and in Earth’s ecosystems where I dwell, and there I have seen the “green” – the presence of the powerfully transformative and yet vulnerable and loving, sacred presence. This divine presence promised life in spite of death, not a life devoid of suffering and death. From my many experiences, I have learned how an adequate and realistic description of the suffering inherent to cosmogenesis can address some theological concepts that prevent sufferers from feeling God’s intimate and transformative presence. Consequently, I am crafting a theologically-sensitive, cosmological narrative that is attentive to the concrete

\[68\] An example includes the predominance of the theological interpretation of suffering as punishment for human sin.
experience of suffering on the ground (human), of the ground (planetary), and rooted in the suffering, compassionate heart of God (divine). I am in debt to Earth scholar Thomas Berry for crafting the descriptive and narrative *Dream of the Earth* and other documents to help guide and encourage this aspect of my method.

**Constructive**

A third dimension of my method is that it is purposefully constructive. Each chapter offers many threads (e.g., images, ideas, language) that are woven together to make new tapestries or constructions (e.g., ETA and the nine dimensions of promise in Chapter Five). Hence, every chapter is written in such a way that each subsequent chapter will have the substrate, or foundation, on which to build. To engage the mystery of human suffering in an evolutionary world, new scientific understandings of the world (e.g., natural selection, predation, mass extinction, supernovas, ecological crises, etc.) must be addressed theologically in unprecedented ways. This newness requires novel constructions rather than simply reiterating traditional conceptions. Again, my guide for this aspect of my methodology is Thomas Berry. Berry argues that while humanity has historically given due attention to the relations between humans and the Divine, and among ourselves, we tend to neglect the third mediation namely, the important relations between humanity and the rest of creation.\(^6\) Thus theologians today need to construct new ways of understanding how God and all aspects of creation relate. What was evident from my research was that many modern ecotheologians respect this tri-fold commitment in their work, but few directly articulate the

\(^6\)“We are entering into a period that might be identified as the period of the Third Mediation. For a long period the divine-human mediation was the dominant context not only of religion, but of the entire span of human activities. Then, for some centuries of industrial classes and nation-states, a primary concern has been inter-human mediation. Now the dominant mediation can be identified as earth-human mediation. The other two mediations will in the future be heavily dependent on our ability to establish a mutually enhancing human-earth presence to each other.” Berry, *Dream of the Earth*, 88.
exact nature of these relationships. By paying attention to the consensus drawn from the perspectives offered by the many authors, both classical and modern, a unique construct, an ETA, was developed. This ETA becomes a substructure for re-imagining the significant relationships between the human and the Divine, between humans, and between the human and the rest of creation. This constructive effort is not “the” ultimate vision of what these relations should be; rather it can serve as a starting point or aid for those readers who desire to engage further with the mystery of human suffering in an evolutionary world.

Chronological-Historical

The cosmological orientation to my constructive method expands the spatial horizon of theological engagement with suffering beyond the stratified confines of the human species to include other-than-human subjects. In order to make sense of how humanity’s understanding of our position, purpose, and role in the universe has changed, a chronological-historical approach is purposefully employed. This method also helps organize the many ways in which humanity has attempted to describe and interpret various experiences of suffering. It also facilitates a correlation of many different interpretations with the cosmologies out of which they emerged. This dimension of my method is also influenced by Thomas Berry. Mary Evelyn Tucker, in her biographical document on Berry, indicates that Berry’s academic work began as “historian of western intellectual history” via his thesis on Giambattista Vico’s philosophy of history. Berry’s historical approach remained a cornerstone of his method, but his subject matter broadened from the analysis of human history to a deep comprehension of Earth’s history:

70 One notable exception is Ernst Conradie. His text, An Ecological Christian Anthropology: At Home on Earth? (Cornwall, UK: TJ International Ltd., 2005) systematically constructs a vision of an ecological, Christian anthropology.
Berry's New Story, born out of his own intellectual formation as a cultural historian of the West, turning toward Asian religions, examining indigenous traditions, and finally culminating in the study of the scientific story of the universe itself. It is a story of personal evolution against the background of cosmic evolution. It is the story of one person's intellectual history in relation to Earth history.\textsuperscript{71}

A comprehensive understanding of humanity’s intellectual history, especially how this influenced how we interpret suffering over many centuries, is needed in order to highlight forgotten interpretations of suffering and to offer new possibilities. This is why Berry’s chronological-historical approach was adopted as a vital component of this project’s method.

It is important to note that this project also benefits from H. Paul Santmire’s historical-constructive method. In the “Introduction” of \textit{The Travail of Nature}, Santmire indicates there was a great need for a historical study of biblical and classical thought.\textsuperscript{72} Santmire surmises that from this point of departure, there is the “possibility of constructing a ‘new theology of nature’ in our time.”\textsuperscript{73} The connectivity between historical consciousness and the ability to construct new theological “vessels” and frameworks is vital for this project; it will be asserted that since humans are one of the by-products of 13.8 billion years of continuous cosmogenesis, to only focus on the temporal horizon where humanity dwells on Earth is to ignore most of our formative history.

Nevertheless, an in-depth analysis of the disintegration, pain, and death prior to the emergence of humanity is not the goal of this project; rather, the chronological focus serves the purpose of engaging Western, Christian theological descriptions and interpretations of human suffering. Thus, Chapter One begins by examining and evaluating the relevant or


\textsuperscript{72} This was generated in response to the accusations made by Lynn White concerning Christianity’s responsibility for the ecological crisis. See: “Voices Raised in Protest” in Chapter Three.

active cosmology within which individuals or communities describe, engage, and respond to suffering during a historical period spanning from the classic to the modern industrial era. My attention to particular historical periods and the prevailing cosmological contexts attempts to emphasize the situatedness of many interpretations. My approach also illustrates how deficiencies within the prevailing cosmological vision (anthropocentric political, economic, intellectual, theological, and spiritual language, principles, and praxis) have led to particular (sometimes distorted) understandings of suffering. A chronological-historical approach in Chapter Two and Three offers evidence documenting the emergence of Earth literacy in science and theology. Thus the coupling of descriptions of suffering with historical periods allows both stability and dynamism, growth and similarity to be featured and explored, and this is vital to this project.

Limitations/Problems

This cosmologically oriented, descriptive, constructive, and chronological method has many benefits, yet it also has several weakness. One prominent problem concerns the necessity of using an abundance of authors, images, and references. This approach allows for a strong, interdisciplinary framework for the plausible interpretations presented in this project, but it also makes several scholarly explorations impossible: i) a meaningful engagement of the differences between the chosen authors, ii) a systematic analysis whether these new interpretations were related to the original author’s intent, and iii) an in-depth exploration into the contributions of any one author. These weaknesses of method may give the false impression that there is only one direction or answer to the “problem” of suffering and that the authors are used only to substantiate an overarching ideology concerning

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74 Some aspects explored include scientific discoveries, literary developments, theological formulations, and social justice movements.
suffering. However, Thomas Berry can be offered as an exemplar of how this synthetic approach can aid scholastic inquiry; Berry’s “The New Story,” an interdisciplinary construction, makes use of many diverse ideas of a variety of thinkers and could be taken as prescriptive.\footnote{Berry, “The New Story,” \textit{Teilhard Studies} no.1 (Winter 1978): 1-13. Also, see: Berry, “The New Story” and “Spirituality of the Earth” in \textit{Riverdale Papers} Volume 5 (Riverdale, NY: Riverdale Center for Religious Research, 1970).} However, his descriptive and aesthetic cosmological approach, which this project has tried to emulate, allows space for alternative visions while still offering solid footings upon which others can build.

A second potential downfall of this method is that it will examine few primary-level human narratives of suffering; rather, it will consider more cosmic moments of suffering, sacrifice, and grace. This approach is grounded in Berry’s cosmological vision of relatedness and interdependency that includes, but expands beyond, the human species. The cosmological orientation takes seriously the new questions that arise from the adoption of cosmogenesis as the context for theological undertakings and gives primacy to voices and stories of the universe’s many subjects. This is important to counter the prevailing anthropocentrism within theological conversations concerning human suffering.

A further problem with employing this method could be the absolutizing of individual experiences or suffering, or the devaluing of the uniqueness of each particular experience of suffering explored. In order to counter this tendency, my method is purposefully descriptive (e.g., there are many voices included) and narrative (e.g., each voice is situated within a larger horizon or “story”). Many diverse voices are described from the galactic, ecosystemic, and quantum levels of life, and this narrative approach is more intuitive than reductionistic or
dogmatic; readers are offered the opportunity to investigate their own intuitions and cosmologies and they are given the space to interact with new imagery, terminology, and concepts. The goal is to inspire readers to do the labour required to arouse compassionate, intelligible, and faith-filled descriptions and interpretations of their personal experiences of human suffering.

A fourth area of concern is the sheer immensity of the chronological timeline; cosmogenesis involves 13.8 billion years of transformation, and within even the last 50,000 years, humanity has recorded untold numbers of experiences of suffering. The variations of interpretations are endless. This project offers a manageable scope of Western Christian theological interpretations. Thus, careful choices were made to narrow the scope of this project. For example, in Chapter One three historical categories are presented to witness to several experiences of suffering: Classical Period (Witness of Scripture/Early Church Fathers and Mothers), Modern Period (Witness of Liberative Writers), and Post-Shoah Period (Witness of the Holocaust). This purposeful selection inevitably excludes historical events, voices, and stories. Also, the purpose of this thesis is to highlight a general consensus or vision among many contributors to lay the groundwork for the final chapters where the bulk of my constructive efforts are focused. Since this purpose narrows the purview of this project, other important areas of study cannot be engaged. For example, this thesis will not examine the manner in which a culture or religious tradition can influence how a person

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77 Part of this labour of love is to test the coherency of what is being presented in this thesis and, perhaps, to contribute to theological dialogues what is lacking here.

78 For example, descriptions and interpretations that fall in the period between the Classic and Modern periods are not engaged.
interprets his or her suffering, nor will it exhaustively explore the infinite variations of interpretations of suffering or the unpredictability of individual responses to suffering.

A final difficulty lies in how readers understand the relationship of chronology and the perceived worth of each category. Chapter Five introduces a fourth historical category, Post-Newtonian Period (Witness of cosmogenesis) to specifically witness to the suffering inherent to, and within, our ancient, complex, and evolutionary universe. This does not mean that this fourth category is the most valuable; each category is vital and no hierarchy of worth (based on chronology) is being proposed. Another nuance to this difficulty is how the chronological-historical can lead readers to believe there is little overlap or connectivity between earlier and later descriptions and interpretations. For example, early Church Fathers and Mothers offer important precedents for the proposals made in Chapter Five, but the striated nature of a historical analysis can highlight difference to the detriment of continuity. Thus this chronological-historical approach to this project does not exhaustively articulate every experience of suffering; rather, its purpose was to outline predominant historical descriptions and interpretations that still impact how sufferers understand suffering today.

Despite these shortfalls, this project’s cosmologically framed, descriptive, constructive, and chronological-historical method is beneficial because it operates at the intersections of concrete, corporeal, contemporary moments of suffering and theoretical theological reflection on creation, human existence, and God. It takes seriously the materiality of human experience within an ancient web of interrelated and interdependent subjects and historical events. This method enables conversations concerning suffering to avoid becoming purely abstract and otherworldly. Cosmogenesis affirms the sacredness, intrinsic worth, and communion of creation, and as a result, the inherent, sacred value of the
“corporality of the flesh, of earth, of cosmos;”\(^{79}\) this allows the living, material Earth to become once more a primary source of revelation for theological engagement with the mystery of human suffering.

**Thesis Statement**

Since humans interpret suffering as a complex personal or communal experience, not as a singular, isolated occurrence, they draw its meaning or significance and determine its intensity from the constructed horizon of meaning or cosmology within which it occurs. This thesis will consider how the adoption of cosmogenesis as a new functional cosmology holds promise for Christian descriptions of, and responses to, human suffering.

Christian ethics has tended either to understand suffering as uniquely human or to frame perceptions of suffering from a solely human perspective. Accordingly, suffering, violence, diminishment, and destruction were seen as evil, generally lacking positive attributes, because they did not promote human flourishing. Christianity has compounded this narrow vision by often coupling suffering, violence, frustration and limitation with human sin and punishment from God. This thesis will argue that some theological interpretations that have emerged from within the classic, dysfunctional cosmology have disconnected sufferers from Earth as a source of comfort, healing and empowerment, and muted communal responses to the reality of suffering in our world.

Cosmogenesis teaches humanity that it is not possible to have creativity and flourishing – both positive aspects of an evolutionary reality – without the violence, death, destruction inherent to the emergence of cosmic innovation. Since we now understand with exceptional clarity that humanity has emerged from the creative processes of the cosmos, then some

\(^{79}\) Gebara, 123.
violence, diminishment, limitation and even death experienced by human subjects is a necessary part of the costly cosmic creative processes. Accordingly, humanity’s understanding of suffering needs to be re-examined. The impact of the cosmic, other-than-human understanding of violence, disintegration, destruction, and death within Christian theology can cultivate descriptions and interpretations of human suffering that are unrelated to sin and punishment. However, suffering that is inherently part of cosmogenesis should not be confused with the suffering caused by human avarice, exploitation, and unjust relations. Unquestionably, acts of mass genocide and biocide are manifestations of human sin and not cosmic processes. Thus, a more comprehensive theological engagement of human suffering, both inherent and anthropogenic, can emerge from within a broader context, namely cosmic suffering – i.e., the unavoidable and inherent pain, suffering, and death that is experienced in the emergence of novelty in the cosmos and on Earth.\(^{80}\)

Adopting cosmogenesis as the foundational understanding of the universe will require a critical examination of pre-Copernican and Newtonian visions of the world\(^ {81}\) and the cultivation of biospiritually informed theological imaginations to form what will be called Earth literacy in this thesis. With this new set of literary tools and literacy skills humanity will be better equipped to describe and interpret vital human existences, including the relations among God, humanity and the rest of the cosmos and the experience of suffering. It is with this new knowledge and skill set that this thesis will be able to broaden our understanding of human suffering and re-situate human suffering with a larger, integrative

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\(^{80}\) In Chapter Five a more elaborate exploration of cosmic suffering will be explored by way of three loci: human, ecosystemic, and divine suffering.

\(^{81}\) This also includes a critique of the prevailing mythology concerning science, namely that creation has a single unified, mechanical explanation and that the scientist is a detached, rational observer and knower of nature’s order outside of the causal, scientific plane (i.e., a figure not influenced by social, economic, racial, political, and psychological forces).
cosmological concept – the kenotic-kinetic. This novel concept will connect the suffering experienced by sentient subjects (e.g., humans, dogs, plants, and paramecia) with disintegrative, entropic events experienced by pre-sentient subjects (e.g., stars, rocks, mountains). This coupling could enable a more holistic definition of human suffering. It will be asserted that Christian sufferers who are equipped with cosmocentric theological language and images, as well as an Earth-centred theological anthropology, will be able to define, describe, interpret, and respond to human suffering in novel ways. It is this Earth centered formation that could allow individuals to appreciate how transformation and growth can emerge from diminishment, suffering, and death. This new consciousness will enable suffers the ability to respond to contemporary experiences of suffering more effectively and perhaps, more compassionately. This project asserts that this Earth centered formation is needed to counter destructive cultural trends in contemporary Western consciousness. Trends such as the denial of any positive value to suffering, sacrifice, or death, the transposition of instances of suffering or sacrifice onto the poor who “deserve it,” and the placement of absolute trust in human technological interventions to control suffering and death, are good examples. Hence, the promise of cosmogenesis is the formation of sufferers, and communities of compassionate subjects, who can appreciate the costliness of Earth’s creativity and can once more “seek the eyes of Death as Lover, bestowing compassion; as Prophet, foretelling the uselessness of anything less than love.”

Thesis Chapters: An Orientation

This thesis begins with its first chapter providing with a critical historical examination of how human suffering has been described and interpreted in theological

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82 This is offered in Chapter Five.

83 From the last stanza of the poem “In Darkness Grows the Green,” in Gomez, 76.
conversations spanning from the classical period and through the modern period. This chapter explores the contributions of many voices from scripture, Patristics, feminism, liberation theology, ecotheology, and the Holocaust. As different categories of suffering are delineated, and areas of concern are exposed, their connection to dysfunctional or anthropocentric cosmologies will be examined. In order for readers to move beyond the captivating “fall” imagery which claims most suffering as punishment for sin and understand how our good, evolutionary creation is “interpenetrated at every moment by the energies of the triune persons of a perfectly loving God” and “forged out of suffering,” significant formation is required. Thus the three ensuing chapters attempt to shape the theological imaginations of my readers so that they can hold these two truths in creative tension. The second and third chapters explore the emergence of scientific and theological Earth literacy, respectively. This offers the data and framework for my readers to comprehend how Earth is the “primary source of intelligibility and value” in science and theology and can contribute to a deeper understanding of human suffering. This leads to my fourth chapter, the construction of a distinctly ecological theological anthropology (ETA) from the data offered in the previous two chapters. It will be shown that this foundation for interpreting human experiences, including suffering, has four pillars: Eschatological Hope; the Intrinsic Worth of Creation; Numinous-Cosmic Communion; Kenosis as the Kinetic of Cosmogenesis. The literary term “kenotic-kinetic” is proposed in exposition of the fourth pillar and offers new way of describing the cosmic dialectic of cruciformity and creativity; the kenotic-kinetic emphasizes how both disintegration/death and enrichment/self-assertion are both functions of the same evolutionary process and inherent to cosmogenesis. Recognition of this coupling is

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84 Southgate, 55.
85 Berry, *Dream of the Earth*, xi.
essential for exploration of human suffering in Chapter Five. This chapter show that by adopting cosmogenesis as a new, evolutionary worldview, three new categories emerge for describing suffering: Cruciformity of Creation; Sacrificial Labour to bring forth Newness; and the Costly Creative Kenotic-Kinetic. Some elements of these new categories, such as labour and sacrifice, have precedent in the Early Church and overlap with what some writers in earlier periods have articulated, but cosmogenesis illustrates new nuance and depth unimaginable to pre-Copernican and pre-Newtonian thinkers. Following this, theological interpretations of personal, ecosystemic, and divine suffering are made to illuminate nine intertwining dimensions of promise that emerge from these new categories. Thus, this final chapter proposes that those who embrace cosmogenesis as a new horizon of meaning and choose to courageously follow God of the cosmic cross can become witnesses to the green that grows in the darkness that is never overcome.
Chapter One: A Historical Exploration of Suffering

A soul cornered by Death’s unwelcome visit to the mind
cowers in the darkness;
illusions gathered as gold purchase denial.
A friend sold on the auction block;
faithful Wisdom goes with her.
Magdalena Gomez

Human suffering, derived from the Greek term *paschein* meaning to suffer, endure, or undergo, is not a singular, isolated occurrence within the spectrum of human existence but is a complex, interpretive, active, personal and universal experience that differs in kind and causality but ultimately draws its significance and magnitude from the constructed horizon of meaning within which it occurs. Since the aim of this thesis is to consider how the new cosmology, cosmogenesis, affects how human suffering is interpreted in the twenty-first century then, to understand the constructive path ahead, one must see whence we came and appreciate the theological legacy that shapes the theological imaginations of sufferers today. This chapter will explore predominant dimensions of theological descriptions and interpretations of human suffering within Western Christianity to expose language, images, and interpretations that inform and guide how we respond to suffering today.

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1 Gomez, 76.

2 Janice McLaughlin indicates that feminists working with postmodern ideas view “experience” as “something not immediately transparent or available; experiences are understood and interpreted through social and cultural discourses that produce our frame of reference.” Janice McLaughlin, *Feminist Social and Political Theory: Contemporary Debates and Dialogues* (New York, NY: Palgrave Macmillan, 2003), 108. Robert Faricy connects this with how theology has described and interpreted suffering. He argues that “...at different times in the history of Christian thought, different models – conditioned by the cultures they existed in – were used to express and to explain the mystery of the redemption.” Robert Faricy, “Teilhard de Chardin’s Theology of the Cross” in *The Cross Today: An Evaluation of Current Theological Reflections on the Cross of Christ*, eds., Gerald O’Collins, Robert Faricy, Maurizio Flick (New York, NY: Paulist Press, 1977), 14. He indicates that early Christianity used slavery as a cultural model for understanding suffering and redemption and then in the early Middle Ages, the cultural model of Roman law was the prevalent lens to understand suffering and redemption. Ibid.
These dimensions will be categorized according to their historical source, viz., classical scripture and Patristic writers, voices from the margins as witnessed by liberative writers, and Post-Shoah voices that speak of radical suffering. Each category will be organized into two sections: i) theological descriptions that offer the language, images, and metaphors that were used to recount experiences of suffering; and ii) theological interpretations that illustrate how these descriptions were understood and communicated by the people or communities using these descriptions. This is a modest landscape, encompassing only three overarching categories of historical sources that span from the classical to modern industrial eras. Readers are reminded that these categories do not exhaust the myriad interpretations of suffering. The goal of this chronological-historical compilation is to reveal some of the legacy that influences contemporary theological moral imaginations and helps to guide our responses to suffering today.

Sources of Modern Understandings of Suffering

First Category: Classical Period (Witness of Scripture and the Earth Church)

Descriptions:

Scripture

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3 Others have formed different typologies of suffering than what I have use. For example Herwig Arts, SJ., delineates three kinds of suffering: physical, psychological, and social. Herwig Arts, *God, the Christian, and Human Suffering* (Collegeville, MN: Liturgical Press, 1993). Elizabeth Dreyer offers four broad categories of suffering: i) suffering that causes minor inconveniences (scraped knees, rejection letter; fender bender); ii) more severe suffering (hip replacement; loss of friendship); iii) death of loved one, losing job, flood destroying home, battling cancer, addiction; and iv) catastrophic suffering as the total destruction of a human being (torture, murder, genocide, systematic rape as military strategy, enslavement). Elizabeth Dreyer, “Suffering in Christian Life and Experience,” in *Suffering and the Christian Life*, ed. Richard W. Miller (New York, NY: Orbis Publishing, 2013), 132. Kristine Rankka offers two classifications: Voluntary (individuals or groups that chose the painful experience (consequence) in order to accomplish greater good -- even in the face of oppression) and Involuntary (the infliction of power over another that never serves the greater good because it is inflicted by one on another against his or her will). Kristine M. Rankka, *Women and the Value of Suffering: An Aw(e)ful Rowing toward God* (Collegeville, MN: Liturgical Press, 1998), 105.
There are many nuanced dimensions to theological descriptions of suffering articulated in Scripture and voiced by early Patristic writers and ascetics. These dimensions are addressed within the following thematic subcategories: Suffering as Punishment (Retribution-Expiation); Messianic Suffering; Divine Discipline (Apostolic Suffering); Effect of Powers Opposed to God’s Will; A Call to Intimacy with God; Witness and Purification; Lament; Mystery; Cosmic Travail. By isolating and outlining these different, often overlapping dimensions of suffering, contemporary sufferers will be better able to recognize aspects that have an impact on their description, interpretation and response to suffering, address the concepts or literary tools which are inadequate or incoherent in light of cosmogenesis, and rediscover lost or ignored aspects lying hidden in the rich legacy of Christian tradition which could offer sufferers today comfort and strength.

*Suffering as Punishment (Retribution – Expiation)*

Early Christian communities developed their descriptions and interpretations of suffering from their acute experiences of persecution and their cultural conditioning, especially with regards to the phenomenon of slavery. During this period of Christian thought suffering was articulated and accepted as one of the actualities of finite life, and thus the problematical element was not the existence of suffering but its distribution. This demanded the full attention of a newly emerging Christian theology and was reflected in the variety of perspectives of this form of suffering offered in Scripture. One principal understanding of individual and communal suffering in Hebrew Scripture that has greatly

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4 See footnote 80 for Robert Faricy’s insight concerning slavery.


influenced the Western Christian tradition is the law of retribution – suffering as punishment for sin\(^7\) – which attempts to justify God considering the immense suffering in the world. The more profound the prophets’ understanding of God became, the more acute became the problem of the distribution of suffering and as a result, the most common response to suffering was also the simplest; namely, suffering is “a punishment and just requital of wickedness.”\(^8\) This “cause-and-effect” explanation of suffering is deeply rooted in Scripture, emerging most provocatively in Deuteronomic writings (Deut. 6:1-3; 30:15-18), and is implicit in the manner by which the people of Israel expressed their understanding of their intimate, covenantal relationship with God.\(^9\) This covenantal relationship held the potential for both promise, when laws were observed, and peril, when they are broken. Hence, suffering became primarily associated with just punishment for human wrongdoing, disobedience, and rebellion. This coupling of sin and suffering is also deeply embedded in the narrative of Genesis (Gen. 3:17-18), and as a result, suffering and death are the primary methods of atoning for the Adamic Fall from grace which is understood as a loss of

\(^7\) Bowker, 12. He offers the following as examples of this: 2 Kings 21:5f., 10-13; Prov 10:27; Isa 3:10f.

\(^8\) For example the prophet Isaiah writes: “Tell the righteous it will be well with them, for they will enjoy the fruit of their deeds. Woe to the wicked! Disaster is upon them! They will be paid back for what their hands have done” (Isa 3:10f). Joshua (23:15-16) indicates that “…just as all the good things that the Lord your God promised concerning you have been fulfilled for you, so the Lord will bring upon you all the bad things, until he has destroyed you from this good land that the Lord your God has given you. If you transgress the covenant of the Lord your God, which he enjoined on you, and go and serve other gods and bow down to them, then the anger of the Lord will be kindled against you, and you shall perish quickly from the good land that he has given to you.” The Book of Judges works to temper Joshua’s vision of God punishing humanity for wrongdoing and infidelity by emphasizing that despite what God says (as outlined by Joshua and other prophets), God is free to act differently and does so by showing infinite mercy and forgiveness. Also, in the final book of the New Testament it is suggested that Christ’s suffering and death is atonement for human sin (Rev. 16: 1-2; 4-6; 10-11; 17-19). Kenneth Overberg, *Into the Abyss of Suffering: A Catholic View* (Cincinnati, OH: St Anthony’s Messenger Press, 2003), 19, 20-21.

\(^9\) Bowker, 12. Kenneth Overberg indicates that “perhaps Deuteronomy simply tapped into deep human instinct” (Overberg, 22) – e.g., one influenced by the ongoing exile of the Jewish people in Babylon in the sixth century. This coupling of sin and suffering continues to shape theological imaginations and offer an exhaustive “reason” for suffering today. Ibid., 21.
primordial perfection, a sin of rebellion, or a despoiling of cosmic bliss in the Garden of Eden. Within this understanding of suffering, salvation entails a return to an Edenic state of cosmic perfection that is only made possible through Christ’s suffering and death (Isa. 52-13-53:12; Rom. 3:23-26; 2 Cor. 5:21; Gal. 3:10, 13; John 3:16; 1 Pet. 2:24, 3:18). Thus, suffering as retribution and expiation for sin is firmly entrenched within Jewish and Christian faith traditions and is a predominant way of understanding suffering and persecution. This interpretation also acts as a guide to determine the adequacy of our responses to suffering.

Messianic Suffering

This subcategory of suffering attempts to describe the experiences of suffering undergone by Christ as proclaimed in the New Testament. It is intertwined with the descriptions offered in Hebrew Scripture for it was a “rich resource for the followers of Christ” and incorporated into the New Testament texts. Nevertheless, the cross and resurrection offered an unique loci for engaging earlier biblical themes concerning suffering such as the vindication of the righteous martyr, the suffering servant, sacrifice, atonement and expiation. All of these add nuance to biblical descriptions of Messianic suffering. In John’s Gospel, Christ is described as the light of the world (John 8:12), and suffering and death will never quench the light of Christ. “What has come into being in him was life, and the life was the light of all people. The light shines in the darkness, and the darkness did not overcome it” (John 1:3-5). Thus, Jesus willingly walked in the darkness through his acceptance of his own innocent suffering as well as his embrace of the tragic elements

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10 Bowker, 36-38. He also indicates that this interpretation needs to be seen alongside the Jewish understanding of reality, the earth, intense feelings of family and community, and a refusal to invoke a supernatural solution to appease the agony of the reality at hand. Ibid., 40.

11 Overberg, 65.

12 Ibid.

13 Bowker, 60.
associated with the human condition. However, he was never overcome; the suffering and
death of Christ is vindicated in the resurrection (John 12:24).

Consequently, there are two intertwining dimensions of the Messianic suffering of
Christ that must be explored: the suffering Saviour who empties himself to participate in
human suffering (Zech. 9:9; Isa. 53; Acts 8:32-35), and the conquering King-redeemer
whose victory over suffering and death reveals them both to be limited truths that Christ has
power over (1 Tim. 1:15-17; 1 Cor .15:53-58; Rom. 3:25f; 8:3; 31-39; John 16:31-33). In
The Revelation to John, apocalyptic methodology is used to imaginatively convey the
assurance of the totality and certainty of Christ’s victory over suffering (Rev. 1:5; 7:13-17;
19:11-21). The synoptic Gospels offered Christ as the premier example of ultimate
confidence that “even the furthest extremes of suffering and death do not defeat the
possibility of God”14 as well as an active and practical compassion to respond to suffering in
the present (Luke 10:30-37). The Gospel of Mark emphasizes that Christ was the Messiah
(Mark 1:1; 8:27-30), but also instructs us what this messianic identity entails; namely, the
suffering of many things (Mark 8:31). The Gospel according to John articulates how even the
worst consequences of suffering are met and overcome (John 8:31-6; 4:13f; 6:30-6) in the
presence of the light of the world. St. Paul, in his famous hymn concerning Christ’s self-
emptying (Phil. 2: 6-11), also demonstrates this paradoxical pairing of suffering and victory.
First, verses 6-8 describe “the career of the Messiah Jesus as ‘downward mobility’ from
divine supremacy to the depths of solidarity with human suffering” as a slave.15 However,
verses 9-11 balance this downward orientation with a divine exaltation reminiscent of Isaiah

14 Ibid., 57.
15 M. Dennis Hamm, “Sharing in His Suffering: The Social Cost of Following Jesus,” in Suffering and
(Isa. 45:22-25) to remind readers of how “...the name of Jesus now exalted evokes universal worship of him as LORD. Thus Kyrios (“Lord”) is the “name that is above all names.”¹⁶

Thus, the depiction of the life, teachings, suffering, death and resurrection of Jesus Christ in Scripture illustrates the following dimensions of Messianic suffering: Christ’s authority over suffering and death (Mk 5: 35-42); his suffering as atonement for human sin (Mark 2:1-12; Rom. 3:23-25); his gentle, practical compassion for those who suffer, even one’s enemy (Mark 6:34; Luke 13:34; Matt. 5:43-8; Luke 6:35f); his active combat with natural, social, and supernatural forces that give rise to suffering (Col. 3:1-5; Matt. 4); his refusal to adopt a simplistic cause-and-effect understanding of suffering while still retaining a sense of suffering as an ultimate punishment (Luke 13:1-5, 6-9); Jesus’ “uncompromising dependence” and trust in God as “the source of his activity” (John 14:18-20; 16:20-22).¹⁷

**Divine Discipline or Apostolic Suffering**

This subcategory of suffering allows followers of Christ to identify with his experiences of suffering (public humiliation, vilification, shaming, and rejection alongside the physical pain of crucifixion) and death (Phil. 3:7-11) as well as share in his supreme confidence in the overcoming of suffering and death, his absolute trust in God, and his practical, compassionate responses to suffering. The suffering that is a result of being disciples of Christ enables Christ’s followers to participate in the exaltation of being conformed to the Risen Christ (2 Cor. 4:7-11; 2 Cor. 11:30). Thus suffering, understood as a share in the suffering of Christ (1 Pet. 4:12-14; 1 Pet. 2:19-25), can be used as a sacrificial catalyst for transformation. This description of suffering as divine discipline or sacrifice for communal transformation – “they die in behalf of the community to give it life by their

¹⁶ Ibid., 36.
¹⁷ Bowker, 50; 54.
death, and to inspire it by their example” – is also described in Proverbs (3:11-12), Sirach (2:1-18) Maccabees (2 Macc. 7), Isaiah (28:23-29), James (5:7-12), Paul’s letter to the Philippians (e.g., 2:12-18) and Hebrews (e.g., 12:1-13). In the New Testament, suffering is the mark of a true disciple of Christ and the consequence of a Christian life (Eph. 3:7-13; Mt 10:38; Acts 14:22; Col. 1:24; 2 Tim. 3:10-12; Rev. 1:9) and thus, suffering that is “taking up one’s cross” (Mark 8:32; Matt. 16:24; Luke 9:23) is the by-product of following Jesus into a world hostile to his message. The Beatitudes attest to this, for those who are persecuted and suffer because of their love of God and for their prophetic role, the Kingdom of God will be theirs (Matt. 5:10-12; Luke 6:22-23). The synoptic Gospels are also clear that enduring suffering as a divine discipline must also evoke the compassionate activity of relieving suffering: “a disciple’s response to suffering is practical and active because it is laid in the pattern of Christ.” Thus through suffering, disciples become alive in love (Eph. 4:32-5:2).

Effect of Powers Opposed to God’s Will

This subcategory offers the description of suffering as that which results from the frustration of God’s will by powers within the world. This is why the Exodus (15:26; 23:25), Psalms (30:2; 41:2-3; 103:2-4; 107:19-21), Jeremiah (17:14) and the synoptic Gospels (Matt. 8:5-17; 9:35; Mark 5:34; Luke 8:43-56; Luke 13:10-13) focus on healing and exorcisms (Matt. 4:24; 8:30-32; Luke 8:1-3; 26-33; Luke 9:37-43). Saint Paul valued suffering because it pointed to the effective power of Christ to overcome all human frustrations and worldly powers (2 Cor. 4:16-18; 5:1-5).

Call to Greater Intimacy with God

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18 Ibid., 28.
19 Ibid., 56.
Rabbinic Judaism speaks of suffering as a blessing which God bestowed on humanity in order for humanity to have the opportunity to draw closer to God.\textsuperscript{20} The Psalmists and the prophet Isaiah also saw suffering as an opportunity for closeness with God (Ps. 63:1-11; Isa. 55:1-6) and in the New Testament it was the narrative of Christ’s life, death and resurrection that was salvific, bringing humanity a new depth of intimacy with God (Phil. 3:7-8; John 3:16; Rev. 21:4). This subcategory also reveals the unfathomable depth of God’s merciful, unconditional and compassionate love in the face of human sin, errancy and unfaithfulness (Hos. 2:10; Isa. 43:4, 54:10) and illuminates how intimately close God is to us.

\textit{Witnessing as Test of Faith and Purification}

In rabbinic Judaism there is a prominent understanding of suffering as a test to which all were subjected rather than understanding suffering purely as a punishment for sin.\textsuperscript{21} Many authors in the Hebrew Scriptures also find the problem of the distribution of suffering intolerable and object to the classic description of suffering as a result of wrongdoing.\textsuperscript{22} The Psalmists warn that humans should not become preoccupied with the punishment, or lack thereof, of the wicked, but focus instead on the more positive aspects of suffering, such as a test of faith, witnessing of faith, or purification (Ps. 101: 2-4, 6, 8).\textsuperscript{23} Thus, the personal experiences of the scripture writers and their communities of unjust persecution, and the incomprehensibly of its distribution, motivated a description of some forms of suffering as a test or a trial through which a believer’s faith is cleansed of distortion and becomes authentic and matured (John 12:24; Gen. 22; Luke 9:23). The narrative of Abraham’s willingness to

\textsuperscript{20} Ibid., 34.
\textsuperscript{21} Ibid.
\textsuperscript{22} Jer. 12:1; Eccl. 8:10-14; 9:2f, 11f.
\textsuperscript{23} Bowker, 15.
sacrifice his only son provides a classic formulation of this idea of testing or witnessing (Gen. 22:1-19), as does the story of Joseph (Gen. 37-50). Other examples are found in the wisdom of Proverbs (Prov. 3:11) and Ecclesiastes (Eccl. 3:18). In St. Paul’s experience, discipleship involves suffering as a test of one’s stamina and faith (1 Thess. 1:6; 2 Thess. 1:4). A corollary of this is that suffering that tests becomes an opportunity to witness to God’s desire, power, and compassion to overcome all evil and suffering (2 Cor. 1:3-7; 2 Cor. 12:10; Rev. 1:9-11; 2 Tim. 1:8-14; Luke 24; Josh. 1:9; Ps. 59:17; Isa. 12:2; 1 Pet. 5:10).

*Lament*

This subcategory explores the darkest realms of suffering and illuminates how some anguished cries to God for redress during this time is not a failure of faith but a witnessing of deep faith. Readers will notice that elements of this thematic subcategory (as well as several others) will be taken up in Chapter Five. In the individual psalms of lament (Pss. 3; 16; 22; 73; 88; 116) and the suffering described in the Book of Job, suffering manifests socially, psychologically and physically, and threatens every dimension of human existence. As a result, people in this state are described as groaning, crushed, and dried up, and manifest symptoms of dissolution that are often depicted with words such as pour out, melted or empty. In these scriptural texts, people experiencing this severe form of suffering experience abandonment and chastisement, and are mocked by friends, neighbours, and intimates. People who cry out in lament are often depicted as imprisoned or caged in pain, cut off from the experience of personal or corporate salvation and entangled in the cords of death’s grasp. There also is a very practical corollary of this subcategory of suffering: the prophetic practice of naming unjust suffering and exposing those responsible for inflicting unjust suffering (2 Sam. 12:7; Mic. 3:9-12) inspires individuals and communities who hear the cries of lament,
either from their own lips or their neighbours, to contest unjust suffering and to work to relieve it, whenever possible.

_Mystery_

The writer of Ecclesiastes delves deeply into the abyss of darkness and mystery that is human suffering in many ways (Eccls. 3:1f., 9-14; 8:10-14; 9:2f; 11f). The apostle Paul also explores the “foolishness” of those who follow Christ to the foot of the cross (1 Cor. 4:10) because this path taken by Christ mystifies and defies human expectations (1 Cor. 1:18-31; 2 Cor. 13:4). However, it is the book of Job that offers the most sustained engagement with the mystery that is suffering. This text transects many of the categories of description offered in this chapter and presents the clearest refutation of the classical description of suffering as punishment due to Job’s absolute innocence. Daniel Harrington indicates that this text “…examines how one can hold together the three propositions that God is omnipotent, that God is just, and that innocent persons like Job can and do suffer.”

Thus, it does not solve the problem of innocent suffering nor take refuge in a more pleasant vision of life after death. Instead, Job proffers a realistic assessment of human suffering and death as mystery and in doing so illuminates the inadequacies of the description of suffering as merely retribution for wrongdoing. Job offers other nuances contained in this subcategory: the promotion of a respectful “silence” when one faces the great dark abyss of suffering; the articulation of suffering as an opportunity that tests one’s faithfulness; the affirmation of the possibility that suffering can be made redemptive or restorative via

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25 This is also undertaken by Ecclesiastes (Eccls. 5:14, 9:5f; 12:5-7).
accepting suffering faithfully and prayerfully, and the cultivation of a cosmic context – God’s revelation in creation – for describing suffering rather than a purely anthropocentric understanding of suffering. In light of cosmogenesis, Job’s appreciation of mystery reverberates anew and humans wrestling with the mystery of suffering today can appreciate anew how an individual is a minuscule part of the complexity, ambiguity and totality of creation (Job 38:4f), an accumulation of ashes and dust (Job 42:6), and despite our scientific and technological advances, we will never comprehend the entirety of God’s designs, intensions, and power.

Cosmic Travail

St. Paul articulated how the whole of creation was groaning in travail, subjected to frustration and limitation (Rom. 8:20), and suffering the pain of childbirth (Rom. 8:22). As will be seen in Chapter Five, this subcategory is an important precedent for descriptions offered via the lens of cosmogenesis. However, St. Paul’s descriptions were intimately intertwined with his anthropocentric understanding of mortality being the wages (punishment) for sin (Rom. 6:23). Nevertheless, he still offers two vital dimensions to this subcategory of cosmic travail; namely, that “…the whole creation has been groaning as in the pains of childbirth right up to the present time,” and that human suffering was situated within this larger horizon of labour: “Not only so, but we ourselves, who have the first fruits of the Spirit, groan inwardly as we wait eagerly for our adoption to sonship [sic], the redemption of our bodies” (Rom. 8:20-23).

26 This dimension is better exposed in Isaiah (Isa. 40:3-5, 49:7; 53:4-7; 11).
Early Church

The writers during the Patristic period (AD 100 – AD 450) inherited many concepts and metaphors from Judaism and biblical writers that enabled them to adequately describe their own particular experiences of suffering. Some concepts that predominated their theological conversations concerning suffering included the narrative of Adam’s Fall in Genesis (Gen. 3), the Psalmists articulation of inherited corruption (Ps. 51:5), St Paul’s understanding of inherited guilt and sin (Rom. 5:12-21; 1 Cor. 15:22), and the life, innocent suffering, and death of Christ as expiation or ransom for our sin (Isa. 53:4-6; Wis. 2:18-20; 3:1-3; 4:16-17; 2 Macc. 7:6, 9, 14; Mark 10:45; Rom 3:24, 25; Col. 1:20; Heb. 9:11-14).

Equipped with these ways of describing many nuanced layers of meaning contained in the ambiguous and complex experience of suffering, Patristic writers made a creative synthesis of three lines of thought: 1) all of creation, including humanity, which had been “very good” (Gen. 1:31) and in a state of grace became “fallen” – separated, corrupt, and alienated from God; 2) the forces of evil and suffering became more personified and associated with the person and activities of the devil and his agents; and 3) Christ’s sacrifice, suffering, and death was to atone for humanity’s fallenness. Thus, for many writers of the Early Church, the Fall mythology and the introduction of the devil in the Garden of Eden became the primary

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27 Bowker indicates that Rabbinic Judaism frequently made use of the classical formulation of suffering as punishment for sin and profoundly affected the imaginations of Early Church Fathers. Bowker, 32. Bowker also illustrates how the work of Maimonides, a Jewish philosopher of the Middle Ages, recognized that suffering as punishment represented the majority opinion of the Rabbis whereas in his twelfth century book, Guide for the Perplexed (1904), he goes well beyond this one description and focuses on three alternative descriptions: suffering and evil which is caused to humanity due to the possession of a body (genesis and destruction); suffering and evils people cause to each other; suffering and evils people cause to themselves. Bowker indicates that the work of Maimonides “bears some relation” to that of Early Church Fathers Ireneaus (130-202) and Augustine (354-430). Ibid., 32-33.

28 Ibid., 81. In Scripture there is a personification of the devil and his agents: John 8:44; Rev. 12:9.
imaginative framework for understanding Christ’s redemptive work and undergirded the concept of original sin first alluded to by Irenaeus, Tertullian, and Cyprian, but most formidably articulated by St. Augustine of Hippo in the late fourth and early fifth century. This doctrine indicated that Adam’s act of disobedience and rebellion caused humanity’s fall from an original state of grace, alienation from God, and expulsion from paradise. Augustine also argued that all human beings share in Adam’s guilt or corruption because they “contracted the contagion of the ancient death” (Adam’s fall) and were seminally present in his loins. Thus, Augustine promoted original sin as a spiritual pathology and original defect of the will transmitted to each subsequent generation and he emphasized the human inclination to sin – an “irrational element” – as the primary legacy of the Fall. The latter emphasis was something previous theologians did not stress as strongly.

29 St. Ignatius of Antioch (50-110) wrote that “[Jesus] suffered all this on our account, that we may be saved,” and St. Athanasius (296-373) also indicated that “...all men had been condemned to death. But he who is innocent has offered for all his body to death....”See: Overberg, 68-69. It was Tertullian (160-220) who stressed a legalistic concept of Christ’s satisfaction for our sin that significantly affected St. Augustine, St Anselm, and St Thomas Aquinas’ understanding of Christ’s connection to sin. Overberg states that Aquinas “viewed the Incarnation as a remedy for sin” even though he acknowledged that God could become incarnate “even if sin never occurred.” Ibid., 82.

30 Irenaeus of Lyons argued for the authenticity of the Genesis account and regarded Adam’s sinful disobedience as something that would affect all subsequent generations. In the third century Tertullian indicated that due to our “fellowship in death” with Adam, our human nature is stained and our soul “is counted as being in Adam until it is re-counted as being in Christ, and remains unclean until it is so re-counted.” Bowker., 83. St. Cyprian (d. 258) described the effects of original sin as “wounds” which Christ came to heal, and baptism was a ritual to “cure the serpent’s poison” and heal the wounds received by Adam. Ibid., 84.

31 For his understanding of the “taint of sin” and how he saw how this affected his life and the life of his mother Monica, see St. Augustine, Confessions, trans. R.S. Pine Coffin (New York, NY: Dorset Press, 1986), Book I, 7; Book V, 8. This theme of the fall, sin of disobedience, and the transmission of the corruption of sin also occupies his imagination in On the City of God (e.g., St. Augustine, On the City of God, Book XII, 1,6,22; Book XIII, 1; Book XIV, 13). http://www.logoslibrary.org/augustine/city/. Accessed December 12, 2012. William Harmless indicates that in On the Merits and Forgiveness of Sins and On Infant Baptism, his two volume treatise countering Caesestius’s assertion that infants do not inherit Adam’s sin, Augustine introduced the term “original sin” into the theological conversation concerning suffering and this was “ever linked with his name.” William Harmless, Augustine in His Own Words (Washington, DC: Catholic University of America Press, 2010), 377-378.


33 Bowker, 82.
of the origin of the pathos of creation offered by these Early Church Fathers has held and continues to hold sway over Christian imaginations concerning human suffering. There were, however, alternative visions to what Augustine proposed such as Irenaeus’ understanding that human deficiency is a manifestation of humanity’s immaturity – a not-yet-realized or matured capacity for goodness. Irenaeus thus, stresses the need for proper spiritual development in one’s salvific journey to know God rather than emphasizing humanity’s fallenness from an original perfect state. Thus, during the Patristic period there were antithetical descriptions of humanity – i.e., a perfect being (Adam) who by his disobedience and pride destroyed humanity’s state of perfection and brought suffering upon himself and all his descendants as opposed the understanding that human beings began as imperfect and immature creatures who undergo a process of gradual development until they find their ultimate completion in God. From these two anthropological visions, Patristic writers crafted seven ways to describe their personal and communal experiences of human suffering: Punishment and Divine Wrath; Testing and Purifying; Schooling in the Ways of Divine Wisdom; Medicinal Suffering; Aesthetic Theme of Harmony; Steadfast Witness; and Mystery. This excavation is necessary to allow contemporary sufferers to recognize the deep roots of current descriptions of suffering, the classic cosmological context out of which they

34 “God arranged everything from the first with a view to the perfection of man, in order to deify him and reveal His own dispensations, so that goodness may be made manifest, justice made perfect and the Church may be fashioned after the image of His Son. Thus, man may eventually reach maturity, and, being ripened by such privileges, may see and comprehend God.” Irenaeus, Against Heresies, 4.37.7. Available at Christian Classics Ethereal Library http://www.ccel.org/ccel/schaff/anf01.toc.html. Accessed August 2013. Also, God’s infinitely overflowing love freely given from before creation until the world’s fulfilment at the eschaton is a dimension of St Paul’s writings (e.g., Ephesian and Colossians) that is underemphasized or overlooked because of his engagement with sin and sacrifice. This alternative, dynamic vision of love and compassion as the cause of the Incarnation rather than human sin is taken up by Franciscan John Duns Scotus (d. 1308) as well as more contemporary theologians such as Teilhard de Chardin (d. 1955), Karl Rahner (d. 1984), writers at the Second Vatican Council, Edward Schillebeeckx (d. 2009) and Catherine Mowry LaCugna (d. 1997). See: Overberg, 73-92.
have emerged, and the need to re-imagine predominant descriptions of suffering (e.g., punishment and expiation) in light of cosmogenesis.

**Punishment and Divine Wrath**

Many Patristic writers re-affirm and re-articulate Scriptural descriptions of suffering as a result of humanity’s prideful rebellion and transgression against God. For example, St. Cyprian makes use of Psalm 89:31-33 in his description of suffering as punishment or retribution for human sin: “If they violate my statutes and do not keep my commandments, then I will punish their transgression with the rod and their iniquity with scourges.” Desert Mother Amma Syncletica, who is thought to have lived in the fourth century, comments that “[i]n the world, if we commit an offense, even an involuntary one, we are thrown into prison; let us likewise cast ourselves into prison because of our sins, so that voluntary remembrance may anticipate the punishment that is to come.” Augustine strongly emphasizes this interpretation of suffering; namely, suffering and evils of the human condition as righteous punishment for human sin:

In the beginning man’s nature was created without any fault and without any sin; however this human nature in which we are all born from Adam now requires a physician [*medico*] because it is not healthy [*sana non est*]. Indeed, all the good qualities which it has in its organization, life, senses, and understanding, it possesses from the most high God, its creator and shaper. On the other hand, the defect [*vitium*] which darkens and weakens all those natural goods so that there is need for illumination and healing, is not derived from its blameless maker but from that original sin that was committed through free will. Consequently, that criminal nature draws upon itself the most righteous punishment.

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35 See Footnote 80 to see how cultural influences, such as Roman law, had on theological understandings of suffering and redemption.

36 Ryan, 104.


38 Augustine, *De natura et gratia*, 3.3. Sarah Elizabeth Thompson argues that Augustine’s statement is far more complicated than it appears due to his understanding of punishment due to “natural” sin (i.e., internal or self-inflicted due to disordered wills) and “legal” sin (i.e., external or divinely inflicted). Samantha Elizabeth
Testing and Purifying

Another influential dimension to Patristic descriptions of human suffering is how suffering involves God’s desire for “his household [to] be tested.”39 This allows suffering to be understood as a test of one’s virtue, as Job was tested, and this allows for a more positive element or meaning to the experience of human suffering. Christian ascetical practices and martyrdom during the third and fourth centuries were moulded by earlier biblical understandings of suffering as a test from God for a righteous person or as a purifying fire that an innocent sufferer (martyr) endured to attain a higher intimacy with God.40 This dimension of suffering was inextricably intertwined with other more positive elements of suffering, namely “Schooling in the Ways of Divine Wisdom” and “Steadfast Witness.” Sufferers today are heirs to these descriptors, but these classical descriptions cannot be directly mapped onto or correlated with situations today; understanding the contextual environment within which they arose is important for a critical evaluation of contemporary interpretations of, and responses to, suffering.

Schooling in the Ways of Divine Wisdom

In many instances, Patristic writers described human suffering as a tool for educating or advancing human beings who are ignorant in the ways of divine Wisdom. This concept

Thompson, “Augustine on Suffering and Order: Punishment in Context” (Thesis (Ph.D.), University of Toronto, 2010), 13.

39 St. Cyprian in Ryan, 105.

40 See chapters 2-5 in the Book of Wisdom, the Psalms (Ps. 34:19, 20; 16:8-11; 31:5), the Prophets, or the story of the seven brothers and their mother in the second Book of Maccabees (2 Macc. 7). John Chryssavgis affirms this understanding of suffering by indicating that “[t]he dry desert, from the third century until around the end of the fourth century, became the laboratory for exploring hidden truths about Heaven and earth.... The hermits who lived in that desert tested and studied what it means to be human....” John Chryssavgis, In the Heart of the Desert: The Spirituality of Desert Fathers and Mothers (China: World Wisdom Inc., 2003), 1. Amma Sarah also illustrates how Christ is her strength in her painful journey of detachment and growth that will purify her and join her more intimately with the Beloved. Amma Sarah 2 in Swan, 37-38.
helped them to describe aspects of their personal and communal experiences of suffering in ways that allowed them to make sense of, and respond positively to, their suffering. For example, the work of St. Irenaeus in the second century asserted that evil and suffering are necessary for “soul making” for this is how we learned or developed our capacities for charity, compassion, cooperation, courage, self-control and forgiveness.\(^{41}\) Another example is Bishop Titus of Bostra whose work in the fourth century indicated that suffering and evil seems “…to school us better than good towards virtue….”\(^{42}\)

**Medicinal Suffering**

This manner in which to describe suffering, namely as a medicinal treatment for the wounds made by sin, enables a believer to attribute some positive aspects to the suffering they are experiencing and allow for a constructive, transformative response to suffering. For example, St Basil of Caesarea asserts that “just as a beneficent physician may inflict sufferings and pain on a body as he grapples with the sickness and not the patient, so the good God dispenses salvation for the whole by punishment of the parts.”\(^{43}\) This way of describing suffering is still employed by sufferers today but needs to be re-imagined in light of distortions caused by malformed expectations of modern sufferers concerning the goal and capabilities of institutionalized medicine and the technicians of modern science.

**Aesthetic Theme of Harmony**

If suffering was one face of a two sided coin, then beauty and joy can be understood as the other face. Many writers in the Patristic period understood this and indicated that another dimension of suffering is how it acts aesthetically to augment creation’s beauty and


\(^{42}\) Ryan, 106.

\(^{43}\) Ibid.
harmony. Paintings are made more beautiful when the artist orders both the light and the shadows in ways that are aesthetically pleasing. St Augustine wrote: “For as the beauty of a picture is increased by well-managed shadows, so too the eye has skill to discern it, the universe is beautified even by sinners, though considered by themselves, their deformity is a sad blemish.” Thus, suffering can be seen as that which qualifies and amplifies one’s understanding of beauty and joy.

Steadfast Witness

Another dimension of human suffering can describe suffering as the opportunity for both an individual or a community to offer a credible witness to Christ. Cyprian of Carthage is embracing this element when he claims that “[y]our present witness is more splendid and brings you greater honour because it became more assured in suffering.” Those suffering unjustly could take refuge in this description for as “water, light, air are shared by all, so the just must endure the evils of the unjust....” Thus, those who suffer innocently can attest to a positive consequence of their suffering; through their witnessing to Christ, and by their steadfast witness, they can guide others to conversion.

Mystery

From Scripture, the Patristic writers were bequeathed plentiful descriptions and affirmations of suffering as a divine and cosmic mystery. Again, this description of suffering was a vital precedent for descriptions and interpretations proposed in Chapter Five. The Early Church Fathers and Mothers were acutely aware of the immensity of pain and suffering being suffered in their communities as well as the limitations and inadequacy of their many

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44 Ibid., 108-9.
46 Prosper of Aquitaine in Ibid., 110.
descriptions concerning the many intertwining dimensions of suffering. Thus, they relied on St. Paul’s affirmation that God’s ways and judgements are incomprehensible to us and our own intellect cannot penetrate this mystery that is human suffering.⁴⁷ St Augustine, in his *Confessions*, indicated that in the midst of the sorrow of life, which is a “land of death,” one may not find happiness or understand the dark abyss that is human suffering. Nevertheless, they were confident that in light of this mystery, a Christian response to suffering is the acceptance of the life, death, and resurrection of Jesus, and in ways beyond our understanding, this acceptance will transform the whole situation.⁴⁸ Thus, embracing the life, ministry, death, and resurrection of Christ does not offer a life devoid of suffering to his followers; rather, it is a reminder that suffering and death never have the final word.

**Interpretations:**

From the nine ways in which scripture writers and Early Church Fathers and Ammas described suffering, there have been five predominant ways that their descriptions have been interpreted (during this period as well as by predominant theologians in subsequent centuries) that have been bequeathed to contemporary sufferers: lament, the law of retribution and expiation, the mystery of suffering, sacrificial or redemptive suffering, and the apocalyptic solution.⁴⁹ These interpretations represent the process of explaining the images, metaphors, and conceptual tools offered by the description and offer a critical explanation of the theological and pastoral significance of these descriptions. This is

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⁴⁷ Ibid. For example, Augustine often refers to St. Paul’s statements (especially Rom 11:33) concerning the incomprehensibility of God’s judgements. Ibid. The desert Mother’s also appreciate the limitation of human comprehension of God’s saving activity. Amma Syncletica writes that “[w]e sail on in darkness. The Psalmist calls our life a sea and the sea is either full of rocks, or very rough, or else it is calm. ...We always set our course by the sun of justice, but it can often happen that the secular is saved in tempest and darkness...” Amma Syncletica 25, in Swan, 62.

⁴⁸ Augustine, *Confessions* iv, in Ibid., 12.

⁴⁹ Harrington, 4-10.
important because many sufferers today are heirs of these interpretative frameworks and when they are experiencing suffering, they employ them uncritically and compound their anguish. The predominant interpretations that are in need of critical evaluation and re-imagination in light of cosmogenesis are retribution, sacrifice, and expiation for they have dominated theological imaginations for seventeen centuries to the detriment of many sufferers.\footnote{50} Shifting Western theological understandings of creation, aided by the emergence of a distinctive Earth literacy, illuminate how these three interpretations have emerged from a dysfunctional, anthropocentric cosmology and have effectively muted more cosmic and Earth centred dimensions of suffering such as St. Irenaeus and St. Paul’s understanding of human misery being coupled with the unfinished, unfolding cosmic drama of salvation. This thesis will argue that by adopting cosmogenesis as the framework for engaging human suffering, purely retributive, sacrificial and expiatory understandings of suffering will be tempered and given a more appropriate place in the moral imaginations of people of faith. Also, more transformational and hopeful interpretations of suffering will be remembered and these will better sustain and guide contemporary sufferers.

**Scripture Writers: Vision of Retribution, Sacrifice, and Expiation**

Suffering as retribution understands and communicates the experience of suffering as God’s punishment of disobedience, infidelity, idolatry, and rebellion. Thus, human suffering is the cost paid to satisfy divine justice. This is the most common approach to suffering in Hebrew Scripture\footnote{51} and many biblical texts offer individual, corporate, and cross-
generational dimensions to the understanding of suffering as retribution for wrongdoing. In Deuteronomy 30, Moses promises Israel that if they keep the commandments they will become numerous and prosper. He also warns that if they fail to keep the covenant, they will perish. Joshua indicated that Achan’s sin of taking what was properly God’s brought God’s anger on the whole people of Israel (Josh. 7). The prophets Isaiah (e.g., Isa. 49) and Jeremiah (e.g., Jer. 15) view historical occurrences of suffering as the result of the sins of the people but they also promise better times ahead if they mend their ways. However there are voices within Scripture that offer a different vision; Ezekiel (chp. 18), argues against the understanding of inherited guilt and Ecclesiastes (7:15; 9:2) expresses scepticism about the validity of the law of retribution. Ibid., 6.

Robin Ryan, in *God and the Mystery of Human Suffering*, shows that scriptural theories of retribution have influenced many other theological constructs. For example, a God who punishes disobedience has led to the emphasis of God as a tyrannical dictator who is disembodied and a purely intellectual Being. This understanding of God promotes God’s radical Otherness and impassibility to the detriment of God’s immanence and compassion. It has also affected humanity’s participation in unjust relations by promoting humanity as passive, fallen beings at the mercy of a wrathful God, and creation as disordered and corrupt, thus preventing Earth and the cosmos from being a source of divine revelation.

Classical visions of suffering as sacrifice assign expiatory meaning to the suffering of the people of Israel and allow sacrifice to be an essential component of the covenantal tradition. Daniel Harrington calls this biblical description of suffering redemptive in that the suffering endured resulted in a positive effect on and for other persons or communities.

This approach to suffering (although not a prominent theme in the Hebrew Scriptures outside of Isaiah) deeply permeates the Christian understanding of Jesus’ passion; Christ’s ultimate sacrifice on the cross in obedience to God’s will “brought about forgiveness of our sins and made possible a new and better relationship with God.” Sacrificial suffering as obedience to God’s will (deeply connected to apostolic suffering as a “taking up of one’s cross”) is

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52 In Deuteronomy 30, Moses promises Israel that if they keep the commandments they will become numerous and prosper. He also warns that if they fail to keep the covenant, they will perish. Joshua indicated that Achan’s sin of taking what was properly God’s brought God’s anger on the whole people of Israel (Josh. 7). The prophets Isaiah (e.g., Isa. 49) and Jeremiah (e.g., Jer. 15) view historical occurrences of suffering as the result of the sins of the people but they also promise better times ahead if they mend their ways. However there are voices within Scripture that offer a different vision; Ezekiel (chp. 18), argues against the understanding of inherited guilt and Ecclesiastes (7:15; 9:2) expresses scepticism about the validity of the law of retribution. Ibid., 6.

53 Ryan, 27.

54 Harrington, 8.

55 Ibid.
interpreted as a gift to God and a way to establish communion with God. It also becomes a way of atoning for human sin, which when coupled with hierarchies of worth presented by the prevailing dysfunctional cosmology, becomes very influential in later centuries and perilous to marginalised individuals and groups. Thus, the interpretation of suffering as sacrifice grounds Isaiah 53, the last of the Servant Songs, and the Christ event, and enables Christians to imagine that Christ was the suffering servant whose sacrifice accomplished human salvation, something material sacrifice undertaken by humanity could not do.

Augustine: Vision of Retribution, Sacrifice, and Expiation

St. Augustine (and later St. Thomas Aquinas) took up the challenge of formally and faithfully explaining the pervasiveness of suffering and offered a theological interpretation or solution: the doctrine of original sin. Their works focused on articulating suffering as divine punishment and retribution for sin and they relied on the biblical drama of the Fall to help people of faith to understand this. The core of Augustine’s understanding of the Fall was taken from the myth of angelic beings falling from total dependence on God to a reliance on their created capacity and this pattern repeating itself with Adam falling way from God due to disobedience and pride. Augustine believed that the miseries suffered in one’s life were the result of Adam and Eve’s original sin that had besmirched God’s good and perfect creation. The drama of the Fall from an “exalted” human state where there was no illness and where one possessed true freedom and knowledge, to our finite state of vulnerability, infects

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56 This will be taken up more fully in the second category “Witness of Liberative Writers.”

57 Ryan, 33.

58 Augustine wrote three commentaries on Genesis that included the Fall (On Genesis Against the Manichees; On the Literal Interpretation of Genesis, An Unfinished Book, and On the Literal Interpretations of Genesis). He was committed to understanding the book of Genesis in light of the origin of sin and evil in Confessions (Books 2, 11-13) and used the angelic Fall imagery in City of God (Books 11-14). For a current author who engages with Augustine’s understanding of retribution, see: Marjorie Suchocki, The Fall to Violence: Original Sin in Relational Theology (New York, NY: Continuum, 1994), 19.
all of human history and how humanity appreciates creation. Since Augustine believes that all evil is the result of sin, then human suffering is due to both “heavenly conflict prior to creation” and humanity’s prideful rebellion against God which are the central elements of the Fall drama. The efforts of Augustine have influenced subsequent theologians including St. Thomas Aquinas who believed that existence is a good and unmerited gift of the Creator and there is no contrasting principle that causes suffering. Thus, akin to Augustine, Aquinas saw evil as a privation or an absence of the good that ought to be present, and this privation is either a natural evil suffered (malum poena) or a moral evil done (malum culpae). As a result, Aquinas interpreted Augustine’s Fall mythology as the historical people of Adam and Eve living in a state of “original justice” or blissful goodness in harmony with others made possible by God’s grace, and their suffering, which infected each subsequent generation of human beings, was a punishment caused by their disobedience. From this vision, St. Thomas interpreted original sin as a loss, a privation or disordered disposition that grows

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59 Ryan, 112. Despite Augustine’s admission that this drama only affects humanity, the drama of the fall also has ramifications for nonhuman created life.

60 Suchocki, 19.


62 Ibid., I.48.1.

63 Aquinas inherited culpa and poena from Augustine. In De libero arbitrio Augustine wrote that there are two species of evil: that which we do (culpa) and that which we suffer (poena). However Aquinas in his later writings speaks simply of two aspects of sin (i.e., the malum culpae and malum poenae). De Malo Q1. a4. Culpa is an evil operation (a willed, disordered act) whereas poena amounted to an evil that inheres in the subject of the operation and is something that is endured. See: Romanus Cessario, The Godly Image: Christ & Salvation in Catholic Thought from St. Anselm to Aquinas, Studies in Historical Theology (Petersham, ME: St. Bede’s Publications, 1990), 85-86.

64 Nicholas E. Lombardo, The Logic of Desire: Aquinas on Emotion (Washington, DC: Catholic University of America Press, 2011), 121. Robin Ryan also indicates that Aquinas believed that the wounds caused by Adam and Eve’s disobedience were wounds of ignorance (which damages human reason), malice (which damages human will), weakness (which affects the irascible appetites), and concupiscence (which damages concupiscible appetites). Ryan, 132.
from the dissolution of the harmony humanity originally possessed in the Garden of Eden.  

Thus, the rebellion and disobedience of Adam at the beginning of human history changes, modifies and sickens all human persons and only God can heal this wound. After the many debates concerning original sin that captivated the imagination of several Councils, the Council of Trent (1545-63) formalised the understanding of original sin emanating from Augustine’s and Aquinas’ understanding of the Fall and this became a cornerstone of the faith. As a result, the meaning of the cross became firmly situated in the context of expiation which diminished the theological space for encountering other layers of meaning in the life, death and resurrection of Christ.

Today, the theological imaginations of many sufferers are still entranced by this classic interpretation of suffering despite the recognition by the voices from liberative or contextual theologies that this interpretation has contributed to the victimisation and oppression of many sufferers. It is the voices of sufferers from the margins, as witnessed by liberative writers, that reveal how classical descriptions and interpretations fail to adequately articulate God’s immediate healing and saving presence in creation as well as the need of


66 Ryan, 132.

67 For example, the synods of Carthage in the fourth and fifth centuries engaged sin and grace and formalized their beliefs into canon in 418. Also, the Council of Orange (529 AD), an outgrowth of Augustine’s public polemic with Pelagius, affirmed the idea of original sin: “If anyone asserts that Adam’s sin affected him alone and not his descendants also...he does injustice to God and contradicts the Apostle, who says, ‘Therefore as sin came into the world through one man and death through sin, and so death spread to all men because all men sinned’ (Rom. 5:12).” *The Canon of the Council of Orange* (529 AD), Canon 2. [http://www.fordham.edu/halsall/basis/orange.txt](http://www.fordham.edu/halsall/basis/orange.txt). Accessed December 11, 2013.


69 This will be elaborated on in the following section “Voices from the Margins.”
humanity to respond to God’s immanent saving grace by working with God and the rest of creation to alleviate suffering in the here and now.

Second Category: Modern Period (Witness of Liberative Writers)

**Descriptions:**

Contemporary society is very different from the world of antiquity. Our world today is more ambiguous for we have immediate access – daily and even hourly – to the massive suffering occurring worldwide, and yet at the same time, we deceive ourselves by believing in the possibility of living a life devoid of suffering via “a life of hyper-consumerism and the entertainment of spectacle.”

Scientists Lynn Margulis and Dorion Sagan indicate that this deception is unique to our species: “[a]mong the dazzling array of reasons implying our superiority over the rest of creation, one scientific argument stands out to us in curious contrast to the rest: humans are the only beings capable of wholesale self-deception.”

Our world is also highly stratified; our technocratic, industrial and capitalist global world is comprised of a small centre of exploitative producers and possessors (20 percent) while the rest constituted a great periphery of the marginalized (80 percent) where the majority of people live, are exploited, and suffer. Contemporary contextual theologies critique anthropocentric and androcentric classical ideas of suffering that focus solely on the Divine-human relationship, and ignore the exploitation of whomever is deemed “other” – e.g., women, oppressed people living in poverty, those suffering from mental illness, indigenous peoples, those living with disabilities, the aged, and Earth. This classical interpretative

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framework effectively relegates many to the margins of society and to the bottom of contemporary value systems. Douglas John Hall indicates that to correct this myopia, theology must make its methodological starting point the experience of suffering of those living at the margins. This orientation will expose how descriptions of suffering, such as punishment for disobedience and rebellion, self-abnegating sacrifice associated with the uncritical use of the phrase “taking up of one’s cross,” or suffering as a way of appeasing God’s wrath, can be inappropriate and often exploitative if the “other” is seen as “sinful” and thus the suffering they experience is justified or glorified by those in positions of power in society.

One theological description of suffering that has been employed and has oppressed many women is the extrapolation of the self-sacrifice and obedience modelled by Christ (e.g., the Suffering Servant from Isaiah 53) to women. From this theological narrative it has become the moral expectation that a woman deny her selfhood for the sake of fathers, brothers, spouses, or children. As a result, unjust suffering becomes justified or glorified when it is coupled with Christ’s unquestioning obedience to God and his ultimate sacrifice of his life. The suffering of women thus becomes understood as punishment for disobeying God manifest as a defiance of the Church, the state, fathers, or any male in a position of power. When this is coupled with an understanding of God as a wrathful, vengeful God and Father, then the oppression, suffering and death of women (and other vulnerable people) can become justified and even glorified. Joanne Carlson Brown and Rebecca Parker indicate that in light

73 Ibid., 154.
74 Carol J. Adams “Battery” in The Dictionary of Feminist Theologies (Louisville Kentucky: Westminster John Knox Press, 1996). In this exposition Adams writes that “[g]ender-based notions of proper religious behaviour, in which women are to be self-less and self-abnegating, contribute to a woman’s confusion about putting her safety first. ... The suffering servant model very likely keeps victims from establishing safety concerns as their first priority. ... The religious meaning of sacrifice is thus layered on top of the social view of women as sacrificial.” Ibid., 24.
of this theological glorification of suffering, “[i]s it any wonder that there is so much abuse in modern society when the prominent image or theology of the culture is of ‘divine child abuse,’ – God the Father demanding and carrying out the suffering and death of his own son?” Feminist and liberation theologians as well as the “victims of slavery, racism, unjust wages, torture, human trafficking, and political oppression” are working to challenge these distorted, dis-embodied or spiritualised, and exploitative descriptions of suffering, and are offering new, more life-giving ones. More nuanced and accurate descriptions of suffering pay theological attention to the collapse of mutually empowering relations, the distortion of social structures and patterns of thinking, and the corporate and personal acts of violence towards the “other.” By taking the lived experiences of those forced to the margins as the starting point for theological engagement with suffering, two alternate ways of describing suffering are exposed: Breakdown of Relationality, and Resistance to Unnecessary Violence Against Well-Being. These are crucial for aiding those who are suffering today to make sense of their experiences in light of their faith in a God who is Love. They are also set a vital precedent for the fourth category of suffering offered in Chapter Five.

Breakdown of Relationality

Suffering, in addition to classical descriptions, needs to reflect a neglect or breakdown of relationship, regardless of whether the context is between sexes (sexism), races (racism), women (patriarchy), economic levels (classism), or species (speciesism). Thanks to the work of many contextual theologians, the disintegration of mutually empowering

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76 Calef, 51.

77 Hall, The Cross in Our Context, 72.
relations with God, self, and neighbour has become understood as “sin,” and this new understanding allows the narrative of the Passion and the cross to speak more clearly of the suffering caused by breakdown of relationships:

It is the story of a man whose goal is shattered. But this despair over his own cause would be incomplete – and below the level of other human suffering – without the physical and social experience the story describes. Without torture, it would remain on a purely spiritual level. And the disintegration of his company of followers is part of this experience of suffering, for Jesus is denied, betrayed, and abandoned by his friends.

The expansion of a purely private and individualistic understanding of sin and suffering allows both social and historical dimensions to surface and illuminates how anthropogenic suffering that disempowers and dehumanizes (sinful socio-economic and political structures and patterns of thinking) can (and must) be named and transformed. To privatize sin to only personal acts of pride or disobedience against God who is radically other, as is emphasized in the Adamic fall in the garden of Eden, fails to take the corporate dimension of sin into account and when this is ignored, the concept of sin can be a powerful tool to oppress those deemed “other” in society. A narrowed perception of sin arises from the understanding of suffering as punishment of individuals or groups for wrongdoing and this

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78 For example, feminist theologian Rosemary Radford Ruether indicates that sin is social, historical and personal and that “[a] false individualizing of responsibility for sin is also a major way of trying to evade the reality and responsibility for the history of distorted humanity. ... Sin has a personal as well as a systemic side. But it is never just ‘individual:’ there is no evil that is not relational. Sin exists precisely in the distortion of relationality, including relation to oneself. Although there are sins that are committed primarily as personal self-violation or violation of another individual – abuse of one’s body by intoxicants, rape, assault, or murder of another – even these very personal acts take place in a systemic, historical, and cultural context.” Ruether, *Sextism and God-Talk: Toward a Feminist Theology* (Boston, MA: Beacon Press, 1983), 181. Another example is liberation theologian Gustavo Gutiérrez. He asserts that many classical descriptions and interpretations of sin as retribution (and suffering “caused” by this sin) fails to account for the socio-political and economic dimensions of sin. The doctrine of retribution is “a convenient and soothing doctrine for those who have great worldly possessions, and it promotes resignation and a sense of guilt in those who lack possessions.” Gustavo Gutiérrez, *On Job: God Talk and Suffering of the Innocent* (Maryknoll, NY: Orbis Books, 1987), 22. Thus sin, for Gutierrez, is a breach of communion with God and one’s fellow human beings and this is the true cause of poverty, injustice and oppression. Gustavo Gutiérrez, *A Theology of Liberation: History, Politics, and Salvation* (Maryknoll, NY: Orbis Books, 1973), 35.

79 Sölle, 16.
becomes a powerful tool for the affluent in society to blame and silence the victim. It also allows for the powerful to justify, romanticise, and glorify the suffering of the “other” while negating their own responsibility in causing the suffering of the “other.”

The concept of sin is a key to helping us understand human suffering in the light of human responsibility. It is misused, though, when seen as punishment for those who suffer.... Blaming the victim is the easiest and most superficial way to explain suffering; on the contrary, compassion and cosuffering characterize the way of Christ.  

Christ invites all his disciples to pray as he did – “with bold speech” – and thus, the violation or breakdown of mutually empowering relationships, speaks boldly to the social and historical nature of suffering and to simplistic understandings of suffering as punishment for wrong-doing or sin. This is a vital dimension for any theological engagement with suffering in a globalized, evolutionary, and industrialized world.

Resistance to Unnecessary Violence Against Well-Being

Suffering is a component of embodied life but voices from the margins also describe suffering as the unnecessary violation of well-being associated with rebellion against creation. The immensity of suffering today has many intertwined root causes that include institutional structures or norms that violate well-being of the “other” while guarding the well-being of those with privilege. Also, classic understandings of punishment for sin and social expectations of women and other vulnerable, marginalized groups promote a passive and silent acceptance of suffering that leaves little room for an authentic sense of how deeply

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80 Dorothee Söelle, “Suffering,” in New Handbook of Christian Theology, ed. Donald W. Muser and Joseph L. Price (Nashville: Abingdon Press, 1992), 465. Robin Ryan also indicates that Gustavo Gutiérrez is pointed in his critique of how the poor have been “idealized” by the affluent and “caricatured as simple people who are content with “their lot” and “close to God.” This only serves to insulate the economically advantaged from any responsibility for unjust social constructions and patterns of thinking that cause poverty. Ryan, 426-247.

81 Calef, 67.

82 Suchocki, 16.

83 Ibid., 13; 129.
God loves us, a faithful resistance to injustice, and active, vigorous participation in the process of self-care and healing.

In the Gospel of Mark, the story of the hemorrhagic woman witnesses to how one can faithfully describe and respond to that which violates one’s own well-being. In this story there are two reactions made to the woman’s suffering: the woman’s and Jesus’. This woman endured multiple forms of privation (physical, economic, social), resisting each one tenaciously, and upon hearing about Jesus, acts yet again to relieve her suffering and establish well-being and wholeness (Mk 5:27-29). Thus her healing occurs at her own initiative sustained by the grace of God for “[s]he reaches out, yet again, in hope of relief to the one she believes can heal her.” In this way she is a model of faithful “self-care.” Jesus inquires “Who touched my clothing?” (Mk 5:30), a personal response to her act of faith and thus opens a dialogical space for the woman’s voice, muted by pain, sorrow and isolation, to be heard. He breaks her isolation by addressing her directly and bears witness to her status as a beloved child of God and a woman of great faith.

This event also draws our theological attention to the need to actively respond to the spiritual, social and physical needs of sufferers when possible. The “power” to heal lay in her unwavering confidence that the ultimate source of healing power resided in Jesus and her trust that God “wills the good for her;” namely, the restoration of her health and wholeness: “Daughter, your faith has made you well” (Mk 5:34). It is through a personal encounter with God that we are healed, nourished, and empowered to resist suffering, protest grave injustices, and stand in solidarity with other co-sufferers changing “...the ‘I’ into ‘we,’ enabling one to say, ‘we poor,’ ‘we oppressed,’ ‘we exploited....’ This...is the fruit of the

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84 Calef, 60.
85 Ibid., 61.
This Christology of relational, shared spiritual and physical power, “one in which Jesus’ power is active through the participation of others,” allows for a description of suffering that evokes a different response than merely passively bearing one’s cross in silent resignation that can stem from a purely retributive, sacrificial, or expiatory description of suffering.

**Interpretations:**

Voices from the margins bear witness to scriptural and Patristic understandings of suffering, such as lament, mystery, trial, discipline and a call to intimacy; but they also offer critique and qualify simplistic and purely retributive understandings of suffering. The experience of suffering by women, those people living in poverty, or Earth’s vulnerable subjects does not glorify, valorise, or eternalise suffering; instead, it pays close theological attention to social, cultural, political and historical dimensions of suffering (social sin) as well as personal acts that cause suffering (personal sin). The voices at the periphery invite a redefinition of sin and suffering as distorted or broken relationships (rather than purely prideful acts undertaken by autonomous, rational moral agents) not only between God and humanity, but also among humans and between humanity and Earth. These interpretations made of suffering at the margins allow suffers to: i) regain choice and agency, ii) work to alleviate suffering when possible, iii) bear suffering when necessary, iv) transform suffering

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86 Rankka, 222.


88 Rankka offers some descriptions of these distortions (she makes use of the term evil in these descriptions): “other as evil”, distortion of self-boundaries, betrayal of trust, moral callousness, and an inability to accept one’s own vulnerability. Rankka, 85.

89 Rankka indicates that feminist theology is good at illuminating the deficiencies in relationships between genders but often fails to evaluate female-female relationships for distortion. Ibid., 159-160.
when feasible, and v) stand in solidarity with other sufferers. This interpretative framework explores a radical acceptance of reality as it is and reveals a mysterious, transformative power within and beyond creation that is able to respond to suffering by releasing persons from the paralysis of the irresolvable questions (i.e., why is God punishing me?) and offering them a catalytic force to move them toward liberation and healing. This shifts theology from focusing on what a good and just God allows, gives, or denies towards a theology of activity and participation in suffering with God who is compassionately present and eternally encouraging. The twofold emphasis – i.e., God’s affective and responsive relationship with creation and a person’s “taking on” or active acceptance of suffering – is the catalytic dynamism that helps alleviate suffering.

Third Category: Post-Shoah Period (Witness of the Holocaust)

Descriptions:

While some suffering can be categorized and thereby placed within a horizon of meaning, some seems so meaningless that it defies placement. Radical suffering transverses the precipice between meaningful and meaningless suffering. It represents an attack on human personhood and an “incurable wound of despair that annihilates the future, severs relationships, and withholds from suffering any possible meaning.” Radical suffering has the power to dehumanise and degrade human persons, inhibit spiritual transformation, and utterly destroy the sufferer. It is not the intensity of the suffering that makes it radical but its power over a sufferer, whether physical, emotional, or spiritual. The self-image of a

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90 Ibid., 8.
91 Ibid., 126.
92 Ibid., 136.
93 It is important to note that radical, destructive suffering where there is no transformative impetus or response is often hard to delineate from transformative or redemptive suffering due to the interpretative nature
sufferer is crippled due to self-loathing and despair, and all of his/her experiences are absorbed into their present experience of suffering. This suffering individual has no recourse to memories of the past or to hope in a future; he/she is trapped in the meaningless misery of the present. If radical suffering is prolonged, then it “can create a soul incapable of self-defence because the spark of self-respect or dignity has been snuffed out by humiliation and pain.”

This category of suffering is informed by (and informs) the thematic subcategories offered by the first and second category (e.g., lament, mystery, and the breakdown of relationality) but is also significantly different. The similarities and differences can be described in a variety of ways. First, in this category suffering cannot be traced to punishment for an action or wrong doing; instead, it arises out of a sense that something is wrong with the very way one’s life is conditioned or structured. It also describes a radical contingency and vulnerability for the sufferer, despite his or her best actions, placing them at the mercy of something/someone that seeks to destroy life and all that is good. Third, this suffering is always concrete and contextual; namely, a part of a particular culture, economy, society and personal circumstance. It destroys human personhood and dignity by diminishing one’s capacity to exercise freedom, feel affection or hope, and love God. Finally, it is described as undeserved and unjust – without meaning and purpose. Kristine Rankka describes this radical suffering as involving undeserved suffering, and evoking pity and

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94 Ibid., 135-136.
96 Ibid., 135-136.
horror, and causing those outside of this experience of suffering to become paralyzed due to its perceived meaninglessness.\textsuperscript{97} Dorothee Sölle, in \textit{Suffering}, indicates that extreme suffering\textsuperscript{98} is the most radical stage of human suffering, “the night of pain,” and describes it as a form of suffering that turns a person inward to such a degree that he or she is unable to communicate and others cannot reach them, though one should never stop trying.\textsuperscript{99} The complete inability of language to communicate the reality of this suffering \textit{in extremis} reduces a person to muteness in which no discourse is possible any longer and the person ceases reacting as a human agent.\textsuperscript{100} This speechlessness that alienates a sufferer from any form of relationship is a form of death.\textsuperscript{101} Sölle is clear that there is nothing that language can capture or communicate about a “dark night” of extreme suffering for sufferers have turned completely in on themselves.\textsuperscript{102} But to stop attempting to try to reach them is not a viable option: “[i]t would be sheer cynicism to develop a theology about such suffering, for theology presupposes a certain amount of common experience” that is utterly lacking when engaging with this dimension of suffering.\textsuperscript{103} This description of suffering indicates how

\begin{flushleft}
\textsuperscript{97} Ibid., 165. \\
\textsuperscript{98} She labels this form of suffering “mute suffering” because it reduces sufferers to “a silence in which no discourse is possible.” Sölle, \textit{Suffering}, 68. \\
\textsuperscript{99} Ibid., 69. \\
\textsuperscript{100} Ibid., 68. \\
\textsuperscript{101} Ibid., 76. \\
\textsuperscript{102} The image of “the dark night” is not a modern construct but has its roots in medieval mysticism. For example, fourteenth century Flemish mystic Jan van Ruusbroec makes use of the idea of the Divine Dark as a place of transformation, and sixteenth century Spanish Catholic mystic, St. John of the Cross, used the phrase “Dark Night of the Soul” as the title for one of his poems and a later treatise. A twentieth century British writer Evelyn Underhill, in \textit{Mysticism: A Study in the Nature and Development of Man's Spiritual Consciousness} (4th edition. (London: Methuen, 1912)) asserts that the dark night of the soul is a vital stage in mystical process of union with God and describes it in a variety of ways: as a sense of “helpless imperfection” (Ibid., 390), a “utter blankness,” a “stagnation,” a “loss of the once possessed power of orison or contemplation,” an “impotence,” a “solitude,” a “dark fire of purification” (Ibid., 381), a “utter darkness and deprivation” (Ibid., 382), an “aridity” (Ibid., 383), a “probing of Divine Negation” (Ibid., 387), an “anguish of the lover who has suddenly lost the Beloved,” and finally “bitter suffering: far worse than that endured in the Purgative Way.” (Ibid., 389) \\
\textsuperscript{103} Sölle, \textit{Suffering}, 69.
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some sufferers “no longer have any possibility of determining a course of action, of learning from their experience, or of taking measures that would change anything.” Thus some sufferers can be described as perpetually powerless victims and their suffering ultimately being destructive. This darkest abyss of mystery that is radical suffering demands respect and humility and teaches modern sufferers that in some cases language will never adequately describe all aspects of the experience of suffering nor will God’s transformative grace, and the sufferer’s salvation, ever be fully comprehended. We are called to trust and hope in the resurrection and to companion those engulfed in the darkness – even if they cannot be reached – constantly reminding them of how the silent, stark darkness of the tomb on Holy Saturday was followed by the divine radiance of Easter morning for “nothing is impossible with God” (Luke 1:37).

**Interpretations:**

This description of suffering cannot be viewed statically nor in isolation from the other categories of suffering. Sölle envisions radical suffering as contributing to and qualifying all interpretations of the other forms. Her dynamic communication of the potential movement of a sufferer engulfed by radical suffering from isolation and muteness (Phase One) through communication and lament (Phase Two) to solidarity and change (Phase Three) calls attention to how more simplistic, uni-dimensional, classic Christian interpretations of less radical categories of suffering (e.g., retribution, expiation, test, discipline) cannot be applied universally. This form of suffering also unearths distorted responses to suffering, such as apathy and intolerance that classic visions of “suffering as punishment for sin” evoke. This category illustrates vividly how, when a person living and

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104 Ibid., 68.
105 Ibid., 73-74.
loving in solidarity with those who suffer opens her mouth “for the mute” (Prov.31:8-9), a sufferer of radical suffering gains access to the language of lament, pain, and self-expression that names and accepts the situation of suffering, produces new dimensions to the conflict or struggle, and envisions another way of being. It is this shared conquest of powerlessness – the moving from muteness to speech, from reactive to active behaviour – that liberates sufferers and exposes mitigating factors of their suffering that need redress.\textsuperscript{106} This relationally-based, emancipatory interpretation of suffering that names and responds to systemic injustice exemplifies how radical suffering and other forms of suffering cannot be explained by the Fall mythology or by the doctrine of retribution. The horrific, undeserved, dehumanizing cruelty of radical suffering defies all attempts to justify it and reminds those engaging with suffering of the boundaries of human abilities and the humility required to describe and interpret suffering in our world.

Conclusion: Chapter One

This chapter outlines numerous significant dimensions of human suffering that are categorized into those witnessed by scriptural, Patristic, and liberative writers as well as those who engage with the phenomenon of radical suffering. It is important to note the overlap of certain thematic elements (as well as the differences) in each category. Vital precedents are offered by these first three categories for the fourth category that is constructed in Chapter Five. The first category’s thematic subcategories of cosmic travail, lament, and mystery offer the imaginative models readers require to understand the cruciformity inherent to cosmogenesis and the role lament plays in our faithful witness to inherent suffering in our evolutionary world. The breakdown of relationality offered in the

\textsuperscript{106} Ibid., 70-74.
second category offers readers an archetype to examine and critique human relations with Earth. This is a crucial to modern understandings of our evolutionary world. The subcategory of resistance to unnecessary violence is also vital; it is the cornerstone for a critical reflection on the vision of sacrifice and the kenotic-kinetic offered in the fourth category. Radical suffering, the content of the third category, continually reminds readers of the inadequacy of any category of suffering. The speechlessness in the “dark night” of extreme suffering reminds readers and researchers of the humility required when exploring and promoting each category, including the novel category offered in this project. Thus, each category in this project offer readers many different descriptions and interpretations of human suffering that exert a strong influence on our theological imaginations and effect how we interact with the mystery of human suffering today.

This chapter attempted to reveal some inadequacies of some classic visions of suffering, namely retribution and expiation for sin or wrongdoing. It will be proposed in later chapters that a pre-Copernican worldview cultivates a nostalgic desire to return to a former, static, anthropocentric, and mythic state of perfection. This desire, in turn, distorts retributive interpretations of suffering and compounds the suffering of some individuals. This first chapter serves as a starting point for evaluating the faithfulness and authenticity of modern descriptions and interpretations of suffering by identifying how a great proportion of suffering in creation is tragic, undeserved, and outside the “theological grid of guilt and punishment.”107 By the twentieth century, theologians such as Pierre Teilhard de Chardin, saw that a new worldview was emerging and was inviting theology to use an evolutionary

model to express the mystery of the cross in order to re-evaluate human suffering.\textsuperscript{108} Thus, understanding how humanity, and indeed all of creation, has always existed within an ever-evolving universe that is directed toward greater complexity, subjectivity, and communion is propelling people of faith towards new descriptions of suffering that are more coherent within an evolutionary understanding of the universe. This chapter also reminds sufferers of earlier, often under-appreciated, theological descriptions and interpretations that take on a much brighter hue and moral significance when understood within the context of cosmogenesis.

The next task of this thesis is the constructive work to correct the over-emphasis on “suffering as punishment for sin” that is unduly burdening sufferers today. This is accomplished by the formation of theological imaginations that appreciate how suffering is intimately intertwined with creativity and evolutionary emergence \textit{without} losing sight of how sinful human action causes so much suffering and devastation. This is a tall order and first requires a person’s biospiritual moral imagination to be formed within a matrix of scientific and theological Earth literacy so that the relations among God, cosmos and humanity can be re-imagined and re-articulated within an ecological theological anthropology. This task will be engaged within the next three chapters.

\textsuperscript{108} Teilhard, in the essay “The Sense of Man” wrote about this shift in understanding; “To the informed eye, is there not already a barely perceptible change of shade? Original sin is very gradually becoming, is it not, something more in the nature of a tough beginning than a fall? The redemption more akin to a liberation than a sacrifice? The cross more evocative of hard-won progress than of penitential expiation?” Pierre Teilhard de Chardin, \textit{Toward the Future}, trans., R. Hague (London, UK: Collins, 1975), 34.
Chapter Two: The Emergence of Scientific Earth Literacy

The Contribution of Science to the Envisioning a New Cosmological Horizon of Meaning for Engaging Human Suffering

Science is built up with facts as a house is built with stones, but a collection of facts is no more science than a heap of stones is a house... It is by logic that we prove, but through intuition that we discover. To know how to criticize is good, to know how to create is better. 

*Jules Henri Poincare*

Cultivating a robust scientific Earth literacy is essential in the formation of the biospiritual imaginations needed to construct an ecological theological anthropology and reframe conversations concerning human suffering. Stephen Scharper wrote that he was always struck by the pithy comments of Gustavo Gutiérrez, including: “Unless you know the names of a poor person, you are not in solidarity with them.” Scharper applies this to the Earth community: “unless you know the names of certain species, learn how to communicate with them, spend time with ecosystems, with rivers, discern the patterns of animals that move across your life course, your ravines, you are not in solidarity.” Thus to foster a loving relationship with Earth and live in courageous solidarity with its most vulnerable requires the development of one’s scientific Earth literacy by learning the names and way of being (and becoming) of the many characters who contribute to the narrative of cosmogenesis. This

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2 Robert J. Russell celebrates what he calls “the ‘creative mutual interaction’ between theology and science” and argues for the existence of an analogy between science and theology. Robert John Russell, “Natural Sciences” in *The Blackwell Companion to Christian Spirituality*, ed., Arthur Holder (Malden, MA: Blackwell Pub., 2005), 331. He also asserts that “[i]magination plays a key role in the construction of models and theories. Theories (doctrines) are tested by their fruitfulness in interpreting new kinds of data and in their practical consequences for life.” Ibid., 330. The term “biospiritual” is Thomas Berry’s who indicates that Earth is the only biospiritual planet that we know (Berry, *Dream of the Earth*, 117) and must be our primary educator, healer, commercial establishment, and lawgiver. Ibid., 120. Thus the term “biospiritual imagination” is employed in this thesis to appreciate the analogy between both disciplines (“bio” symbolizing science and “spiritual” representing theology) and reminds readers of the vital function of being able to imagine (e.g., dream, yearn, aspire) in both disciplines.

thesis is structured by a cosmologically oriented, constructive and historical methodology and thus allows the personal stories of other-than-human characters to be explored alongside human stories, such as Rachel Carson’s, to flesh out what this new story or cosmology is telling us – especially concerning human suffering. This chapter will offer a dynamic portrait of how humanity’s scientific Earth literacy emerged in the twentieth and twenty-first centuries and is still ongoing as humanity encounters creation in inventive manners, imagines just relations between God and all of creation in creative fashion, and interprets suffering in prophetic ways.

Earth Literacy

Environmentalist and educator David Orr defines “ecological literacy” as the shift towards a truly “ecological consciousness” and affectivity that allows an individual to merge their “landscape” with their “mindscape.”

Orr indicates that students are being taught that “ecology is unimportant for history, politics, economy, society,” and as a result, we are forming “ecological yahoos” who envision Earth as a commodity that is “theirs for the taking” with no natural or moral limits. Thus ecological literacy, as Orr envisions it, offers a new acuity, aesthetic appreciation, and intimate, empirical knowledge of humanity’s interconnectivity and interdependence with Earth. This way of understanding and interacting with the world is driven by a sense of wonder, an affinity for the living world, and a delight in life. Orr indicates that the features that constitute the foundation of ecological literacy are

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5 Ibid., 85-96; 95. He writes that “[t]he result [of a malformed consciousness] is a generation of ecological yahoos without a clue why the color of the water in their rivers is related to their food supply, or why storms are becoming more severe as the planet warms. The same persons as adults will create businesses, vote, have families, and above all, consume. If they come to reflect on the discrepancy between the splendor of their private lives in a hotter, more toxic and violent world, as ecological illiterates they will have roughly the same success as one trying to balance a check-book without knowing arithmetic.” Ibid., 85-86.
knowing about Earth and Earth’s life systems, caring about the constituents of this planetary web of life, and practical competency in how to go about this. These, he indicates, will lead humanity towards “prudence, stewardship, and the celebration of Creation.”

This is echoed over a decade later by physicist Fritjof Capra who indicates that an ecologically literate person would have at least a basic comprehension of Earth’s ecology, human ecology, and the concepts of sustainability.

In this thesis, the term Earth literacy will replace ecological literacy due to a two-fold expansion of Orr’s term. First, Earth literacy will include a deep comprehension of Earth’s and humanity’s ecologies; however, this understanding will be situated within the larger 13.8 billion year universe story. A foundational principle in cosmology, derived from Einstein’s general theory of relativity in 1931, is the cosmological principle that states that “[a]ll places are alike” or more specifically, that the universe is homogeneous and uniform in all directions. Thus, at immense scales the laws of physics apply to the Sun, planets, and all that constitutes the cosmos and as a result, the entire universe is being governed by the same rules. Thomas Berry and Brian Swimme expand this understanding with their "cosmogenetic” principle in which they hold that since the dynamics of development are the

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6 Ibid., 95.

7 Capra’s understanding of sustainability is grounded in a deep intellectual and emotional understanding of ecology that fosters responsible and caring human citizens who respect nature. Ibid., xv His vision is also intergenerational because a sustainable community is “one that is able to satisfy its needs and aspirations without diminishing the chances of future generations.” Michael K. Stone and Zenobia Barlow, *Ecological Literacy: Educating Our Children for a Sustainable World*, 1st ed., Bioneers Series (San Francisco, CA: Sierra Club Books; Produced and distributed by University of California Press, 2005), xiii. This follows in the footsteps of David Orr who indicates that sustainability implies a “radical change in the institutions and patterns that we have come to accept as normal ... a change in metaphors from mechanical to organic, industrial to biological. This demands a re-envisioning to what human well-being means and how this is measured.” Orr, 94. For a fuller outline of David Orr’s six defining characteristics of ecological sustainability, see Ibid., 29-38.

8 Swimme and Berry, 66.

9 They define this principle as follows: “that every point in the universe is the same as every other point and additionally, that the dynamics of evolution are the same at every point in the universe.” Ibid. Berry and Swimme contrast this “form-producing” principle or power with its polar opposite – the second law of
same throughout the cosmos, then the forces used to build and develop structures on Earth “permeate the universe as well.” That is, the principles that guide evolution are the same throughout the universe. Swimme and Berry elaborate further indicating that the evolution of the universe will be “ordered by differentiation,” “structured by autopoiesis” (subjectivity), and “organized by communion.” Thus cosmogenesis, in its simplest form, refers to “structures evolving through time,” but on a larger scale, represents the ancient and continually unfolding universe ‘story’ that narrates the origin and ongoing 13.8 billion year family history. Earth is one manifestation of cosmogenesis and represents a microcosm of the macrocosm that is the universe. However, Earth is also a macrocosm, a holistic oikos or household, within which microcosmic planetary systems and individual organisms dwell.

The second area of expansion that Earth literacy provides to Orr’s term ecological literacy is the attention given to the sacred dimensions of the creation story. Earth is a result of God’s initial creative efforts (creatio originalis), a manifestation of God’s ongoing creative efforts (creatio continua) and a participant in God’s new creation at the end of time (creation nova). As a result, Earth can be understood as a complex, interdependent, ancient biospiritual subject imbued at every level with divine potentiality and kenotic dynamism.

Thermodynamics – that serves as a ‘form destroying power’. Both characterize “the way the universe actually works.” Ibid., 69.

10 Ibid., 67.
11 Ibid., 73; 75; 77.
12 Ibid., 67.
13 Johnson, Ask the Beasts, 123-124.
Earth is also the central, subjective, and personal point of reference by which humanity is able to make sense of our planetary and human ecologies – including religion.\textsuperscript{15}

Thus in this thesis Earth literacy will be defined as a new planetary consciousness that embraces our biospiritual Earth as a “primary source of intelligibility and value” in both science and religion.\textsuperscript{16} This shift of consciousness – what I call a re-enchantment with the Earth – emerged in the twentieth and twenty-first centuries and offered new language, metaphors and cognitive frameworks for understanding the world around us and the relations among God, the entire planetary and cosmic communities, and a humanity that has emerged from, and lives in, Earth’s ecosystems. It will be argued that scientific and theological Earth literacy enabled a new, more functional cosmology – cosmogenesis – to emerge in the 1980s and offered a new way to see the purpose, position, and worth of human life within a larger, ancient, irreversible, complex and sacred web of life. This is a new context for imagining and doing Christian ethics and will impact how humanity understands and responds to suffering today.

**Scientific Earth Literacy**

The focus of this chapter is the emergence of scientific Earth literacy; thus, prior to this exploration, an understanding of what is meant by the term science is required. Science,\textsuperscript{15} Berry, *Dream of the Earth*, 88.

\textsuperscript{16} Mary Evelyn Tucker uses the term Earth literacy in her essay “Education and Ecology: Earth Literacy and the Technological Trance” in *Teilhard in the 21st Century: The Emerging Spirit of Earth*, eds. Arthur Fabel and Donald St. John (Maryknoll: Orbis Books, 2003), 95-96. She indicates that the basis of Earth literacy is the appreciation of human intimacy with the Earth and argues that human beings are “a planetary species that can move toward the enhancement of life or its radical diminishment for future generations.” Ibid., 90. Her interdisciplinary approach is excellent but in this essay she does not comprehensively address the spiritual dimension of Earth (she does so in other texts). Ursula King attends to this in more detail by her nomenclature “earthing spiritual literacy” and argues that when our spirituality is rooted in Earth we can discover “the zest for life that fosters the flourishing of people and planet.” Ursula King, “Earthing Spiritual Literacy: How to Link Spiritual Development and Education to a New Earth Consciousness?” *Journal of Beliefs & Values* 31, no. 3 (December 2010): 258. King employs the term “earthing” and “spiritual” to represent a coupling of the spiritual and biological in her understanding of literacy. This *biospiritual* understanding of Earth grounds what the term Earth literacy represents in this thesis.
in the most basic sense, can be understood as a person’s way of knowing and thinking about the material world that he or she experiences. Science “sets out to discover what the observable world is telling us about itself,” and this faculty of observation and critical thinking can be honed and trained to become more sophisticated and specialized in order to penetrate deeper into the phenomenological world. What this chapter demonstrates is that science is the artistic craft of weaving together wonder, observation, intelligence, deduction, and experimentation to reveal truths concerning the world around us. Modern forms of this artistry have brought the vast breadth and depth of the cosmic phenomena, spanning “both ends of the scales of time, distance, size and visibility” to humanity in unprecedented detail. When these truths have developed into planetary consciousness and this is applied in the navigation of ordinary life, then scientific Earth literacy has emerged.

It is important to note that science is not immune to distortion as Mary Midgley, Carolyn Merchant, and Sandra Harding attest, and has often become a vehicle for reinforcing distorted human convictions such as the dead state of matter, the objectivity of the scientific technician, and the capacity to overcome any and all limits via technology. These have fed our illusions of mastery over creation and atrophied our understanding of Earth to only what human scientists can measure, symbolize numerically, commodify, and ultimately control. Both interrelated distortions, these women claim, stem from an exaggeration of the

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17 Galileo Galilei indicated that “[p]hilosophy is written in this grand book, the universe, which stands continually open to our gaze. But the book cannot be understood unless one first learns to comprehend the language and read the letters in which it is composed.” As quoted in John Feehan, The Singing Heart of the World: Creation, Evolution and Faith (New York, NY: Orbis Books, 2012), 11.

18 Ibid., 7.

19 Ibid., 125.

20 For Irish botanist, geologist, and environmental scientist John Feehan, the scientific expression of the world around us in thoughts and words (such as our understanding of the pollination strategies of flowers or spore dispersal in fungi) must be part of a greater cosmic and meaningful narrative. Ibid., 123. His engagement of reality and Reality moves beyond merely accumulating empirical facts about the world to making meaning from the language and imagery offered in the natural world. His approach is an expression of Earth literacy.
objectivity and precision promised by science\textsuperscript{21} which illustrates the need for an authentic understanding of science to develop a robust and accurate planetary consciousness. The wisdom of these feminist critiques will guide this chapter in the following ways; first, science is understood as not a thing or a “surveyable domain” protected by Northern, Western, male scientists who wield weapons labelled “pure objectivity” and “value-neutrality.”\textsuperscript{22} Instead, this chapter presents science as a multivalent and synthetic act of the imaginative intellect as the scientist (preformed within their own unique historical contexts and prevailing cosmologies) encounters empirical reality.\textsuperscript{23} Second, “natural” science(s) will lay inside, and be dependent upon, critical social sciences that emphasize relationships and connectivity between subjects; science is not merely a database nor the discipline of cataloguing intrinsic features of purely independent objects. This enables the formation of the strongest, most coherent form of “objectivity” possible and situates the observer as a participant – not a radically separate observer – in the art of science.\textsuperscript{24} This in turn will develop a planetary consciousness that understands more nuanced layers of meaning that

\textsuperscript{21} Mary Midgley articulates this exaggeration as an empirical and epistemological failure in \textit{Evolution as a Religion} (London: Routledge, 1985). Carolyn Merchant, in \textit{The Death of Nature}, sees it as part of a larger marketing plan to sanction the domination, commodification, and exploitation of nature. Sandra Harding exposes this exaggeration as part of a bigger myth, namely that creation has a single unified, mechanical explanation and that the scientist is a wholly rational observer, a knower of nature’s order outside of the causal, scientific plane, and a figure who is not influenced by social, economic, racial, political, and psychological forces. See: Sandra Harding, “Must the Advance of Science Advance Global Inequality?” \textit{International Studies Review} 4, no. 5 (Summer 2002): 92.

\textsuperscript{22} Ibid.

\textsuperscript{23} This entails that science be understood as a manifestation of a diversity of voices from many disciplines. Thus science expresses a complex, particular set of relations and historical forms of reasoning, research traditions, institutions, and practices derived within prevailing paradigms or cosmologies. Sandra Harding, \textit{Whose Science? Whose Knowledge? Thinking from Women’s Lives} (Ithaca, New York: Cornell University Press, 1991), 179; 185-186.

\textsuperscript{24} Barbour, \textit{When Science Meets Religion}, 26. Sandra Harding cautions against naivety in this area for science is being used as the vehicle for generating capital (knowledge and technology) and this is how social groups acquire and control the physical world and social relationships. Harding, “Must the Advance of Science Advance Global Inequality?” 95.
include – and yet transcend – mechanical functioning\textsuperscript{25} and offer insight to conversations concerning human suffering.

Earth Literacy in Science: A Grand Odyssey of (Re)Awakening

It is important to offer a historical portrait of the development of Earth literacy in science to illustrate some of the many events, discoveries and contextual nuances that contributed to the shifting from an anthropocentric and mechanical worldview to an increasingly evolutionary and organic cosmological vision of creation. This is important for recentering the mystery of human suffering within cosmogenesis and engaging with both inherent and anthropocentric suffering in our industrialized, evolutionary world.

Carolyn Merchant’s \textit{Death of Nature} provides an in depth historical portrait of the developing intellectual, scientific, and cultural matrix that allowed a mechanical and instrumental vision of the world to become so prominent after the sixteenth century. This however, begs the question: what contextual features have contributed to the transfiguring of a mechanical worldview into a new evolutionary driven cosmology – cosmogenesis – in the twenty-first century?\textsuperscript{26} Furthermore, how did the understanding of the world offered by scientists such as Isaac Newton and Francis Bacon transform so that scientists today, such as Brian Swimme, Lynn Margulis or Lewis Thomas, could argue that the cosmic creation story

\textsuperscript{25} An example of this can be seen in the writings of John Feehan: “Look at this tree. It gathers all of the past into itself: its form, and the rings in its trunk and branches, give form to the years of its individual life, as its specific essence does to the eons of its geological journey. It draws all of the future towards itself in anticipation.... But only the present moment into which these flow is alive and to be experienced.” Feehan, 134. He also argues that scientists contribute to an “appreciation of other species as living self-expression of God” and this can be understood as notes “in that stupendous orchestra” or a hues “in the superpsychedelic rainbow of life.” Ibid., 92.

\textsuperscript{26} Paul Hawken asks this same question and offers a detailed answer in his text \textit{Blessed Unrest: How the Largest Movement in the World Came into Being and Why No One Saw It Coming} (New York, NY: Penguin Group, 2007).
is “transcultural” and “trans-scientific” in its meaning.\textsuperscript{27} that symbiosis rather than combat is a powerful mechanism of cellular evolution, or that Earth is a living organism that is still complexifying and differentiating.\textsuperscript{28} This immense change in consciousness is not the effect of one person or event but is the result of purposeful and chance encounters and the compounding forces of a multitude of people, ideas, discoveries and events.\textsuperscript{29} Thus, those wanting to explore the emergence of scientific Earth literacy must follow the many intertwining threads of this tapestry and the new questions asked by each weaver. This chapter will root the important scientific content (events, discoveries, principles) within their cultural substrate to help outline the cosmology or context that nourished both the scientist and the ideas, language and metaphors they contributed. As a result, this chapter will include physical sciences such as biology, physics, chemistry and affiliated technology as well as elements outside these parameters that also contribute to the overarching cosmology (e.g., art, literature, politics, and economics).\textsuperscript{30} These artisans of science, each in their own way, became able to describe and articulate, often in unprecedented ways, how: Earth is our primary teacher; human history is ecological history; instrumental and intrinsic worth of creation can be re-imagined; just ethical praxis might be aroused and realized; and suffering, diminishment, transformation, and death are unavoidable, inherent costs of the infinitely creative, sacred universe.

\textsuperscript{27} Brian Swimme, “Berry’s Cosmology,” \textit{Crosscurrents} 37, no. 2-3 (Summer/Fall 1987d): 221.


\textsuperscript{30} Dorion Sagan indicates that the history of scientific discovery is best articulated when the “poetic” roots of scientific thought and writing are not denied due to a false pretence of academic rigor. See: Dorion Sagan, “In Defence of Writing,” in \textit{From Gaia to Selfish Genes: Selected Writings in the Life Sciences}, ed., Connie Barlow (Cambridge, MA: The MIT Press, 1991), 240.
Any comprehensive investigation of the origins of scientific Earth literacy ought to start with the moment matter and spirit coalesced and “blossom[ed] out of a primordial atom” called the Big Bang 13.8 billion years ago.\textsuperscript{31} However, since Carolyn Merchant offers an exhaustive historical-economic and cultural analysis of the cognitive matrix of the sixteenth and seventeenth century, and coherently depicts the \textit{fortissimo} tenor of anthropocentric and androcentric scientific discourse that progressively drowned out Earth’s articulation of her own sacred biospiritual narrative, this thesis will not. Instead, this landscape will describe how the cracking of the veneer of the mechanistic worldview in the eighteenth and nineteenth century affected the direction, passion, and truths discovered by twentieth and twenty-first scientists.

A Crack Appears: Eighteenth and Nineteenth Centuries

The sixteenth and seventeenth centuries saw immense changes in the way the world was imagined: an understanding of a geocentric, finite cosmos morphed into a heliocentric and infinite universe; a grasp of Earth as a living, interdependent, living organism atrophied as the metaphor of the world as a machine flourished; dead objects such as money were imbued with life and living subjects, such as Earth, women, indigenous peoples, and wage labourers, were reduced to commoditized objects for profit or recreational amusement; organic biological attributes such as growth, activity, pregnancy, weakness, and decay were disassociated from living Earth systems and became understood as descriptors for economic wealth and technological progress; scientists, as artisans who articulated humanity’s awe of Earth as our source of life and truth, became mechanical technicians hungry to extract the

\textsuperscript{31} David Toolan, \textit{At Home in the Cosmos} (New York, NY: Orbis Books, 2001), 139. For a narrative of this cosmic adventure, see Swimme and Berry, \textit{The Universe Story}, and Brian Swimme and Mary Evelyn Tucker, \textit{Journey of the Universe} (New Haven, CT: Yale University Press, 2011).
secrets of nature and augment human power over nature regardless of cost. All of these shifts in perception illustrate the disintegration of a dynamic, interconnected, and organic view of nature and an ascendancy of a dysfunctional, anthropocentric, static, mechanistic worldview.

The eighteenth century saw a frenzied accumulation and categorization of scientific data thanks to the beliefs, passion, and methodology offered earlier by Francis Bacon (1561-1626), René Descartes (1596-1650), and Isaac Newton (1643-1727). In addition, technological advancements such as the evolution in the microscope, telescope and nautical tools allowed for more ambitious maritime voyages that unveiled the mesmerizing biodiversity (and thus further substrate for industrialization) beyond the narrow geographical boundaries of Europe. The prevailing atomistic and fragmentary scientific mind-set, described by ecofeminists as “chiselled to perfection for controlling, for distancing, for calculating, and for dominating,” allowed science, technology and an emerging corporate capitalism to transform and reshape every facet of life and articulate an enticing and yet

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32 Merchant, 288.

33 René Descartes may have offered a philosophy based on a mind-body dualism and Issac Newton the analogy of a Divine watchmaker (this analogy would subsequently be made more popular by Christian apologist William Paley (1802) in his text *Natural Theology* (Chapters 1-3)), but this thesis asserts that it was the passion of Francis Bacon that was a vital stimulus in the shifting of Western society’s relationship with the natural world towards the objectification and commodification of Earth.

34 Documents from Christopher Columbus (1493), Jean Ribaut (1563), and Baltasar de Obregón (1584) illustrate their wonder at the riches of the “New World” and the prevailing instrumentalist understanding of the world that sanctioned their exploitation new ecosystems to fuel the Scientific and Industrial Revolutions in the Old World of Europe. These documents are outlined in Peninah Neimark and Peter Rhoades Mott, *The Environmental Debate: A Documentary History*, Primary Documents in American History and Contemporary Issues Series (Westport, CO: Greenwood Press, 1999), 10-14.

dysfunctional and pathological cosmology.\textsuperscript{36} The cultivation of this reductionistic mechanical mind-set reached new heights with the continuing industrialization of Europe and the rise of petrochemical and electrical industries in the United States in the 1880s. This latter development was due to the need for highly trained technicians to solve practical problems associated with meeting the demand for energy.\textsuperscript{37} Graduates from this mechanical school of thought soon created powerful tools and industrial structures that literally transformed the physical face of the natural world and affected every dimension of human relationships with other-than-human beings and each other.\textsuperscript{38} Despite this infection of the scientific mind-set by the machine metaphor, a yearning for an intimate knowledge and understanding of our own birth, place, and purpose in the unfolding universe story began to cause a crack in the armor of the mechanical worldview. This yearning allowed science to come full circle; humanity’s larger, holistic vision of the \textit{pathos} and \textit{logos} of creation was narrowed as humanity necessarily (and myopically) collected data about our planet and ourselves (driven by the mistaken belief we would become masters of creation), but it was via this reductive scientific enterprise that humanity encountered a world more wild, vast, and unpredictable than we ever could have imagined.

From this initial crack, the process of moving from an atomistic, static and mechanical scientific worldview to a holistic, evolutionary and organic one required several pre-emptive steps in the eighteenth and nineteenth centuries. The first step was to diminish

\begin{itemize}
\item \textsuperscript{37} Ibid.
\item \textsuperscript{38} Sean McDonagh indicates that the Industrial Revolution saw human workers alienated from a holistic sense of purpose (assembly line work) and with little access to the capital that their labour creates. Ibid. This alienation lifted inanimate objects to a position of worth above human beings.
\end{itemize}
humanity’s fear of nature and its accompanying belief in the capriciousness of God. One significant contribution came in 1761 when Giovanni Morgagni of Padua (1682 – 1771) began to perform regular autopsies and was able to relate a patient’s illness to pathologic findings. Morgagni offered an empirically based answer to how individuals became sick; thus he offered an alternative explanation for illness and death to counter what was widely believed – i.e., invisible, unpredictable and personified forces inflicted suffering on innocent human victims. Morgagni’s discoveries lessened human anxiety by offering sufferers new hope; if illness was a biological malfunction then science could find a way to correct it.

A second necessary cognitive step towards an organic worldview came when Swedish botanist, physician, and zoologist Carl von Linné (1707-1778), better known as Carl Linnaeus, laid the foundation for the modern system of binomial nomenclature. This better enabled humanity to identify, inventory, and then compare the varieties of living species of plants and animals. This, combined with the earlier stratigraphic concepts conceived by geologist and bishop Nicolas Steno (1638-1686) and findings of contemporary geologists William Smith (1769-1839), Charles Lyell (1797-1875), and John Phillips (1800-1874) led to a profound appreciation of the age, complexity, interdependency, and harmony of creation that characterized an organic worldview.39

Although there were many contributing factors in the nineteenth century,40 a major step that aided the emergence of an organic and holistic worldview came in 1858 when, at a

39 Another contributor is Prussian scientist and explorer Alexander von Humboldt (1769-1859) who wrote the five-volume treatise, Kosmos (published between 1845 and 1862), to expose the inherent harmony in nature without appealing to religious tenets.

40 For example, great advances in physics and chemistry in the first decades of the nineteenth century were successfully applied to the study of the stars. This revealed a new level of cosmic interconnectivity. Early in the nineteenth century Bavarian optometrist and physicist Joseph von Fraunhofer (1787-1826) invented the spectroscope (1814) which allowed him to study light sources with remarkable precision. With this new instrument, his invention of large achromatic telescopes, and the improved optical gratings he constructed, he was able to study the dark absorption lines in the spectrum of sunlight and pioneered the field of spectral
meeting of the Linnean Society of London, the copious data collected independently by Alfred Russel Wallace (1823-1913)\(^{41}\) and Charles Darwin (1809-1882)\(^{42}\) was publicly read and discussed at great length. In 1859 Darwin formally published his theories of adaptation and change that emerged from this data in *The Origin of Species by Means of Natural Selection* or *The Preservation of Favored Races in the Struggle for Life*. This was one of the fatal blows to a static, mechanical worldview.\(^{43}\) Darwin’s theory of natural selection as the vehicle for evolution,\(^{44}\) coupled with the emerging understanding of the internal, genetic transmission of physical morphology via Moravian friar Gregor Mendel’s laws (1865), offered humanity a coherent vision of the emergence and continuation of life on Earth via the analysis. With Fraunhofer’s instruments and the data offered by other astronomers (e.g., John Herschel (1792-1871)), chemist Robert Wilhelm Bunsen (1811–1899), and theoretical physicist Gustav Robert Kirchhoff (1824–1887) the absorption and emission of light from molecules and atoms in sunlight, stars, and other celestial bodies were measured and this data proved the material connectivity of the universe because the chemical composition of celestial bodies was the same material as the Sun and Earth. Dieter B. Herrmann, *The History of Astronomy from Herschel to Hertzsprung*, trans., Kevin Krisciunas (Cambridge, UK: Cambridge University Press 1984), 69-114.

\(^{41}\) The data offered by Wallace came from his journals concerning the Malay Archipelago between 1854-1862.

\(^{42}\) Darwin’s research data came from his travels on the HMS Beagle when he circumnavigated the globe (1831-1836).

\(^{43}\) Vital intellectual predecessors who gave Darwin and Wallace the necessary cognitive substrate to form their evolutionary vision included Louis le Clerc (1707-1788), James Hutton (1726-1797), and Georges Louis Buffon (1707-1788). Darwin in the fourth edition of *On the Origin of Species* indicated that “the first author who in modern times has treated it [evolution] in a scientific spirit was Buffon.” See: Charles Darwin, *On the Origin of Species by Means of Natural Selection, or, the Preservation of Favoured Races in the Struggle for Life*, 4th edition (London, UK: J. Murray, 1866), xiii. Another important contributor was Jean-Baptiste Lamarck who offered a comprehensive but flawed, flexible mechanism of evolution. Ibid. Others who made important contributions that allowed Darwin and Wallace to construct their evolutionary theory include botanists Bernard de Jussieu (1699-1777) and Antoine Laurent de Jussieu (1748-1836), geologists Mary Anning (1799-1847) and Charles Lyell (1797-1875), and cleric and economist Thomas Robert Malthus (1766-1834).

\(^{44}\) It is noteworthy that, persuaded by Alfred Wallace among others, Darwin included the term “survival of the fittest” only in the fifth edition of his text. He took the phrase from the philosopher Henry Spencer’s idea about social progress among human beings and incorporated it into his own discussion of the biological “struggle for existence.” Also Darwin only first used the term “evolution” in the sixth (and last) edition published in 1872. See: Johnson, *Ask the Beasts*, 25.
forces present since the birth of the cosmos.\textsuperscript{45} The publishing of Darwin’s \textit{The Descent of Man} (1871), a substantively and imaginative portrait of humanity’s emergence and development out of the physical earth, sparked both controversy and intrigue but irreversibly re-positioned humanity back within natural history alongside – and derived from – other-than-human living organisms. However, the data illustrating evolution is not Earth literacy; authentic scientific Earth literacy is not merely knowing the names of Earth’s constituent parts but it is the appreciation of what these many subjects are telling us about the unfolding cosmos. Thus, a scientific Earth literacy continued to emerge as Earth was encountered in new ways and this unique form of literacy will be continually refined because the Earth is dynamic, evolution is ongoing, and scientists are constantly being shaped by – and are shaping – cosmogenesis.

As evolution was beginning to mould the imaginations of humanity, another crucial development occurred in the nineteenth century – the official recognition of ecology as a distinct scientific discipline by Ernst Haeckel, and the emergence of sufficient theories and linguistic tools to dislodge the static, mechanical worldview. This biologist coined the neologism \textit{Oecologie}, ecology, in 1866 as “the science of the relations of living organisms to the external world, their habitat, customs, energies, parasites, etc.”\textsuperscript{46} This vision of dynamic, organic connectivity and interdependence was corroborated by many other crucial voices at the turn of the century and enabled this discipline to evolve from the activity of atomizing

\textsuperscript{45} With the re-discovery of Mendel’s research and the advent of the field of genetics, Darwin’s outwardly observed theory of mutations and natural selection became more intelligible because it now had an internal or systemic cause to propagate this trait to future generations.

and dissecting Earth and categorizing its parts to the holistic observation of habitats and the study of the dynamics of interrelations among community members.\(^{47}\)

When ecology generated sufficient cognitive frameworks and linguistic tools, Earth’s biosphere became described as an organic, interwoven, interdependent, and dynamic existence rather than a collection of individual, alienated, self-reliant components. When the art of microscopy evolved sufficiently, it too began to reveal how even the smallest creatures reveal nature’s magnificent complexity, and demonstrated within self-organization at the cellular level, how all life is intimately connected.\(^{48}\) This revelation within the empirical world transformed how the world was understood and cultivated the imagination of many who followed.\(^{49}\)

Thus, at the cusp of the twentieth century, these artisans of science were beginning to employ more empirically appropriate metaphors, imagery and language to speak of the Earth

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\(^{47}\) These important contributors include (but are not exhausted by) the following: industrial and environmental chemist Ellen Swallow Richards (1842-1911), the “First Lady of Science and Human Sanitation,” who fleshed out the foundation of Haekel’s original vision of Oekologie (Robert Clarke, *Ellen Swallow: The Woman Who Founded Ecology* (Chicago, IL: Follett Pub. Co., 1973), 113-120); zoologist Clinton Hart Merriam’s (1855-1942) holistic approach to research in Arizona in the 1880s revealed significant biogeological patterning; botanist Carl Georg Oscar Drude emphasized the mutual interdependence of animals and plant life while Andreas Schimper blurred the boundaries of ecology with physiology and morphology in his work documenting the impact of specific physiological adaptations of individual plants on the whole community; botanist Eugen Warming wrote *Plantesamfund* (1895) and offered an expansive vocabulary to enable a more substantive description of interdependence in the “social” world of plants. Worster, 196-198.

\(^{48}\) Descriptions of the physical interconnectivity within the created world at the cellular level was offered by botanist Eduard Strasburger (who coined of the universal terms cytoplasm and nucleoplasm in 1876), biologist Oscar Hertwig (who discovered meiosis in sea urchin eggs in 1876) and biologist Walther Flemming (who described the process of mitosis in 1882). Later, biologist August Weismann developed a germ plasm theory of inheritance in the 1890s that indicated that material in the nuclei of all cells were responsible for the passing on of inherited traits. These ideas, alongside those concerning recombination, were crucial for understanding the depth of interconnectivity enjoyed by all living things and the emergence of novelty in creation. Bruce Sanguin, *Darwin, Divinity, and the Dance of the Cosmos: An Ecological Christianity* (Kelowna, BC: CopperHouse, 2007), 103-104.

\(^{49}\) This included paleontologist George Gaylord Simpson who not only articulated the existence and importance of the interconnectivity at every level of life but he also coupled it with his understanding of the fragility of this connectivity. This was a prophetic assertion concerning the looming horizon of mutagens that would alter the very genetic continuity of all living things. See: Rachel Carson, *Silent Spring*, 2nd print edition (Boston, MA: Houghton Mifflin Co., 1962), 211.
and the proper relations among its many members. Individual voices gave way to a chorus of voices because as this vision of interdependence surfaced, so too was the realization that all disciplines of science (e.g., geology, cytology and evolutionary biology) were not working in isolation. The subsequent cross-fertilization, the beginning of a healthy scientific Earth literacy in the nineteenth century scientific human mindscape, contributed to the further erosion of the mechanical vision of the world bequeathed by the sixteenth century and made space for new questions, discoveries and cosmologies to emerge.

Re-Enchantment: Twentieth and Twenty-First Centuries

The disenchantment of science with Earth inspired by scientists such as Francis Bacon and Isaac Newton, thankfully, is not the end of the story; the nineteenth century crack in the mechanistic veneer was becoming a chasm early into the twentieth century and this offered the space for the development of a new planetary consciousness – an Earth literacy – that led to the articulation of a new cosmology in the 1980s.

At the dawning of the twentieth century, the quest for and accumulation of unprecedented amounts of data about the world around us was still influenced by a mechanical and anthropocentric worldview. However, as this century progressed into the next, another description and understanding of the world emerged, one that emphasized transformation above changelessness, interrelationship over atomization, dependency instead of autonomy, ambiguity as an alternative to rigid order, and organicism rather than mechanism. Scientists working in the latter part of the twentieth century began describing and exploring Earth in unprecedented ways and their work demonstrated an emerging Earth literacy that offered new avenues of exploring ageless questions, such as: what is the nature of the universe; where did it, and ourselves, come from; what is our place in creation; why is
the universe the way it is? The articulation of a new cosmology that more adequately addressed these eternal yearnings signalled the dawning of humanity’s re-enchantment with Earth. The following is a condensed narrative of this re-enchantment and offers discoveries and insights that span three interconnected domains – cosmic, ecosystemic and personal – to illustrate the expanse and pervasiveness of this new planetary consciousness.

**Cosmic Domain**

At a cosmic level there were many contributions that aided the emergence of planetary consciousness or Earth literacy. One significant contributor at the turn of the century was theoretical physicist Albert Einstein. He effectively – albeit begrudgingly – undermined the static and purely mechanical vision of nature via his ground-breaking theory of relativity in 1915 that offered a new framework for understanding the universe. However, at that time, the influence of the static worldview was still formidable so Einstein questioned his empirical data that pointed to a dynamic universe and inserted a cosmological constant, “lambda,” into his field equation to achieve a static model of the universe.\(^{50}\) Later the work of Russian physicist Alexander Friedmann in 1922, the data collected by Edwin Hubble in 1924, and the work of Msgr. Fr. Georges Lemaître convinced Einstein of his error.\(^{51}\) The cosmos was determined to be dynamic and this led astronomers to determine a more exact age of the universe and to describe the birth of the universe in an unprecedented way.\(^{52}\) It

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\(^{50}\) Physicist George Gamow tells of a conversation he had with Einstein where the latter admits that the cosmological constant idea was the “biggest blunder” of his life. See: George Gamow, *My World Line: An Informal Autobiography* (New York, NY: Viking Press, 1970), 44.


\(^{52}\) Data collected during this time showed how the 400 billion galaxies (visible to the Hubble telescope) were rapidly moving away from our galaxy in every direction and they were travelling at a speed that was directly proportional to their distance from Earth. This could only be explained if there was a single birth moment (with a central focal point) that offered the material and energetic impetus to disperse this newly
was Abbé Georges Lemaître, a Belgium priest and mathematician, who offered a model of the universe’s origin and expansion in 1931, that became known as the Big Bang. Many other interrelated threads in theoretical physics further corroborated and augmented the dynamic and continuously unfolding birth story of the universe postulated by these pioneering scientists, but British astronomer Sir Bernard Lovell in the 1950s and physicist Stephen Hawking in the 1970s added another profound dimension of meaning to this narrative – if the expansion rate had varied even an infinitesimal amount, the universe would have either collapsed back into chaos, or expanded too rapidly for particulate to coalesce into atoms, elements, molecules, or larger conglomerations such as stars, planets, or humans. The formation of stars allowed the universe to burst into new level of radiance and the birth of our sun 4.5 billion years ago only added to this illumination. As larger stars ran out of fuel, their cores collapsed causing explosions that hurled vital elements into space that subsequently became the planets, stars, living systems and individual beings constituting the cosmos. Thus, we humans, as one of the universe’s youngest species, can understand ourselves as one part of this dynamic story, and in a truly literal fashion, know that we are star dust.

generated matter in an outwardly fashion. Also, prior to a half a million years, radiation and matter were too intimately interconnected to be distinct entities revealing a primordial material-energetic interconnectivity. Feehan, 28.


54 See: Hawking, 41-42.


Earth literacy within the cosmic domain, however, also requires exploration on a vastly different scale: “a millionth of a millionth of an inch.”⁵⁷ There were many scientists working at the turn of the century at the level of the atom, such as John Dalton, J. J. Thompson, Niels Bohr, among others,⁵⁸ but their work was still influenced by a static worldview. With the arrival of better technological means to see and know the atom and other microscopic particulate, humanity’s subatomic theories evolved revealing a different description of the inner workings of the world. After Einstein offered the world a glimpse at the enormous amount of energy needed to hold an atom together (E = mc²), and this became a defining characteristic of the macrocosmos and super-microcosmos, science on a micro scale realized that particles such as electrons “no longer had separate, well-defined positions or velocities” unlike earlier models that envisioned electrons as raisins in a bun or billiard balls in orbits around the nucleus. Instead, the many elementary particles possess a quantum state that is an amalgamation of both position and velocity. This caused complexity, ambiguity, and interdependency to become integral parts of how Earth was understood and further undermined a static, rigidly ordered universe.⁵⁹ Another maxim, The Pauli Exclusion Principle,⁶⁰ announced that the total atom cannot be understood by the laws concerning individual electrons, and when this is coupled with holistic attitudes of quantum physics (the abandoning of attempts to describe the behaviour of the constituent electrons), new depth is offered to the old Aristotelian adage – the whole is greater than the sum of its parts. Thus the universe, from its cosmic immensity to its subatomic particulate, can be best described as a

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⁵⁷ Hawking, 11.
⁵⁸ Some vital figures include R.G Boscovich (1711-1787); John Dalton (1766-1844); J.J. Thompson (1856-1940), Max Planck (1858-1947), Albert Einstein (1879-1955), Ernest Rutherford, (1871-1937), and Niels Bohr (1885-1962).
⁵⁹ Hawking, 55. See also: Feehan, 38.
⁶⁰ Barbour, 82.
complex, immensely old, intimate, dynamic, interdependent, constantly developing entity
that has uncertainty, connectivity, and relationality built into the very fabric of its ontology.\textsuperscript{61}

**Ecosystemic Domain**

The nineteenth century was a formative time when the minds, hearts, and spirits of
Emily Dickinson, Charles Darwin, Walt Whitman, Ralph Waldo Emerson, David Thoreau,
and John Muir were being moulded and nurtured. From this new cognitive and emotive
matrix emerged the intellectual foundation and aesthetic depth that would cultivate the
imaginations of twentieth and twenty-first century ecologists who have contributed to
scientific Earth literacy and the articulation of cosmogenesis.\textsuperscript{62} These men and women of
science have offered rich and relatable linguistic expressions and analogies to describe their
encounter with creation – a domain more familiar to humanity than astrophysics or quantum
mechanics. Their work has emphasized the inherent dynamism, interconnectivity, symbiotic
co-operation, and costliness that manifests in Earth’s web of ecologies. This section will
highlight some of the voices and events that contributed to the emergence of an ecosystemic
Earth literacy.

To begin, a general perusal of a few cultural and social trends and events within
human ecology need to be explored because ecosystemic Earth literacy grows out of and is
interwoven within “the general fabric of human thought” and is moulded and validated by

\textsuperscript{61} It is important to note that there is no singular unified theory that eradicates all problematical or
incompatible components of the macrocosm and microcosm (i.e., theories of relativity and quantum
mechanics). Einstein worked tirelessly on a synthesis of the two theories and Stephen Hawking, another great
twentieth century mind in theoretical physics, is still deeply engaged in the endeavour of coherently articulating
a singular quantum theory of gravity. This is the premise for Hawking’s book *A Brief History of Time*.

\textsuperscript{62} For example, Dickinson wrote of an intrinsic, emotive knowledge of the sea that 20\textsuperscript{th} century writer
Rachel Carson deeply appreciated. Carson recalls her sensory and emotional impressions that long preceded her
intellectual responses and found a kindred spirit in Dickinson’s words: “I never saw a moor, I never saw the
sea; Yet know I how the heather looks, And what a wave must be.” As cited by Linda J. Lear, *Lost Woods: The
personal and social needs. Human ecology in the twentieth century saw many unprecedented developments; by the end of 1930s hundreds of thousands of people had procured telephones, cars, phonographs, radios, and a multitude of other manufactured products. This demand for manufactured products was accompanied by a rapid urbanization and housing boom, a growing requirement for waste, water, and transportation systems, and a diminishment of arable farmland to feed these growing urban areas. The new consumption-economy was combined with a new “cult of reason” that replaced embodied and aesthetic wonder and awe for creation with a triumphalism that envisioned all natural limits as items to be overcome via scientific innovation. This marriage became the predominant context for understanding creation, humanity and scientific endeavours. This also was a period of history when non-renewable, polluting energy sources, chemical pesticides, and other deleterious synthetic materials associated with industry were being indiscriminately introduced into ecosystems. This anthropogenic destruction was a result of the myopic, pathogenic vision of human progress that was sanctioned by an anthropocentric and mechanical worldview.

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63 Worster, xi.

64 Neimark and Mott, 144. Tim C. Wieskel offers some staggering statistics: in 1700s, less than 10% of the global population of 700 million lived in cities; by 1950 30% of the global population of 2.5 billion lived in cities and in North America urban dweller consist of 64% of the population and in Europe that figure rises to 56%. He also indicates that in the 1700s only 5 cities in the world had over 500,000 people, in 1997 over 400 cities in the world had over 1 million and by 2000, 21 cities will be classified as mega cities with over 10 million. Tim C. Wieskel, “Notes from Balshaz’zar’s Feast,” in The Greening of Faith: God, the Environment, and the Good Life, ed. John E. Carrol, Paul T. Brockelman, and Mary Westfall (Hanover, NH: University Press of New England, 1997), 18-19.

65 Hawken, 183.
Despite the bleak portrait offered thus far, there were many scientists whose work offered a different and more functional or coherent worldview. Carolyn Merchant\textsuperscript{66} offers a historical purview of some of these pioneering scientists and illustrates how they saw nature as: human ecology (Ellen Swallow Richards); organic in character (Frederic Clements);\textsuperscript{67} economic in organization (Charles Elton);\textsuperscript{68} made up of a multitude of stable interconnected, organic and inorganic comprised ecosystems (Arthur Tansley\textsuperscript{69} and Raymond Lindeman);\textsuperscript{70} a relational, interdependent, dynamic, and holistic vision of ecological \textit{oikos} employing a process of ecological succession (Eugene Odum);\textsuperscript{71} and chaotic, unpredictable, and contingent (Edward Lorenz, William Drury, Ian Nisbet, S.T.A Pickett, and P.S. White).\textsuperscript{72}

Voices in seemingly incompatible disciplines of entomology and American literature spoke passionately about a symbiotic model of community life that includes aspects of cooperation and intimacy outside a narrow purview of the neo-Darwinian tenet ‘survival of the fittest.’

Voices from within the fledging field of genetics also spoke of a deep physical

\textsuperscript{66} Carolyn Merchant, \textit{Major Problems in American Environmental History: Documents and Essays}, Major Problems in American History Series (Lexington, MA: D.C. Heath, 1993), 444f. This text does not include the numerous and valuable scientific contributions of figures outside the United States at this time.


\textsuperscript{68} Charles Elton, in 1927 published \textit{Animal Ecology} within which he laid the foundations for this new economic understanding of ecology via his vision of energy transfer within nature. Through photosynthetic conversion of energy to food, essential capital was seen in the natural economic order. Elton outlined typical food chains and the economic value in each link as well as the vision of these individual chains intertwining into a food web and pyramid. Thus he produced a complex vision of economic activity in ecology. See: Charles S. Elton, \textit{Animal Ecology}, Text-Books of Animal Biology (New York, NY: Macmillan, 1927).


\textsuperscript{70} He elaborated on Tansley’s work to include economic metaphors (producers, consumers, productivity, etc.) and concepts such as food webs, “Eltonian” food pyramid, and trophic systems that entail energy transfers and transformation of materials. Raymond Lindeman, “The Trophic Dynamic Aspect of Ecology,” \textit{Ecology} 23, no. 4 (October, 1942): 399-417.

\textsuperscript{71} “In other words, the landscape is not just a supply depot but is also the \textit{oikos} – the home – in which we must live.” Eugene P. Odum, cited by Merchant, \textit{Major Problems in American Environmental History}, 458.

\textsuperscript{72} Donald Worster as quoted in Ibid., 472-479. Also see: S. T. A. Pickett and P.S. White, \textit{The Ecology of Natural Disturbance and Patch Dynamics} (Orlando, FL: Academic Press, 1985).
interconnectivity of all living things through the commonality of natural, dynamic processes acting on all organisms to ensure that life continues. Social activists in the early decades of the twentieth century spoke adamantly of the living consequences of the prevailing and flawed industrialized economies, those that ignored, devalued, and ultimately destroyed indigenous natural economies. Also, early advocates of nature and educational pedagogy were passionately developing programming and literature to fuel the nature-loving minds and hearts of children. During this period artisans of literature, poetry, and science alike wielded a double-edged sword. On the one hand they spoke prophetically of the atrocities of war, nuclear weaponry, industrialization, and the urgent need to critique prevailing mind-sets and practices. On the other they spoke evocatively of the wonder, beauty, awe, and majesty of creation alongside the hope of humanity that lay hidden in the vitality and resiliency residing at the heart of the natural world. Thus, scientists were beginning to discover innovative systems of scientific analysis that spoke more coherently, with ever greater timbre and tenacity, of Earth as an ancient, living organism that was dying right before their eyes.\(^73\)

By the middle of the twentieth century, there was a cascade of scientists who contributed many subtle nuances to the developing ecosystemic Earth literacy: mutual empowering relations; interdependency and cooperation; human rootedness in and of the Earth; sacrifice; widened kinship horizons; wonder and awe; symbiogenesis; sustainability;

\(^73\) In 1953 Clair Cameron Patterson (a geochemist) was able to determine the age for the Earth – i.e., 4.5 billion years old – but he was also able to prove how human actions was causing significant changes to environmental levels of lead. This he determined was having dire health ramifications to humans. George R. Tilton, “Clair Cameron Patterson (1922-1995) (Washington, DC: National Academies Press, 1998), 8. [http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/patterson-clair-c.pdf](http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/patterson-clair-c.pdf). Accessed April 2, 2014. Despite fierce resistance, Patterson’s work helped to change public perceptions concerning lead based products and led to the ban of lead-based products (including additive tetraethyllead that was added to gasoline in the 1920s). Banning lead products (e.g., lead based paints in 1978 and lead additives in gasoline which were phased out from 1973 to 1996) have directly contributed to the decrease in the levels of lead in the bloodstream of North Americans. Health Canada, “Final Human Health State of the Science Report on Lead” (February 2013). [http://www.hc-sc.gc.ca/ewh-smt/pubs/contaminants/dlhssrl-rpcscepsh/index-eng.php](http://www.hc-sc.gc.ca/ewh-smt/pubs/contaminants/dlhssrl-rpcscepsh/index-eng.php). Accessed April 2014.
rights and value of other-than-human organisms and ecosystems; and Earth as a self-regulating organism pervaded with ancient wisdom, biospirituality, autopoiesis, bioregionalism, and justice.

The latter half of the twentieth century resonated with the emergence of iconoclastic and celebrated international ecological leaders, rising to a crescendo in the last two decades. Some memorable media figures include: French conservationist Jacques Cousteau; Jane Goodall, a British primatologist studying chimpanzees in Tanzania; Dian Fossey, an American primatologist who studied gorillas in Rwanda; former Soviet politician Mikhail Gorbachev, who (in conjunction with the Earth Council Alliance and Green Cross International) launched an initiative to build an Earth Charter as a civil society initiative; and David Suzuki, an award-winning geneticist, Canadian academic, and host of an award-winning radio series It's a Matter of Survival (1989) and television show The Nature of Things. There are many others with less international media fanfare who helped to cultivate ecosystemic Earth literacy in the last decades of the twentieth century. However, they are too numerous to mention here. These individuals were not satisfied with merely stating that Earth possesses intrinsic value; rather, they creatively cultivated both new language metaphors to describe what they were encountering in nature as well as the impetus

74 Maurice Strong founded Earth Council Alliance in 1992.


to stop the ecological degradation that was putting the world in crisis. Thus, new cognitive
horizons concerning Earth’s complexity, interconnectivity, potentiality, and dynamism –
manifest in patterns of suffering, destruction, transformation and renewal – were dawning at
the end of the twentieth century and led to a period of intensive innovation in the following
century. However, science needs both the atomistic vision and vast amounts of empirical
data supplied by technical experts and proficient personal narrators or subjects who have the
right tools, formation, and prophetic vision to situate the collected data and theories in a
worldview that guides their actions. Thus, scientific Earth literacy must also resonate at the
most intimate level of science, the personal level, and the next section offers Rachel Carson
as a model of how one might cultivate one’s own ecological autobiography.

**Personal Domain**

Both cosmic and ecosystemic scientific Earth literacy cannot be isolated from the
personal formation of the particular artisans of science. As scientific Earth literacy
developed in the twentieth century scientists were awakening to how Earth was both the
physical source of their being (genetic coding) as well as the richest “psychic” source for
guiding human actions and cultural constructs.\(^77\) This new appreciation allowed scientists to
understand their personal participation as both perpetrators and victims of the mechanical
worldview and the actions it was sanctioning. This new acuity illustrated how their

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\(^77\) Berry, *Dream of the Earth*, 208. Thomas Berry indicates that “new cultural coding must emerge
from the source of all coding, from revelatory vision that comes to us in those special psychic moments....”
These are “intuitive, nonrational processes that occur when we awaken to the numinous powers ever present in
our phenomenal world about us.” Ibid., 211.
imagination, morals, motives, biases, and passions were derived from the prevailing
cosmology and this formation affected the direction and results of their work as scientists.\footnote{78}{James A. Nash, \textit{Loving Nature: Ecological Integrity and Christian Responsibility}, Churches' Center for Theology and Public Policy (Nashville, TN: Abingdon Press, 1991), 17.}

Scientists working in the twentieth century were deeply affected by the devastation of First and Second World Wars,\footnote{79}{The magnitude and scope of science and technology’s ability to inflict human and non-human suffering was demonstrated on August 6th, 1945 when an uranium fission bomb, “Little Boy,” was detonated over Hiroshima and then on August 9th, when a plutonium implosion fission bomb, “Fat Man,” was exploded over Nagasaki, Japan. In mere moments, approximately 200,000 Japanese people died and untold damage was done to the planet’s biosphere. The unprecedented scale and scope of destruction by the nuclear bombs used during World War II affected how scientists encountered the created world. This is illustrated in the statement by J. Robert Oppenheimer who, after watching the detonation of the first atomic bomb, uttered an invocation of Shiva from the Bhagavad Gita: “I am Death, the shatterer of worlds.” Footnote 1 in Hawken, 29. Thus many historians indicated that humanity had crossed an unprecedented threshold of history; “[t]he bomb that fell on Hiroshima cut history in two. Before and after are two different worlds.” Henry Nelson Wieman, \textit{The Source of Human Good} (Chicago, IL: University of Chicago Press, 1946), 37 as quoted in footnote 3 of Gordon D. Kaufman, \textit{Theology for a Nuclear Age} (Manchester, UK: Manchester University Press, 1985), 15.} the anxiety surrounding the Cold War (1947-91) and the very real threat of global nuclear annihilation, the Vietnam Conflict (1965-1975), the feminist and civil rights movements in the United States and abroad, the insulation of ever-increasing urban populations from nature in all its forms,\footnote{80}{According to Stephen Wheeler and Timothy Beatley this was accomplished via “central heating, electric lighting, air conditioning, long distant food transportation, or huge dams and pipelines bringing water from hundreds of miles away.” Stephen Wheeler and Timothy Beatley, \textit{The Sustainable Urban Development Reader}, The Routledge Urban Reader Series (London, UK; New York, NY: Routledge, 2004), 113.} and the rise of globalized information and communications technology.\footnote{81}{See Appendix B.} They were acutely aware of global power agents, militarism, political corruption, and the scope and magnitude of human suffering. These scientists were the first to be fully immersed in the mind-set that saw no limits to human ingenuity and technological innovation and yet they were also a generation disenchanted by the high cost of the “triumph of progress.”\footnote{82}{Laurel Kearns, “The Context of Eco-Theology,” in \textit{The Blackwell Companion to Modern Theology}, ed. Gareth Jones (New York, NY: Blackwell, 2004), 473.} They reminisced about the dawning of the space age with the launch of Sputnik in 1957 as they witnessed Russian
cosmonaut Yuri Gagarin’s space flight in 1961 and Neil Armstrong’s walk on the moon on July 16th, 1969. They were also the first generation to see a picture of the whole Earth from space and realize in a concrete way the “artificiality of political borders” and fragility of the interconnected world. Many grew up in front of the television, travelled the world on commercial airplanes, experienced the technological ability to control human procreation, and realized that disposing of the ever-growing amount of toxic chemicals and radioactive wastes into our rivers, seas, and skies was no longer a viable option. They were offered a profound ability to interconnect with other people and as a result also knew with frightening clarity their own personal participation in the infliction of suffering and destruction of life on Earth. Gro Harlem Brundtland, a Norwegian physician, politician, and the chair of the World Commission of Environment and Development eloquently outlined the extent of this twentieth century cognitive and phenomenological transformation:

> When the 20th century began, neither human beings nor human technology had the power to radically alter the global ecosystem. Today, 1987, as the century draws to a close, human beings in ever-increasing numbers have that power, and as a result of their activity on the planet, major unintended changes are taking place in the atmosphere, the biosphere, and the hydrosphere. These changes outstrip our present

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85 Kearns, 474. Kearns indicates that this generation has questioned the legacy of preceding centuries (namely that matter is dead and atomized objects) and has recognized “the ecological web and the intricate interdependency of a very alive nature seen in ecology, evolutionary cosmology, and other aspects of the new science, such as chaos theory.” Ibid. This is emphasized in the many mutually empowering, symbiotic or interdependent relations. Even our human bodies are understood as composite entities and “joint property of the descendants of diverse ancestors.” Margulis and Sagan, 350.

ability to cope: the world’s financial and political institutions are out of step with the workings of nature.\textsuperscript{87}

Shifting worldviews and the emergence of a new planetary consciousness that envisions Earth as a biospiritual entity is reflected at a personal, human level; to accurately tell the unfolding narrative of the cosmos, the voice of \textit{Homo sapien sapiens} must be added to the other-than-human voices offered in the previous two sections. There are many extraordinary citizens and scientists whose personal Earth literacy has helped to change the way humanity envisions and encounters Earth’s life systems. One pioneering Earth literate scientist who was working at the dawning of the twentieth century was Rachel Carson (1907-1964).\textsuperscript{88} This marine biologist lived in solidarity with creation and allowed the physical and psychic inheritance offered by Earth to guide her scientific research and activism against the use of DDT. Her autobiographer Linda Lear documents Carson’s Earth literacy:

Carson could not be silent. She had peered into the fairy caves and tide pools of her beloved Maine coast and had seen the fragility and tenacity with which even the smallest creatures struggled for life against the relentless ocean tides. Her flashlight had captured the unforgettable spectacle of the solitary crab on the rocky beach at midnight, vulnerable yet unassailably resilient. She could not stand idly by and say nothing when all that was in jeopardy, when human existence itself was endangered.


\textsuperscript{88} She demonstrates her Earth literacy in the following quote made in 1952: “We live in a scientific age; yet we assume that knowledge of science is the prerogative of only a small number of human beings, isolated and priestlike in their laboratories. This is not true. The materials of science are the materials of life itself. Science is a part of the reality of living; it is the what, the how, and the why of everything in our experience. It is impossible to understand man [sic] without understanding his environment and the forces that have moulded him physically and mentally.” Carson, “Remarks at the Acceptance of the National Book Award for Nonfiction” in Lear, 91. Even in her field notebooks, Carson’s Earth literacy resonates: “What peculiar brand of magic is inherent in that combination of sand, and sky and water it is hard to say. It is bleak and stark. But somehow it is not forbidding. Its bleakness is part of its quiet, calm strength. The dune land is a lace of overwhelming silence, or so it seems at first. But soon you realize that what you take for silence is an absence of human created sound. For the dunes have a voice of their own, which you may hear if you will but sit down and listen to it.” Carson, “Fragments from Rachel Carson’s Field Notebooks,” in Ibid., 130.
That was the message that brought her to the Senate hearing room. That was what had sustained her.

Rachel Carson’s personal and professional journey towards an intimate understanding of her (and humanity’s) embeddedness in Earth’s ecology was fuelled by her anxiety about the accelerated trend of nuclear militarism and humanity’s potential to destroy all life. This anxiety is echoed in her books, especially *Silent Spring* which was the spark that transfigured isolated caring individuals and conservation groups into a vociferous environmental movement. Carson’s life and work – despite vicious opposition – inspires every scientist and planetary citizen to cultivate a profoundly personal connectivity with Earth. “We must never forget the wholeness of that relationship. We cannot think of the living organism alone; nor can we think of the physical environment as a separate entity.”

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90 The bombing of Pearl Harbor in World War II occurred one month after the publication of her book *Under the Sea-Wind* (1941) and her research into the destructive effects of war on Earth’s aquatic ecosystems deepened Carson’s intimacy with creation.

91 She began writing *Silent Spring* in 1957. It took her five years to shape and mould the “enormous body of scientific literature into a compelling indictment against the flagrant misuse of synthetic chemical pesticides.” Lear, *Lost Woods*, 187.

92 One letter to the New Yorker is a perfect example of this: “Miss Rachel Carson’s reference to the selfishness of insecticide manufacturers probably reflects her Communist sympathies, like a lot of our writers these days. We can live without birds and animals, but, as the current market slump shows, we cannot live without business. As for insects, isn’t it just like a woman to be scared to death of a few little bugs! As long as we have the H-bomb everything will be OK. PS. She’s probably a peace-nut too.” As quoted in Hawken, 49. Her gender was also a target of angry and oppressive prognosticating. Norman Borlang, an agronomist, plant pathologist and in 1970, a Nobel Peace Prize winner, “blamed the ‘best-selling, half-science, half-fiction novel “Silent Spring’” for instigating a “vicious, hysterical propaganda campaign against the use of agricultural chemicals.” Philip M. Boffey, “20 Years after ‘Silent Spring’: A Troubled Landscape,” *New York Times* May 25, 1982. Dr. William Bean in *Archives of Internal Medicine* indicated that “Silent Spring, which I read word for word with some trauma, kept reminding me of trying to win an argument with a woman. It can’t be done.” Also *Time* magazine called this book “an emotional and inaccurate outburst.” Quoted in Hawken, 55.

Carson, humanity understands in greater clarity the personal, professional, and prophetic dimensions of scientific Earth literacy.\footnote{One cannot overemphasize the concrete impact of this one person’s scientific Earth literacy; when *Silent Spring* was published in 1962 “DDT measured in human tissue was 12.6 ppm and sixteen years later it had fallen to 4.8 ppm and today it is under 1 ppm.” Hawken, 58. Thus our children, and our children’s children are the beneficiaries of the fruits of Carson’s Earth literacy and activism.}

Other Earth literate scientists and citizens who have allowed this cognitive and affective formation to driven their life work include the following: the many women of the 1970s Chipko movement who put the life of the forests above their own, and with their actions, proclaimed nature as indispensable to survival; Lois Marie Gibbs, an American housewife from the Love canal region in New York; American geneticist Barbara McClintock who developed a keen intuitive sensitivity and intellectual appreciation and kinship with other-than-human organisms as subjects; and community activist Carol Van Strum who wrote about the effects of using Agent Orange; Vandana Shiva, an Indian physicist, ecofeminist, and the founder of Navdanya (a women-centred national movement to protect biological and cultural diversity and cultivate the integrity of living resources, especially native seeds); Katsi Cook a founding aboriginal midwife of the Six Nations Birthing Centre at Six Nations, Ontario who cofounded the Akwesasne Mothers Milk Project (1983) to bring attention to how toxic contaminants from industrialization are present in human breast milk; physicist and cosmologist Brian Swimme whose work re-imagined many cognitive horizons within science and contributed to the narration of the universe story to the wider public; Lynn Margulis, an outspoken advocate for the Gaia theory and evolutionary symbiosis at the mitochondrial level is another example of an Earth literate scientist as is farmer, writer, and activist Wendell Berry.

**Conclusion: Chapter Two**
This chapter outlines how, within the cosmic domain, dynamism, uncertainty, and interconnectivity emerged as more accurate descriptors of the universe and Earth. In the domain of Earth’s ecosystems, the myriad expressions of interconnectivity, contingency, organismic, and interdependence became cornerstones of a new planetary consciousness. Lastly, the biospiritual nature of Earth, the purposeful cultivation of reverence and humility in light of Earth’s mysterious grandeur, and a deep personal connectivity with Earth were exposed as foundational components of a vibrant personal scientific Earth literacy. Each domain gave a platform for the many human and other-than-human subjects and contributors to the story of the cosmos and offered a glimpse of how expansive this shift was towards a planetary consciousness. Thus, in a little more than half a century, a mechanical worldview became corroded and the process of replacing this static vision with a dynamic vision of interconnectivity, uncertainty, continuous creativity, interdependence, and risk, began in earnest. This transformation in our mindscapes is a vital precursor to the change in how humanity names, describes and responds to human suffering today.

Scientific Earth literacy alone is not substantial enough to adequately address humanity’s questions of meaning, purpose and worth in an evolutionary, globalized, and industrialized world. In 1969, anthropologist Claude Levi-Strauss mused whether humanity’s self-destructive poisoning of the biosphere will mimic the pattern of self-annihilation via overconsumption seen in certain insect larvae communities. Interestingly, he concluded by indicating that we will only save ourselves via a profound spiritual transformation. This demonstrates the need of a second form of Earth literacy – i.e., a theological Earth literacy – to properly articulate a more functional cosmology and form the biospiritual moral

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imaginations required to coherently and faithfully engage human suffering today. Outlining this form of Earth literacy is the task of the subsequent chapter.
Chapter Three: The Emergence of Earth Literacy in Theology

The Contribution of Theology to the Envisioning a New Cosmological Horizon of Meaning for Engaging Human Suffering

Without roots we can neither discover where we belong, nor can we grow. Without stability we cannot confront the basic questions of life. Without stability we cannot know our true selves. It is only as we put down roots into the earth that we begin to see the fruits. To be earthed is to come alive in a new sense of mission.

Jean Vanier

On June 22, 1633 ecclesial authorities publicly condemned Galileo as a heretic and effectively attenuated avenues for dialogue between science and faith and mutual critique. Due to this deepening chasm, while science was eagerly learning about our human origins and uncovering a new story of how the universe emerged, evolved, and sustained itself, there was little religious dialogue on the deeper significance of science’s new encounters with creation. Theologians cloistered their creative scholastic efforts almost exclusively to the anthropocentric Christian story, the personality of Jesus, Augustinian Fall/Redemption theology as human salvation from the natural world, ecclesiological structures, or to internecine strife within and between Christian churches, and ignored creation theology to a large degree. As a result, divinity was condensed into a notion of an unchanging, static, and transcendent God beyond the dynamism and mutability of the phenomenological world. This divine God was not intimately involved in the world and not “passionately caught up in

1 Vanier, 82.
2 Giorgio De Santillana, The Crime of Galileo (Chicago, IL: University of Chicago Press, 1955), 306-310. The effects of this lack of dialogue and mutual critique is illustrated in H. Paul Santmire’s claims that Christianity’s absorption of modern science, philosophy and industrialism has bankrupted Western theology. See: Footnote 324.
3 McDonagh, 12.
4 Ibid., 63, 81, 108.
its destiny.\textsuperscript{5} Since the rise of mechanistic philosophy, God was seen as an all-powerful, ingenious, male and seemingly unconcerned mechanic of a cosmos that was understood as an exquisitely constructed clock. This worldview offered a dysfunctional understanding of humanity’s place in, and relationship with, creation. This, in turn, atrophied theological conversations concerning human suffering and alienated humanity from an immense source of healing and transformation. Thus, what could generate richer theological dialogues concerning human suffering would be the construction of an ecological theological anthropology (ETA). This framework could allow Christianity to engage human purpose, worth, and the suffering that accompanies our participation in a sacred, cosmic, and planetary communion of subjectivity in new ways.

This chapter offers many theological interlocutors who crossed the chasm between Christian religion and science and critiqued the prevailing anthropocentric and mechanical world-view as an evolutionary consciousness was emerging in the twentieth century. There were formidable voices prior to the twentieth century that cannot be explored in detail here but they set the tone for the work that was to be done to uproot the prevailing static cosmology.\textsuperscript{6} It will be shown that there was an emergence of Earth literacy, as defined in

\textsuperscript{5} Ibid., 110.

\textsuperscript{6} It is noteworthy that prior to the eighteenth century there were many under-appreciated theological voices who offered a profound (and yet some quite flawed) understanding of creation’s worth and humanity’s connection to Earth. These will be taken up more specifically in Chapter Four and include the following: St Irenaeus (130-200), the Desert Mothers (4th-5th century), St. Benedict (480-543), Maximus the Confessor (580-662), St Francis (1181-1226), St Clare (1194-1253), St. Hildegard of Bingen ((1098-1179), St. Bonaventure (1221-1274), St. Thomas Aquinas (1225-1274) See: Santmire, The Travail of Nature and Bonaventure and Ewert H. Cousins, Bonaventure: The Soul’s Journey Into God; the Tree of Life; the Life of St. Francis, Classics of Western Spirituality (New York, NY: Paulist Press, 1978). Theologians working in the eighteenth and nineteenth centuries who cannot be explored here include British naturalist-parson Gilbert White (1720-1793) who has been called (by American historian Donald Worster) the seminal representative for the modern study of ecology, and Jesuit poet Gerard Manley Hopkins (1844-1889) whose poems offered the world the “symbolic energy” that intimately coupled creation and revelation. See: Gilbert White, “The Natural History of Selbourne,” (New York, NY: Appleton and Company, 1899), 350. http://www.biodiversitylibrary.org/item/57838#page/9/mode/1up. Accessed February 2, 2014; See also: Worster, 5; Robert Bernard Martin, Gerard Manley Hopkins: A Very Private Life, 1st American edition (New
Chapter Two, within Christian theology that paralleled the development of scientific Earth literacy. This burgeoning planetary consciousness offered new language, images, metaphors for articulating the sacred universe story as well as the moral impetus for doing so. This transformation of theological consciousness allowed for a more authentic and faithful interpretation of humanity’s place, worth, and purpose within this unfolding narrative. It will be argued in this chapter that these two forms of Earth literacy, scientific and theological, merged in the 1980s giving birth to a unique theological discipline – i.e., ecotheology. The constructs and ideas offered by this new discipline have enabled the construction of a distinctly ETA, the content of Chapter Four of this thesis. Subsequently in Chapter Five, it will be shown how this new relational framework affects theological discourse concerning human suffering.

This chapter will begin by offering an illustrative, non-exhaustive, exploration of several theologians working in the twentieth century who made significant contributions to the emergence of a theological Earth literacy. Then the heated dialogue concerning Christianity’s culpability for, and response to, the ecological crisis will be explored for it served as a critical stimulus for the emergence of Earth literacy in theology. Finally, an examination will be made of six vital strands of theological discourse which signalled the birth of ecotheology in the 1980s. The ultimate purpose of this chapter is to highlight the emergence and development of theological Earth literacy for only after a substantive level of Earth literacy is reached, can an ETA be constructed and conversations about the mystery of

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7 The subsequent growth, proliferation, and innovation of ecotheology in the 1990s onwards is beyond the scope of this chapter but would be an excellent future project.
human suffering be sufficiently grounded – the latter two areas will be the content of the last two chapters of this thesis.

Twentieth Century Contributors

In the twentieth century there was a crescendo of ecocentric theological voices that included French philosopher, anthropologist, and Jesuit Pierre Teilhard de Chardin (1881-1955); German Lutheran theologian Albert Schweitzer (1875-1965); American Lutheran theologian Joseph Sittler (1904-1987); American United Methodist process theologian John Cobb (1925-). All these voices have cultivated particular nuances within theological Earth literacy and it is important to note both the importance of their contributions and the partiality of their legacy; Earth literacy is an interactive, evolving encounter and response to God, creation, and humanity that defies permanent tethering in any one word, image, metaphor, or description. Nevertheless, these authors do offer a rich matrix of ideas during a crucial period of history that needs to be retraced; to know where ecotheology is being called to go, one must know where it has been.

Twentieth Century Voices: Teilhard de Chardin, Schweitzer, Sittler, and Cobb

Jesuit Paleontologist Pierre Teilhard de Chardin

During the latter part of the nineteenth century, empirical data from science was helping to articulate a different origin story and pattern of development on Earth. In the early twentieth century, the work of theologian and anthropologist Pierre Teilhard de Chardin contributed to this shift of consciousness not via prose and poetry but via the artifacts unearthed by paleontology and anthropology. After the war and during his travels in China he focused on paleontology and theology.
evolutionary creation story, his employment of new language and images in theological reflection, and his unique way of expressing his deep love of creation.

In Teilhard’s scientific master piece, *Le Phénomène Humain* (1955),⁹ and his mystical meditation, *The Divine Milieu* (1957), he was able to illustrate a three-fold synthesis of the material and the spirit, past with the future, and the many with the one, all central features of a theological Earth literacy and vital elements for the emergence of ecotheology. For Teilhard, God is the “cosmic eddy”¹⁰ of animating force behind every single event from the atom to the vast mountain, and therefore God is the intangible at the heart of the universe.¹¹ God is not a fixed end point but both the “Prime Mover, Gatherer and Consolidator, ahead of us...”¹² and the eternal God above, connecting the entire evolutionary process as one unified sacred story of becoming. As a result, Teilhard introduced Christian theology to a grand cosmological horizon and awakened it to a new dynamism and creativity inherent in the cosmos. This realization led him to employ new terminology to more adequately articulate his vision: cosmogenesis, geogenesis, biogenesis, psychogenesis, and noogenesis.¹³ These, he indicates, are ultimately processes of Christogenesis – the evolving dynamism of the living, Risen Christ.

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As a priest, Teilhard desired to reconcile his deep love for God and adoration of the Sacred Heart of Jesus with his inner yearning to participate in a scientific understanding of creation. He dedicated the *The Divine Milieu* (1957) to those who love the world, and in this text he described how, at the heart of the universe, each soul exists for God: “...the diaphany of the divine at the heart of a glowing universe, the divine radiating from the depths of matter a-flame.” Thus, for people of faith to come to know God, they must “bathe [themselves] in the ocean of matter” and never become alienated from the material universe that is progressively complexifying, interiorizing and converging “towards a personal transcendent God, the center, loving and worthy of being loved.” Thus, despite his anthropocentric bias, Teilhard’s affirmation of his deep love and reverence of creation as a path to wisdom was a cornerstone of his Earth literacy.

**Lutheran Theologians Albert Schweitzer and Joseph Sittler**

Teilhard was not the only voice in the Christian tradition that contributed to the emergence of Earth literacy in theology. Two highly influential Lutheran theologians that need to be profiled are Albert Schweitzer and Joseph Sittler not only due to their academic contributions but also because of the audience they addressed – i.e., the international and

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15 Ibid., xiv.


18 Teilhard’s vision, however, does still exhibit an anthropocentric and anti-matter bias. This is seen in his eschatological vision of a spiritual “Omega Point,” the glorified, spiritualized Christ, who is the dynamic impetus of the evolutionary process and the end goal. See: Teilhard de Chardin, *The Phenomenon of Man*, 260. This is also seen in his belief that the final state of the world is purely spiritual and the “material vastness of the universe will disappear” into “the nothingness of consciousness.” Pierre Teilhard de Chardin, *Science and Christ*, trans., Rene Hague (New York, NY: Harper and Row, 1969), 84; 85. It is also echoed in his “ascending axis of hominization” that Teilhard uses to optimistically indicate that humanity is the penultimate apex of the evolutionary process and the “ULTRA-HUMAN” is where we are headed. Teilhard de Chardin, *The Making of a Mind*, 302; Teilhard de Chardin, *The Heart of Matter*, 38.
scientific communities. Schweitzer believed that ecology was “the study of the architecture of creation”\(^1\) and yet lamented that anthropocentrism had tainted humanity’s understanding of this science and its moral applications. “The great fault of all ethics hitherto has been that they believed themselves to have to deal only with the relations of man to man [sic].”\(^2\) His ground-breaking work critiquing anthropocentrism and the nature-human dualism in *Reverence for Life*, earned him the 1952 Nobel Peace Prize and the attention of formidable scientific minds, including renowned biologist and environmental activist Rachel Carson. Key components of his Earth literacy were his non-hierarchical vision of Earth relations, creation centered theology, and nonviolent respect and reverence for all life.\(^3\)

Joseph Sittler was an influential rhetorical and practical theologian\(^4\) who developed a “theology of the earth” which he took to the international stage in order to address the urgency of the ecological crisis and human devastation.\(^5\) On November 21, 1961 he addressed the Third Assembly of the World Council of Churches (WCC) in New Delhi,

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1. Feehan, 89.
3. The following demonstrates his Earth literacy: “The ethics of reverence for life makes no distinction between higher and lower, more precious and less precious lives. It has good reason for this omission. For what are we doing, when we establish hard and fast gradations in value between living organisms, and judging them in relation to ourselves, by whether they seem to stand closer to us or farther from us. This is a wholly subjective standard. How can we know what importance other living organisms have in themselves and in terms of the universe?” Albert Schweitzer, *The Teaching of Reverence for Life* (New York.: Holt, Rinehart, and Winston, 1965), 47.
4. For example, one of Joseph Sittler’s many pupils was ethicist Richard Baer and due to Sittler’s influence, Baer was able to envision God’s creation as the “web of life” in the 1960s and 70s. As a result of this formation, Baer suggested a series of principles as a foundation for a Christian environmental ethic. Baer concluded that to destroy the environment is to sin against the order of Creation and God. See: Richard A. Baer Jr., “Land Misuse: A Theological Concern” in *Christian Century* 83 (Oct. 12, 1966): 1239-1241 and Ibid., “Conservation: An Arena for the Church’s Action” in Christian Century 86 (Jan. 8, 1969): 40-43. See also: Seyyed Hossein Nasr, *Religion & the Order of Nature* (New York, NY: Oxford University Press, 1996), 193.
India, lamented the “doctrinal cleavage” of grace and nature, and committed himself as a man of faith to rectifying this wrong. His now famous statements to the WCC reflect his theological Earth literacy: “The mathematization of meaning in technology and its reduction to operational terms in philosophy has left no mental space wherein to declare that nature as well as history, is the theatre of grace and the scope of redemption.” Thus, his conception of the theological responsibility to care for Earth is firmly grounded in “the theological magnificence of cosmic christology” – an image offered by “Irenaeus, or Augustine and Martin Luther on their good days.” As his theological Earth literacy was forming in the crucible of the world wars and nineteenth century Protestant theology that saw nature as a stage for human redemption, Sittler was able to contribute to a different worldview that affirmed an Earth centered ethic and a broadened soteriological vision.

Methodist Process Theologian John B. Cobb

In the 1970s, Methodist process theologian John B. Cobb made a synthesis of Alfred North Whitehead’s process metaphysics and philosophy with Christian theology, and applied this new vision of Earth relations to justice issues such as racism, prejudice, and ecological

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25 He recognized how “[f]or fifteen centuries the Church has declared the power of grace to conquer egocentricity, to expose idolatry, to inform the drama of history with holy meaning” and that his novel context required of him something unprecedented. Ibid., 183.

26 Ibid.

27 Ibid.


29 “This radio-active earth, so fecund and so fragile, is his creation, our sister, and the material place where we meet the brother in Christ’s light. Ever since Hiroshima the very term light has ghastly meanings. But ever since creation it has had meanings glorious; and ever since Bethlehem meanings concrete and beckoning.” Sittler, “Called to Unity,” 187.
injustice.\textsuperscript{30} Cobb’s articulation of process theology – a unique manifestation of theological Earth literacy – offered new ways to speak of the dynamism inherent in both creation and the Creator, and argued that all created entities are intrinsically valued by God, contributing to God’s own developing experience and wisdom.\textsuperscript{31} It also demonstrates how differentiation among living beings can be articulated in terms of both intrinsic and instrumental worth, an important facet of St. Francis of Assisi’s theology. Thus John Cobb’s Earth literacy makes space for the conversation of how “all living things are valuable, but they are not equally valuable” that will become contested, refined, and nuanced in subsequent decades within theology.\textsuperscript{32}

In conclusion, Earth literacy was manifest by these pioneering theologians in a variety of ways but contributed to the emergence of ecotheology by offering both new literary tools (terms, images, metaphors) and new ways to describe the relationships among God, humans, and other-than-humans encountered in creation. One catalyst that spurred the development of theological Earth literacy and the emergence of ecotheology was the accusation that Christianity was to blame for the ecological crisis.

Voices Raised in Protest

In the twentieth century alongside constructive Christian voices, there were those who lay blame for the ecological crisis squarely at the feet of Christianity. They accused this religion of fueling the alienation of humanity from the natural world and sanctioning

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\item \textsuperscript{32} Ibid., 71.
\end{itemize}
exploitative practices. The strength and urgency of these critiques offered by Max Weber, Harvey Cox, Lynn Townsend White and others, were a great impetus for the development of theological Earth literacy for they, albeit painfully, showed areas of deficiency within theology and stimulated a re-appraisal and re-articulation of Christianity’s doctrines in light of humanity’s new understanding of creation.

One early critique was offered by Max Weber in *The Protestant Ethic and the Spirit of Capitalism*. He argued that the Protestant vision of a radically transcendent God and the asceticism promoted by Luther and Calvin, when coupled with a sense of divine election and the Protestant work ethic, was a powerful driving force in the rise of capitalism and the desacralization (and abuse) of the created world. Another early critic, who published his damning appraisal nearly one year prior to Lynn White’s, was American Protestant theologian Harvey Cox. He suggested that the de-sacralization of nature was due to the biblical creation story that separated humanity from nature.

The most well-known critique came from American historian Lynn Townsend White Jr. At his famous lecture at the American Association for the Advancement of Science (1966), he argued that “[e]specially in its Western form, Christianity is the most

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34 This ethic and the actions sanctioned by its divine affiliation is captured in Calvin’s pronouncement that an individual is “…strengthened inwardly, given immense creative authority and sent into an ‘open’ world to remold it to God’s glory.” Langdon Gilkey, *Reaping the Whirlwind: A Christian Interpretation of History*, Crossroad Book (New York, NY: Seabury Press, 1976), 185. Cited in Santmire, 127. When this work ethic is uncoupled from a real sense of divine immanence and intrinsic worth of creation, then it becomes, in Santmire’s mind, a theological validation and interior impetus that perpetuates a “vocational domination” of creation, leading to the secular industrial domination that has survived into the 21st century. Ibid., 126; 137.


anthropocentric religion the world has seen” and that its anti-ecological influence on the development of science and technology stemmed from the biblical precepts for humanity to ‘subdue the earth’ and have ‘dominion’ over “every living thing that moves upon the earth.” Instead of advocating the dismissal of religion completely, including Christianity, White was clear that the remedy for our crisis lay in the recognition that the ecological crisis was both a moral and spiritual crisis, a fact other Christian theologians have also advocated.

Following White, there were numerous voices criticizing Christianity and these accusations did not go unheeded. It was, however, in making coherent and faithful responses to these accusations that a deeper theological Earth literacy emerged. There are many who entered the dialogue to respond to White but a key interlocutor with Lynn White’s criticism was Protestant theologian H. Paul Santmire. In his text *Brother Earth:*

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37 Ibid., 1205.
38 Genesis 1:28.
40 Hal Lindsey wrote *The Late Great Planet Earth* (Grand Rapids, MI: Zondervan, c1970) and argued that Evangelicals gave little to no attention to the care of Earth; landscape architect and urban theorist Ian McHarg indicated that Judaism and Christianity have long been concerned with justice and compassion but “…assumed nature to be a mere backdrop for the human play.” See: Ian L. McHaig, “The Place of Nature in the City of Man” in Ian G. Barbour, *Western Man and Environmental Ethics: Attitudes toward Nature and Technology*, Addison-Wesley Series in History (Reading, MA: Addison-Wesley Pub. Co., 1973), 175.
he promote a theocentric approach to theology over an anthropocentric or cosmo-centric model, and in his later document, “Reflections on the Alleged Ecological Bankruptcy of Western Theology” (1973), he states that despite the “deep-seated ecological liabilities” in classic theological doctrine, it would be dangerously facile and I to lay the entire blame for the ecological crisis at the feet of one book of Scripture.43

Santmire’s theological Earth literacy reveals itself in his more nuanced, historical portrait of Western Christianity’s ambiguous relationship with creation. Via his historical consciousness and under the guiding metaphor of ‘pilgrimage,’ Santmire demonstrates that Christianity originally had a “pronounced and pervasive ecological dimension” and its “bankruptcy” came when it “became locked in with the forces of modern science, modern philosophy, and modern industrialism.”44 Santmire highlights the dynamic and transformational character of Earth literacy, and through his work, theology can appreciate critiques of Christianity’s contribution to the dysfunctional cosmology without abandoning Christianity entirely, naively ignoring its culpability, or disregarding its important role in articulating a new functional cosmology that sanctions more life-giving ethical praxis.

The consequence of the theological Earth literacy offered by these eighteenth, nineteenth, and twentieth century theologians was the emergence of the distinct theological

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43 H. Paul Santmire, “Reflections on the Alleged Ecological Bankruptcy of Western Theology,” in *Ethics for Environment: Three Religious Strategies: The Proceedings of a National Conference Held at the University of Wisconsin-Green Bay, June 11-13, 1973*, eds., David Steffenson, Walter J. Herrscher, and Robert S. Cook (Green Bay, MA: UWGB Ecumenical Center, 1973), 36. Even more provocatively, Santmire offers a counter critique of the role of wealth in the ecological crisis: “[w]hen...a rather affluent-looking ecologist goes on national television and blames the Book of Genesis for the ecological crisis, one wonders whether he is also familiar with the creation paean of Psalm 104, not to speak of the strictures of the prophet Amos and Jesus against the wealthy.” Ibid.

44 Ibid., 31.
discipline—ecotheology—in the 1980s. This would have been impossible were it not for the many contributions of the theological pioneers who appreciated the intrinsic worth of creation in new ways, who offered the linguistic tools to poetically, mystically, and heuristically experience the intertwining of the numinous and cosmic, who understood the dynamism inherent in creation in provocative ways, who realized that ethical consideration for developing just relations was much broader than previously considered, and who saw how Christianity and all religions played an important role in addressing the ecological crisis. This final section offers a portrait of the birth of ecotheology within six vital theological domains thanks to the language, images, and metaphors offered by the maturing theological Earth Literacy. This is done in order to supply the substrate for constructing an ecological theological anthropology in the following chapter. It is this synthetic framework that will enable Christians to engage the mystery of human suffering in new ways.

Nativity of Ecotheology

This chapter’s exploration of the emergence of Earth literacy within theology culminates with ecotheology’s nativity in the 1980s and the following offers a brief outline of the contributions made by its numerous midwives. Since theology itself is a complex, interdependent tapestry of ideas, and since ecotheology is a manifestation of this interwoven academic discipline, then the birth of ecotheology ought to be described through the exploration of several of its many threads. For this enterprise, seven threads or domains of theological reflection will be explored with each offering a vital hue to the articulation of the new functional cosmology, cosmogenesis. These six domains, entitled Cosmology, Systematics, Ontology, Justice, Natural Theology, and Spirituality and Praxis, will be described by sixteen theological midwives. Unfortunately, in this process of fragmenting the
emergence process, some areas of this ecotheological tapestry had to be omitted and others treated somewhat superficially.\textsuperscript{45} Thus the purpose of this portrait is illustrative rather than exhaustive; it is the celebration of ecotheology’s nativity in the 1980s and the exploration of the fertile substrate that would sustain its immense proliferation (1990s) that would enable both the construction of an ETA and the resituating of theological conversations concerning human suffering within cosmogenesis.

**Cosmology**

**Thomas Berry: The Storyteller of Cosmogenesis**

Passionist priest, Teilhard scholar, and cultural historian Thomas Berry (1914-2009), was a pioneering figure who disseminated a new functional cosmology – cosmogenesis\textsuperscript{46} – at the cusp of the 1980s. The narrative Berry crafted that told of his understanding of the biospiritual nature of the cosmos, the connectivity and dynamism of the universe, the unique role humans have in the universe process, and the situation of Earth as the primary referent for all human endeavours gradually emerged in the late 1970s\textsuperscript{47} and nearly a decade later this

\textsuperscript{45} For example, the groundbreaking ecumenical and multidisciplinary achievement of the anthology *Cry of the Environment: Rebuilding the Christian Creation Tradition* (1984) could not be investigated here. In addition, non-Christian contributions to Earth literacy will not be explored here but are important in understanding Earth literacy. This thesis also does not offer a systematic analysis and critique of ecotheological developments within the disciplines of biblical, sacramental, trinitarian, pastoral, and ecclesial theology. Nevertheless, this survey does illuminate trends, dimensions, and patterns within Christian theology as a whole and its effect on our understanding of human suffering.


\textsuperscript{47} See: Berry, “The New Story: Comments on the Origin and Transmission of Values,” Volume 5 in *Riverdale Papers*. It was also published as the first volume of the *Teilhard Studies* series (*Teilhard Studies*, no.1
universe story was a vital part of a special edition of *Cross Currents* (1987) dedicated to Berry’s writings.\(^{48}\) This sacred universe story then rose to more public prominence when it was the context out of which Berry’s “Twelve Principles for Reflecting on the Universe” arose (1987)\(^{49}\) and was included as the tenth chapter of his text *Dream of the Earth* (1988). His level of Earth literacy enabled him to diagnose the concurrent dysfunction of modern Western consciousness and offer another “story” to captivate the human imagination. The seeds had first been planted during his childhood in rural Greensboro, North Carolina,\(^{50}\) incubated during his youth and adolescence, and began to germinate after he entered the seminary run by the Passionist order at age 20 (1934) and after his ordination in 1942. As he reflected on the depth and scope of the social, political, economic, and ecological problems facing the industrialized Western human community, his knowledge of a larger cosmological horizon of meaning began to crystallize and emerge in his teaching and writings.\(^ {51}\) Thus, as was shown above, in the 1980s Berry emerged as a scholar of the wisdom revealed by Earth, a cultural historian, and a notable storyteller whose stories were inspiring humanity to recognize and revere the sacredness of Earth as a communion of subjects and not as a collection of objects to be exploited, commodified, and exterminated. His aptitude as a

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\(^{48}\) Thomas Berry, “Thomas Berry: Introduction,” “Creative Energy,” “The New Story: Comments on the Origin and Transmission of Values,” “Response to an Inquiry,” “Dream of the Earth: Our Way Into the Future,” “Twelve Principles for Reflecting on the Universe,” *Cross Currents* 37, no. 2-3 (Summer/Fall 1987): 178-217. However, Berry repeatedly centralized his work around this “new story” in many of his publications, often including a synopsis of this cosmic narrative within the document. As a result, presenting an accurate chronology to depict when Berry’s cosmic narrative first emerged and arose to prominence is challenging.

\(^{49}\) Ibid., 216-217.

\(^{50}\) Berry writes eloquently of the impact of a local meadow across the creek from where he lived on his spiritual and ethical formation. Berry, *The Great Work*, 13.

\(^{51}\) This deepening of his Earth literacy was occurring in the 1970’s, especially during his tenure at Fordham when he founded the Riverdale Center for Religious Research (1970-1995).
constructive scholar enabled him to weave the deep wisdom from so many academic disciplines (i.e., science, anthropology, world religions) into a coherent and evocative narrative that articulated the story of the cosmos, the role of the human in this developing cosmos, and our way forward into a new “geo-bio-logical era”\textsuperscript{52} – i.e., the Ecozoic Era – that promises mutually enhancing relations among humans and the “larger community of life.”\textsuperscript{53} Thus by the 1990s, Berry’s sacred universe story was becoming a foundation for a new cosmology and the cognitive matrix from which ecotheology was born.\textsuperscript{54}

**Systematics: Defender, Architects, and Advocate**

**John Haught: Defender**

John Haught is an American theologian critical of the pessimism concerning creation that is generated by both a purely otherworldly spirituality in theology and a scientific understanding of nature as radically impersonal, barren, indifferent and impermeable to divine influence. Haught strove to cultivate the philosophical and theological foundation for a coherent and synthetic religious and evolutionary worldview. At the dawning of the 1980s, Haught’s work consisted in defending the congruity between religious “myths of meaning” and “the fabric of nature disclosed by modern science and consistent cosmological theory.”\textsuperscript{55} Haught’s systematic and apologetic work has been accomplished via a synthetic vision of the process philosophy of Whitehead and other great thinkers in philosophy, theology, and


\textsuperscript{53} The term “Ecozoic” arises in Berry’s work in 1989. Berry uses “Ecological Age” as a title for chapter 5 in *Dream of the Earth* (1988) but then coined this phrase in 1989 (in a phone conversation with Brian Swimme) and used it publicly in the 1990 VISION-TV series filmed at Holy Cross Center in Port Burwell, Ontario. It was also incorporated into the title of the book he co-wrote with Brian Swimme (1992). Kiplinger, 10-11.

\textsuperscript{54} This is poignantly demonstrated in the text *The Universe Story* which Berry co-authored with astrophysicist Brian Swimme in 1992. In this text they incorporate emerging empirical scientific data with the sacred wisdom traditions offered by the world’s major religions.

science (such as Michael Polanyi, Paul Tillich and Karl Rahner). His focus during this period was addressing the “academic suspicion of cosmic teleology”\textsuperscript{56} and delineating what could constitute divine purposefulness in an evolutionary universe and how human appreciation of this cosmic purpose intensifies and deepens inter-human love. He embraced his defensive and constructive role as a means to articulate the relationship between God’s purposefulness and creation, an area of theology he feels is often neglected due to embarrassment.\textsuperscript{57} His work was crucial for the nativity of ecotheology; it was crucial to have such a meticulous, well-formed, and passionate writer and speaker, to defend the congruity of ecos and theos and contribute the philosophical undergirding to an alternative worldview – a “cosmic adventure”\textsuperscript{58} – more coherent than the prevailing cosmology that “[left] no openings in nature’s soil for the seeding of divine purpose.”\textsuperscript{59}

\textbf{Jürgen Moltmann and Gordon Kaufman: Architects}

German, Protestant systematic theologian Jürgen Moltmann appreciated how the environmental crisis was “nothing less than a crisis in human beings themselves,”\textsuperscript{60} and thus sought in \textit{God in Creation} (1985) to construct an ecological doctrine of creation to correspond to the relational, social doctrine of the Trinity that he had outlined in \textit{The Trinity and the Kingdom of God} (1981). He argued that if we see God as a unified Trinitarian community, then we will not see “his [sic] relationship to the world he has created as a one-sided relationship of domination,” and we will understand our relation with creation

\textsuperscript{56} John F. Haught, \textit{The Cosmic Adventure: Science, Religion and the Quest for Purpose} (Ramsey, NJ: Paulist Press, 1984), 166.

\textsuperscript{57} Haught, \textit{Nature and Purpose}, 2.

\textsuperscript{58} This is the title of his 1984 text.

\textsuperscript{59} Ibid., 115.

differently and develop a “non-hierarchical, decentralized, confederate theology.” This was an invaluable contribution to the emergence of ecotheology for he brought to scholastic conversations in systematic theology new ways of engaging with, and relating to, God, humanity, and creation.

Since he saw that a theological doctrine of creation in our time would be guided by the desire to “find a way into the community of creation, to reawaken the awareness of that community and to restore it,” his approach to constructing this doctrine was both ecumenical and interdisciplinary; he listened attentively to rich sources in Judaism (e.g., Hebrew Bible, the Sabbath, and Kabbalistic traditions such as zimsum and divine Shekinah) as well as scientific and secular contributions (e.g., “sciences, technologies, and economies that impact the relations between human beings, machines, and nature”) and “absorbed” them into his systematic vision of Christian theology. He also realized how theological methodology had changed: “We no longer desire to know in order to dominate, or radically and reduce in order to reconstruct. Our purpose is now to perceive in order to participate, and to enter into the mutual relationships of the living things.” In this ground-breaking text, God in Creation, he sought to extend “theology’s horizon to cosmic breadth” in order to embrace all of creation within systematic theology. Thus, as he expanded the “christological concentration” in Protestant theology, all future ecotheologians became benefactors of the connections he

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61 Ibid., 2.
62 Ibid., 4.
63 Ibid., xiv.
64 In his appendix “Symbols of the World” he writes: “My intension is to indicate the points at which the Christian world of symbols has absorbed these other symbols of the world, and to show how they have been transformed in the process.” Ibid., 298. This absorption of the content of scientific encounters with Earth into theology is an area of concern for modern ecotheologians who affirm Earth as the context for theology, rather than merely the content of theological conversations.
65 Ibid., 3.
forged in his doctrine of creation between systematic theology and the secular, scientific, and economic *oikoumene* or “inhabited globe.”

Gordon Kaufman, a constructive systematic theologian, was a primary midwife of ecotheology in two ways: he re-imagined the nature and function of theology and helped to direct the re-construction of two primary religious symbols of faith, God and Christ, in light of the ecological crisis. In *Theology for a Nuclear Age* (1985), he described how humanity’s capability to inflict suffering was not new; rather, what was novel was our ability to obliterate the future for all of creation. Thus, this unprecedented historical and religious situation demands a creative response from theologians that goes beyond merely handing on traditional precepts. His vision of Christian theology, as well as his imaginative analysis, criticism and reconstruction of how we understand God and Christ, became strong motivations and beacons for ecotheology as did his attention to concrete ethical praxis.

Since humanity has become aware of our emergence from the cosmos and that we have been graced “with the power to take some measure of direct responsibility for the further unfolding of that very creativity,” Kaufman asserted that theologians were being

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66 Ibid., xiv.

67 Although Kaufman spends more time elaborating the ecological crisis that would result from a nuclear holocaust, he still understands that the limited nature of Earth’s resources, the depletion of energy, water, mineral, arable land and the poisoning of ourselves are significant components of the historical moment we live in today. See: Kaufman, 30. He articulates that we need new religious symbolism because it is partly to blame for our current “ecological blindness” for it lends itself too readily to reinforcing parochial political objectives and nourished massive historical evils (imperialism, colonialism, slavery, exploitation of natural resources, racism, sexism, persecution of infidels or heretics, genocide). Ibid., 31-32.


69 Kaufman, *Theology for a Nuclear Age*, 22. Kauffman saw theology as the work of the human imagination seeking to create a coherent framework of meaning which will provide an overall orientation for human life. Ibid., 26.

70 Ibid., 44.
asked to speak of God and Christ in “ecological terms,” namely in ways that connect with our contemporary biological and historico-cultural origins and processes.\textsuperscript{71} Our situatedness within the nuclear age has also made humanity urgently aware that if human life is to continue, \textit{all} factors – physical, biological and historico-cultural – must be authentically appreciated and engaged and not destroyed, poisoned, exploited or oppressed. He argued that this novel situation is the ultimate test for theology and its symbols “if ‘God’ is to continue to be a viable symbol for orienting human life.”\textsuperscript{72} Within the radically new context of meaning, Kaufman envisioned God as the primordial, mysterious, “hidden creativity,”\textsuperscript{73} tendency, power, or “ecological reality”\textsuperscript{74} behind, within, and working through the biological and historical-cultural processes. Kaufman also advised against highly personalistic and politically motivated symbols of Christ;\textsuperscript{75} instead, he symbolizes Christ as the spirit of “creativity and liberation, and healing, of reconciliation and reconstruction” at work in the world.\textsuperscript{76} It is the narrative of Jesus’ life, ministry and death on the cross that brings humanity back to the root of our being – interdependence and self-giving. This, he claims, is “the very structure or activity which Christians call God.”\textsuperscript{77}

\textsuperscript{71} Ibid., 37.

\textsuperscript{72} Ibid., 39.

\textsuperscript{73} Ibid., 41. He develops this idea further in the following texts: \textit{In Face of Mystery: A Constructive Theology} (Cambridge MA: Harvard University Press, 1993), 264-280; \textit{In the Beginning...Creativity} (Minneapolis, MN: Fortress Press, 2004). He also does so succinctly in “Re-conceiving God and Humanity in Light of Today’s Evolutionary-Ecological Consciousness” in \textit{Zygon} 36, no. 2 (June 2001): 341-347. In all of these he describes God using the nomenclature “serendipitous creativity.”

\textsuperscript{74} Kaufman, \textit{Theology for a Nuclear Age}, 45.

\textsuperscript{75} Ibid., 53.

\textsuperscript{76} Ibid., 57.

\textsuperscript{77} Ibid., 61. It is important to note that Kaufman is sensitive to how the call to humility, self-sacrifice and self-denial often contribute to, and compound oppression for particular individuals and groups such as women, slaves, and people living in poverty.
Sallie McFague: Advocate

Acutely aware of the historical and cultural context in which she was writing, American feminist theologian, Sallie McFague, became a strong advocate for the Earth by developing a metaphorical theology, one that bridged literature and theology, and by offering a provocative understanding of the world as God’s body. Her motivation was the experience of being a member of the first generation of humans able to harness nuclear power and cause the destruction all life on Earth. Equipped with this world vision and theological methodology from Karl Barth and H. Richard Niebuhr, McFague constructed a new model for understanding the relationship of God and the universe that spoke to this urgent reality:

We belong, from the cells of our bodies to the finest creations of our minds, to the intricate, ever changing cosmos. We both depend on the web of life for our own continued existence and in a special way we are responsible for it, for we alone know that life is interrelated and we alone know how to destroy it. It is an awesome and unsettling thought.

Her writing in the 1980s advocated for new symbols, language, and imagery to depict the relationship of the personal divine presence and power within the created world, including humanity. She argued that in an ecological, evolutionary and nuclear age, the most appropriate ecological models for God include Mother, Lover, and Friend, and the most coherent way of imagining the relationship between God and the world was by using the


79 It was the dialectical theology of Karl Barth and her instructor H. Richard Niebuhr’s appreciation of relativity, symbolic imagination and affection in the doing of theology that left lasting impressions on McFague. These mentors influenced her text *Metaphorical Theology: Models of God in Religious Language* (Philadelphia, PA: Fortress Press, 1982) as did the work of process philosopher Charles Hartshorne (e.g., “The Theological Analogies and the Cosmic Organism,” Chapter 5 in *Man’s Vision of God and the Logic of Theism* (New York, NY: Willett, Clark, and Co., 1941).

organic metaphor of the world as God’s body. This model proposed a way for understanding the Creator of the universe as intimately immanent, as “being-itself,” and challenged the image of a distant, uncaring, utterly transcendent clock-maker God. Consequently, the world in her vision becomes “a sacrament of the invisible God,” and deeply connected to social justice concerns. This model also allowed the Creator to place Godself in a vulnerable situation and require humanity’s care. This extended the moral imperative to be loving stewards of Earth and the poor beyond classical visions, and thus she bequeathed to ecotheology a non-dualistic understanding of how salvation needs to be “...as concerned with such basic needs as food, clothing and shelter as with matters of the spirit.”

**Ontology of Communion**

**Douglas John Hall: Ontology as Being-With**

In *Imaging God* (1986), Canadian “theologian of contextuality” and United Church minister Douglas John Hall indicated that Christian thinkers commonly attribute the designation “image of God” to humans, or promote highly valued cultural attributes by associating them with this theological designation. Thus, cultural contexts impact how this important symbol is understood and applied in ethical concerns since a narrowly defined

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81 Ibid., 672.
82 Ibid.
83 She indicates that “[t]he world is a body that must be carefully tended, guided, loved, and befriended both as valuable in itself – for like us, it is an expression of God – and as necessary to the continuation of life.” Ibid. Also see: Sallie McFague, *The Body of God: An Ecological Theology* (Minneapolis, MN: Fortress Press, 1993), 166.
85 Douglas John Hall, *Imaging God: Dominion as Stewardship* (Grand Rapids, MI: W.B. Eerdmans 1986). His familiarity with contextuality was fostered by many of his teachers during his graduate studies at Union Theological Seminary as did his unusual entrance into secondary and graduate studies – e.g., dropping out of high school to support his family and later being allowed into the University of Western Ontario. See: Douglas John Hall, *The Messenger: Friendship, Faith and Finding One's Way* (Eugene, OR: Cascade Books, 2011), 6. Both played a part in his comfort and clarity in insisting that all theology be understood in relation to its context.
image of God can sanction the devaluing and subsequent exploitation of anyone or anything that falls outside of social, political, gender, race, species, or economic parameters. Hall provocatively states that the image of God must be used in “jarring” ways to unearth embedded distortions and stimulate the re-imagining of what theological anthropology in an evolutionary world in crisis would entail. He suggests that the root cause of our ecological problems is grounded in our ontology, “being” itself, and how it is articulated and applied. If humanness is defined by autonomous individuality, rationality, self-sufficiency, and self-reflective capabilities, and if these qualities reflect vital characteristics of God, then this ontological vision sanctions the ruling, controlling, and exploitation of those who do not meet these standards. Thus, the exploitation of Earth has more to do with who we think we are than with our “having” or “doing.” Hall suggests that Western theology re-imagine and transform its understanding of personhood into reflecting our true ontology of communion – i.e., Being-With. For Hall, this communion is not an absorption of one into another; rather, it understands “being” as a dialectical, mutually empowering relationship with that which is not one’s own “being” – i.e., the other. Hall offers three irreducible distinctions within his ontology of communion: a being-with that is oriented towards God who is the Ground and Source of all being and takes ontic priority, an inter-personal being-with (inter-human relations among neighbours); and a being-with that involves the “inarticulate but not silent”

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86 Hall, *Imaging God: Dominion as Stewardship*, 91.
87 Ibid., 66.
88 Ibid., 13.
89 Ibid., 10; 13.
90 Ibid., 10.
91 Ibid., 148.
physical universe. All three loci are irreducible, inseparable, coequal, and are dimensions of our total relatedness. Another key facet he offers is how this ontology of relatedness is not necessary, finished, nor predetermined. Instead “being-with” requires a continual and personal choice or response due to humanity’s capacity to turn away from this tri-fold set of relations. His great gift to ecotheology is his radical reorientation of human ontology toward Being-With the world, each other and God, and the broadening of human understanding of the symbol “image of God” beyond narrow human-centred parameters.

Raimon (Raimundo) Panikkar: Cosmotheandric Intuition

Raimundo Panikkar is a person with a diverse cultural heritage, a scholar with doctorates in philosophy, chemistry, and theology, and a Jesuit theologian who dedicated his life to the “mutual understanding and cooperation among religious traditions.” His greatest contribution was bringing his appreciation of diversity and his integrative cosmotheandric vision of God, the world, and humanity to the discipline of ecotheology.

In his article, “The Cosmotheandric Intuition,” Panikkar articulated his understanding of a hopeful, holistic, mystical attitude towards creation. Panikkar’s attitude toward reality critiqued the tendency in theology to disembody and de-materialize God and diminish the worth of matter. Panikkar realized that this trend prompted humanity to follow suit.

92 Ibid., 124.
93 Ibid., 144.
94 His mother was an affluent, well-educated Spanish Roman Catholic and his father was a Hindu from an affluent family in South India. Thus he enjoyed a dual sense of belonging and alienation within both cultural and religious realms.
96 Ibid., 138.
“Haunted by the need to preserve his ‘dignity,’ [humanity] stripped himself of his animality, then his body and senses, and soon enough he put aside his feelings until he became a ‘thinking rod,’ a *res cogitans*, and a speaking machine....”\(^9\) This alienation of humanity from materiality also signalled the beginning of humanity’s search for solid metaphysical footing or rootedness in creation.\(^9\) In his synthetic vision, Panikkar sees the metaphysical (transcendent), noetic (conscious thinking), and empirical (material) as the three irreducible, coextensive dimensions that constitute the real.\(^1\) His elegantly crafted description of the relations among these three dimensions allows him to maintain the crucial distinction between the finite and infinite in his unity of diversity.\(^1\) Panikkar’s gift to ecotheology was offering it a way of articulating a cosmotheandric experience that: affirms interconnectivity, intimacy, and dynamism; retrieves humanity’s “ecological sensitivity”\(^3\) to enable us to embrace our mystical yearning for God; and celebrates the divine urge for “time, space, and [humanity].”\(^5\) Panikkar’s ground-breaking work bequeathed to ecotheology “…[a] positive (and not merely dialectical) middle way between the paranoia of monism and the schizophrenia of dualism.”\(^7\)

**Justice Movements**

In the 1980s, thanks to the monumental efforts of social justice movements from the 1950s onwards, it became clear that just human relations were predicated on just Earth

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\(^9\) Ibid., 137.

\(^1\) Panikkar, “The Cosmotheandric Intuition,” 29.

\(^3\) Panikkar, *The Cosmotheandric Experience*, 75-76.


\(^7\) Ibid.

\(^7\) Panikkar, *The Cosmotheandric Experience*, 34.
relations. This sentiment guided the World Council of Churches’ General Assembly in Vancouver in 1983 to affirm three central, intertwining Christian values: peace, justice and the integrity of creation. The following four midwives highlight how this applies within four areas of just relations, offering ecotheology a fertile foundation upon which to grow.

Rosemary Radford Ruether: Women and Earth

Rosemary Radford Ruether is arguably one of the most prominent voices among the many ecofeminist voices of 1970s and 1980s bringing to the world’s attention the intertwining oppression of women and nature in a coherent and persuasive narrative of emancipation. For women who struggle daily to survive and care for their families, the poisoning and deterioration of the natural environment both reflects and exacerbates their own experiences of injustice. Thanks to her training in the history of Christianity, Ruether was able to articulate the complex nature of oppression and discern the bitter roots of social issues such as militarism, sexism, anti-Semitism, colonialism, racism, class conflict, and ecological despoliation. From her historical consciousness she identifies social hierarchy and distorted power relations, seen as divinely ordained, as that which sanctify oppression. In New Woman/New Earth: Sexist Ideologies and Human Liberation written in the late 1970s Ruether envisions how humanity can create a “new society” where cooperation and mutual

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105 For example, Drew Dellinger has argued that Martin Luther King, Jr.’s overarching vision of justice for African Americans was deeply rooted in a cosmic vision of justice. In a 1967 television interview King is clear that “[i]t would be foolhardy for me to work for integrated schools or integrated lunch counters and not be concerned about the survival of the world in which to be integrated.” Drew Dellinger, “Martin Luther King Jr.: Ecological Thinker” in Common Ground Magazine (April, 2014), 49-50. http://www.commongroundmag.org. Accessed May 30, 2014.


107 Other ecofeminists working alongside and following Ruether are too numerous to outline but for more detail, see Eaton, 20-22.

interdependence supersedes domination and oppression.\textsuperscript{109} With this new understanding of human purpose, she issues a special invitation to women working for justice in the modern world,\textsuperscript{110} and this would become an impetus and guide for ecofeminists.\textsuperscript{111}

In “Ecology and Human Liberation: A Conflict Between the Theology of History and the Theology of Nature,” (1981)\textsuperscript{112} she directly connected the fate of Earth and women and two years later she spoke of the need to rethink the traditional hierarchical and androcentric chain of being within Western creation theology to liberate both.\textsuperscript{113} In “Woman, Body, and Nature: Sexism and the Theology of Creation,” a chapter in \textit{Gaia and God} (1992), she spoke of ecofeminism directly (an unique manifestation of ecotheology) and asserted that an ecofeminist theology of nature must “unmask the structures of social domination, male over female, owner over worker that mediate th[e] domination of nonhuman nature.”\textsuperscript{114} Her powerful witness to the shared oppression of women and creation was invaluable to the emergence of modern ecotheology.

\textbf{Sean McDonagh: Indigenous Peoples and Earth}

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\item \textsuperscript{109} “The center of such a society would have to be not just the appropriate new social form, but a new social vision, a new soul that would inspire the whole. Society would have to be transfigured by the glimpse of a new type of social personality, a ‘new humanity’ appropriate to a ‘new earth.’” Ruether, \textit{New Woman, New Earth}, 210.
\item \textsuperscript{110} “Women must see that there can be no liberation for them and no solution to the ecological crisis within a society whose fundamental model of relationship continues to be one of domination. They must unite the demands of the women’s movement with those of the ecological movement to envision a radical reshaping of the basic socio-economic relations and the underlying values of this society.” Ibid., 204.
\item \textsuperscript{111} In the 1990s after collaborating with global ecofeminists, she warns privileged North American ecofeminists that their experiences of creation will only be “recreational self-indulgence” if not enmeshed in an equally strong commitment to the critique and transform unjust social, economic and political structures that oppress and kill. Rosemary Radford Ruether, \textit{Women Healing Earth: Third World Women on Ecology, Feminism and Religion} (Maryknoll, NY: Orbis Books, 1996), 5.
\item \textsuperscript{112} Chapter V in Rosemary Radford Ruether, \textit{To Change the World: Christology and Cultural Criticism} (London, UK: SCM Press, 1981), 57-70.
\item \textsuperscript{113} Chapter 3 in Ruether, \textit{Sexism and God-Talk}, 72-92.
\item \textsuperscript{114} Ruether, \textit{Gaia & God}, 85.
\end{enumerate}
\end{footnotesize}
Fr. Sean McDonagh, a Columban missionary and advocate for both the forests and peoples of the Philippines, contributed to the emergence of ecotheology by articulating the deep connections between the suffering of indigenous peoples and the degradation of Earth. In *To Care for the Earth* (1986), he asserted that “[v]ery little reflection on this damaging relationship between human beings and the earth has emerged from Christian thinkers,”\(^{115}\) and thus, he dedicated that book to exposing the rich legacy that Christianity has to foster social and ecological justice. His methodology is grounded in a praxis where “[a]n ounce of practice is worth a tonne of theory,”\(^{116}\) and his Scripture and cosmological hermeneutic is framed within the urgency of the context of suffering, poverty, and ecological destruction in Negros, Philippines. It was within this context of the suffering of the indigenous T’Boli tribe that he constructed a beautiful and fruitful understanding of God, Christ, Nature, Scripture, Christian witness, stewardship, sacramental life, moral theology, spirituality, and mission.

He critiqued many elements of the Christian tradition by rooting his theology in cosmogenesis, and via this lens, he spoke prophetically to the immediate political, social, and economic causes of cultural and ecological degradation. This embedding of theology within the context of the universe story enabled McDonagh to broaden Christian ethical parameters beyond classic inter-personal relations to offer a serious reflection on the relations of humanity within the Earth community in both the present and future. Thus, McDonagh offered a justice orientation and cosmic foundation for ecotheology. “Unless the environment is preserved, social justice for all human beings, not to mention other creatures, will simply be a dream.”\(^{117}\) Theologians, he asserted, should have a critical and creative response to our

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\(^{115}\) McDonagh, 214.


\(^{117}\) McDonagh, *To Care for the Earth*, 203.
current crisis rather than a romantic fixation on the past so that we can respond to our
problems today in creative ways just “as Jesus and Mohammed did in theirs.”¹¹⁸

Dorothee Sölle: Labourers and Earth

In 1984, Dorothee Sölle wrote *To Work and to Love: A Theology of Creation* to
integrate her feminist and liberation theological visions for human relationships with her
growing awareness of the sacredness of Earth. Sölle’s planetary consciousness and justice
orientation emerged through the real threat of a nuclear holocaust¹¹⁹ and her unique
experience as a German adolescent living with the painful knowledge of the atrocities
committed by the Nazi’s and the enthrancement of many of her fellow German citizens with
elitist propaganda. As a result, Sölle committed herself to finding truth and living justly even
if this entails questioning the authority of political, economic, social or ecclesial institutions.
For Sölle, “[c]hoosing life in the face of death” means walking the path hewn by Jesus the
revolutionary and participating in creation through love, suffering, and work.¹²⁰ She
believed that humanity is “born into the process of liberation”¹²¹ and this is the root of our
belonging to Earth.¹²² Our shared co-creative vocation as members of the Earth community
means we must work to build just relations and recognize the truth of mutual dependence.

¹¹⁸ Ibid., 200.
¹¹⁹ In the first chapter of this text she admits that “...ten years ago I was not so conscious of the
sacredness of the earth. It is when we are confronted with the utter threat to that which we love that we
rediscover the wellsprings of our love and realize our interdependency anew.” Dorothee Sölle and Shirley
¹²⁰ Ibid., 2, 5.
¹²¹ Ibid., 29.
¹²² Ibid., 33.
She saw the violation of Earth reflected in the violence done to other marginalized groups by the practices sanctioned by distorted political and religious anthropocentric worldviews.\(^{123}\)

Sölle’s vital contribution to ecotheology was her testimony to an interdisciplinary approach and a keen listening to the voices of those at the margins, especially poor labourers. She was committed to those who are often overlooked or silenced. As she stood in solidarity and worked along side those thirsting for justice, their wisdom informed her theological constructs in *To Work and to Love*: a Squamish Chief who affirmed of the sacredness of all life on Earth;\(^{124}\) lesbian feminist theologian Isabel Carter Heyward who understood the yearning eros of God as the source of creation’s interrelatedness;\(^{125}\) Sakokwenonkwaw (Native American sub-chief of the Mohawk nation) who appreciated the spiritual essence of all matter\(^ {126}\) and the shared human disposition to frailty and death;\(^{127}\) Martin Buber who articulated “becoming,” not being, as a vital ontological category;\(^{128}\) Nicaraguan priest Ernesto Cardenal who asserted that Earth belongs to those who work as co-creators and not to those who pay for property;\(^{129}\) and St Francis whose affirmation of Sister Death reminded humanity of our co-suffering with all of creation.\(^{130}\) Thus Sölle grounds her theology in wisdom gained through her intimate knowledge of the suffering in human societies and the

\(^{123}\) Ibid., 20, 34.

\(^{124}\) Ibid., 17-18.


\(^{126}\) Sakokwenonkwaw, Native American sub-chief of the Mohawk nation in Ibid., 13.

\(^{127}\) Ibid., 19.

\(^{128}\) Ibid., 25.


\(^{130}\) She makes use of St Francis’s inclusion of Sister Bodily Death in his praises to illustrate this component of her creation theology. Ibid., 42-43; 50.
“prostitution of workers.” This she affirms is a reflection of a deeper alienation from, and exploitation of, Earth.

Jean Vanier: People with Disabilities and Earth

Jean Vanier’s vision of human relations focused on the wounded, beautiful, gifted, and ordinary human beings who struggle to love, to witness to love, and to be loved in return. This originally human perspective for understanding love and vulnerability has germinated into a foundational orientation for ecotheology; what Vanier articulated and how he lived is an exemplar for how to understand our planetary communion of subjects.

Living with men and women with intellectual disabilities has helped me to discover what it means to live in communion with someone. To be in communion means to be with someone and to discover that we actually belong together. Communion means accepting people just as they are, with all their limits and inner pain, but also with their gifts and their beauty and their capacity to grow: to see the beauty inside of all the pain.

As other midwives of ecotheology focus their theological attention on cultivating an awareness of God’s intimate presence in the beauty, joy, and revelation within other-than-human creation, Vanier proclaimed God’s intimate presence in the pain and woundedness of the human heart and offered L’Arche as a model of authentic human community. Hence L’Arche has become a beacon of hope in an unfinished, industrialized, often chaotic and lonely world. Vanier’s focus on the sacred gift lying hidden in human disability and vulnerability that laid the foundation for an ecotheological vision of God’s power in creation

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131 Ibid., 63.
133 Vanier, Community and Growth, 310.
and how mutually empowering, just, and loving relations can be manifest within the cosmic community of subjects.\textsuperscript{134}

In 1988 Jean Vanier gave a series of lectures at the Harvard Divinity School\textsuperscript{135} and radically proclaimed God’s intimate presence in the poverty and woundedness of the hearts of those often marginalized by their physical disability, mental illness, and drug abuse. He stated, “I think we can only truly experience the presence of God, meet Jesus, receive the good news, in and through our own poverty, because the kingdom of God belongs to the poor, the poor in spirit, the poor who are crying out for love.”\textsuperscript{136} This commitment to the belief in God’s presence in the cry for friendship and communion of those deemed unworthy by human society made the necessary theological space for understanding how those outside the human species who are deemed unworthy can be included as important subjects in our Earth community. His creative re-imaging of what community entails and the power relations in our human, planetary, and comic communities celebrates interdependence, attests to the value of the diversity of purposes and gifts, and re-affirms the necessity of sacrifice, limitation and vulnerability in just, loving relations.

A community is essentially a place where we learn to live at the pace of humanity and nature. We are part of the earth and we need the heat of the sun, the water of the sea and the air we breathe. We are part of nature and its laws are written in our flesh. That doesn’t mean that scientific discoveries aren’t useful too. But they have to be at the service of life, applied to create an environment in which human beings can truly grow – whether in town or country, middle class areas or slums. A community should not be primarily a grouping of shock-troops, commandos or heros, but a gathering of

\textsuperscript{134} Vanier was an advocate for the disabled in our human communities and this moulded the minds and hearts of his ecologically oriented successors to be better advocates of Earth’s many subjects.

\textsuperscript{135} Harold M. Wit Lecture Series on Living a Spiritual life in the Contemporary Age that was published as From Brokenness to Community in 1992.

\textsuperscript{136} Vanier, From Brokenness to Community, 20.
people who want to be a sign that it is possible for men to live together, love each other, celebrate and work for a better world and a fellowship of peace.\textsuperscript{137}

Vanier’s writings and L’Arche communities throughout the world continue to be a source – through words and works – for ecotheologians to deeply appreciate what communion means today and how God can be (and chooses to be) present in the joys and pains of creaturely life.\textsuperscript{138}

\textbf{Theology of Nature}

\textbf{John Polkinghorne and Arthur Peacocke: Theology of Nature}

Two British scientist-theologians who aided in the birth of ecotheology in the 1980s were John Polkinghorne and Arthur Peacocke. These men contributed to the shift towards planetary consciousness by fostering a deep knowledge of, and reverence for the Book of Creation and bringing science and theology into meaningful conversation in their methodology: critical realism.

In the late 1980s Polkinghorne recognized that scientists were playing an increasingly significant role in the interface of science and religion,\textsuperscript{139} and this revived theology of nature was a precursor of ecotheology.\textsuperscript{140} Polkinghorne rejected designating God to the “gaps” –

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\textsuperscript{137} Vanier, \textit{Community and Growth}, 196. It is important to note Vanier is not considered an ecotheologian here. What is being asserted is that his ideas and energies concerning building human communities cannot be ignored in this survey of midwives for they contributed to how ecotheology sees the planetary communion. To understand how those who embrace his vision of caring for human beings with disabilities appreciate more specifically the dimension of Earth communion and care, see: “A Human Future: A Thought Sheet for Canadians” Vol.4, no.3 (October 2005). Available at http://www.larche.ca/a_human_future/ahf_caring_for_planet_earth_elizabeth_may.pdf. Accessed January 18, 2015.

\textsuperscript{138} Vanier, \textit{From Brokenness to Community}, 27. Many L’Arche communities are eco-leaders in their communities. See: www.larche.ca for more details.

\textsuperscript{139} He wrote: “...we live at a time when a revival of natural theology is taking place. It originated largely from the physical scientists, both those of a believing persuasion and those who had no engagement with religious tradition.” John Polkinghorne, “The New Natural Theology,” \textit{Studies in World Christianity} 1, no. 1 (1995): 42.

\textsuperscript{140} He indicated that a theology of nature was different from the earlier natural theology in that first, it was more modest, and second it spoke to the deep intelligibility of the cosmos made possible by scientific
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namely appointing God only to the space in between scientific insights; instead, he saw this new theology of nature as asking different, more “meta” questions that pointed beyond, and yet included, science. A key contribution Polkinghorne made was his affirmation that science was only possible because the universe is a creative effort, not an inert entity. Scientists were able to comprehend the *logos* of God in the laws of nature because they were creatures made in the image of the Creator.\textsuperscript{141} He indicated that a theology of nature outlined more cohesively how the process of evolution, in itself, is not comprehensive enough to explain the immense fecundity and complexity in the universe. He claimed that the sheer abundance of creativity, including the degree of sophistication and complexity centred in the human, has occurred within very narrow physical parameters that are governed by precise ground rules or “finely tuned” natural laws.\textsuperscript{142} Thus he bequeathed to ecotheology the vision of mutual dependency and the integration of science and religion.

One of Arthur Peacocke’s major contributions to science was profiling the intricacies of the microcosmic DNA structure and his endowment to theology was helping to develop a way of understanding how science and religion relate.\textsuperscript{143} He wrote extensively about models of God in an evolutionary world and articulated the continuing creation motif in light of the new vision of an unfinished evolutionary world characterized by dynamism and interdependency. In *Intimations of Reality: Critical Realism in Science and Religion*

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\textsuperscript{141} Polkinghorne, “The New Natural Theology,” 45.
\textsuperscript{142} Ibid.
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Peacocke argued that scientific theories yield partial, revisable, abstract, but referential knowledge of the world and these theories are expressed linguistically via metaphorical vehicles and models. This, he asserted, is also true for theology. Thus, via critical realism, he was able to offer a format for allowing meaningful theological and scientific discourses. Peacocke also has innovative ways for describing the creative potentiality of the world as well as God’s creative action in, through and under the creative processes of the world. He offered examples of artistic creativity (e.g., choreographer, artist) as a starting point for analogies describing God’s activity in the world, and he saw the role of chance in an unprecedented way that has inspired many contemporary ecotheologians. He also envisioned the fullest realization of human potentiality in the life, death and resurrection of Christ, and led the way for modern understandings of God’s relations with human and other-than-human organisms. Another key contribution he made that other midwives did not was his use of an evolutionary paradigm to frame his theology of

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145 These metaphors give humanity access to the symbolic world and participation within the discourse but it should be noted that metaphors are ambiguous and can be both empowering and dysfunctional.

146 Ibid. In a later article he wrote that “[c]ritical realism in theology would maintain that theological concepts and models should be regarded as partial and inadequate, but necessary and, indeed, the only ways of referring to the reality that is named ‘God’ and to God's relation with humanity.” See: Arthur Peacocke, “Science and God the Creator,” *Zygon* 28, no. 4 (December 1993): 472.


148 Arthur Peacocke offered a vision of “theistic evolution” where God acts through law and chance. Thus, God created the universe *ex nihilo* in such a way that it would be compatible with Gods ongoing creative activity. See: Peacocke, *Creation and the World of Science*, 86-111. Ian Barbour describes Peacocke’s vision of chance as “God’s radar beam sweeping through the diverse potentialities that are invisibly present in each configuration in the world.” See: Ian G. Barbour, *Religion in an Age of Science*, 1st edition, The Gifford Lectures (San Francisco, CA: HarperSanFrancisco, 1990), 114. Some modern ecotheologians who have developed his ideas are Elizabeth Johnson and Gloria Schaab.

divine suffering. This plays an important role in the last chapter of this thesis to describe how God suffers in, with and under the creative processes of the universe.

**Spirituality and Praxis**

Matthew Fox: Creation Spirituality at the Heart of the Universe

In 1979 Matthew Fox wrote *A Spirituality Named Compassion and the Healing of the Global Village, Humpty Dumpty, and Us*, a title that reflects his eclectic approach to creation theology and spirituality. This was the third in a trilogy of texts exploring spirituality and this last text explored “the wisdom of compassion as learned from religious traditions and from nature and the scientific study of nature.” After delineating the obstacles within human culture that keep compassion “in exile,” he proposed a new understanding of the relationship among humans, nature, and God by re-imagining the symbol of the universe as a “cosmic, human and divine egg” – not unlike that in the nursery rhyme Humpty Dumpty. Through his many texts, he bequeathed ecotheology an understanding of how the world can heal if humanity can rekindle an authentic sense of compassion as both a way of life and

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151 His first was *On Becoming a Musical, Mystical Bear: Spirituality American Style* (1976) which concentrated on prayer (mystical and prophetic) and how it intertwines with the personal, psychological and social (v-vi). His second of the trilogy was called *Whee! We, Wee All the Way Home: A Guide to the New Sensual Spirituality* (1976) which attempted to recover “non-elitist understanding of spiritual experience, both from the practical and theoretical viewpoints.” Fox, *A Spirituality Named Compassion*, vi.

152 Ibid., iv.

153 Ibid.

a way to celebrate the cosmic interconnectedness of matter and spirit. This, he argued is the path to a fruitful embodied spiritual life.\textsuperscript{155}

As his work developed in the 1980s, Fox indicated that the human community lacks a living cosmology,\textsuperscript{156} and to remedy this, he artistically wove together a tapestry of medieval mystical spirituality,\textsuperscript{157} post Darwinian cosmology, and scientific descriptions of nature into his creation theology. This creative synthesis enables him to see the Eucharistic Banquet as a form of cosmic hospitality that becomes a pivotal component of ecological sacramental theology that feeds his vision of embodied spirituality.\textsuperscript{158} Fox’s creation spirituality, alongside the praxis of many religious groups,\textsuperscript{159} energized ecotheology’s quickening, and sustained its proliferation and innovation into the twenty-first century.

\textbf{Conclusion: Chapter Three}

This thesis maintains that the sacred universe story, cosmogenesis, is appreciated and articulated via a robust Earth literacy as outlined in this chapter and the previous, and this

\begin{footnotes}
\textsuperscript{155} Fox, \textit{A Spirituality Named Compassion}, 35.

\textsuperscript{156} The sixth chapter of \textit{A Spirituality Named Compassion} begins with an overview of the growth in alienation from the world and these were all manifestations of a non-functional cosmology that alienated us from our Earth home. Ibid., 177-178.

\textsuperscript{157} Some mystics he explores are: Meister Eckhart, St. John of the Cross, Hildegarde, Julian of Norwich, and St Thomas Aquinas.


\textsuperscript{159} Some examples of ecospirituality and praxis by religious congregations include Miriam Therese MacGillis and the Dominican Sisters of Caldwell, New Jersey, who founded the 140 acre Genesis Farm in 1980. Two Canadian religious congregations who integrate ecospirituality and praxis include the Loretto Sisters and the Sisters of St. Joseph of Toronto. Finally, James Profit, S.J. and Louisa Blair developed the Jesuit Farm Project in 1985 (to focus on agricultural issues) and in 2003, this evolved into the Ecology Project to address the relationship between Christian faith, Ignatian Spirituality, and ecological spirituality. See also: Colleen Carpenter, “These Strawberries are Divine: Catholic Sisters as Midwives of a Practical Spirituality of Living on Earth” in \textit{Review for Religious: A Journal of Catholic Spirituality} 65 no. 3 (July 2006): 304-318; and Sarah McFarland Taylor’s \textit{Green Sisters: A Spiritual Ecology} (Cambridge, MA: Harvard University Press, 2007).
\end{footnotes}
new literacy enables the formation of the biospiritual theological imaginations capable of constructing an ETA, the content of the next chapter. It will be argued that contemporary Christians who develop a profound scientific and theological Earth literacy – thanks largely to the nativity of ecotheology in the 1980s – will understand the relations among God, humanity, and other-than-human creation in innovative ways, and this new perspective will challenge the adequacy of some classical language, imagery and precepts within theological interpretations of human suffering and stimulate new ways to imagine and engage with the mystery of human suffering.

This third chapter is a vital step in this process of re-imagining human suffering in an evolutionary world because it describes the emergence of Earth literacy in theological reflection which resulted in the birth of ecotheology. This nativity demonstrated a deepening of the meaningful conversations occurring between science and religion and was not the result of the efforts made by any one theologian. Hence, it required many contributions and a variety of sources that included: the naming and fleshing out of cosmogenesis, a new functional cosmology, by Thomas Berry; the systematic theological and philosophical framework of John Haught, Jürgen Moltmann, Gordon Kaufman and Sallie McFague; the ontology of communion envisioned by Douglas John Hall and Raimon Panikkar; the justice perspective of Rosemary Radford Ruether, Sean McDonagh, Dorothee Sölle, and Jean Vanier; the theology of nature of Arthur Peacock and John Polkinghorne; and the spirituality and praxis of Matthew Fox. Each contributor played a vital role by offering the methodology, vision, foundation, content, and dynamism for the emergence of ecotheology in the 1980s. In the following chapter, the ecocentric language, principles, spirituality, and praxis offered by these midwives, and the many ecotheologians who followed, enables the construction of a
distinctly ETA. This new framework will offer the tools to broaden and deepen theological conversations concerning human suffering and hopefully stimulate new and faithful interactions with the suffering (inherent and inflicted) present in our planetary communion.
Chapter Four: Construction of an Ecological Theological Anthropology

In order to capture people’s imagination, the story will need to be told not just in the abstract form of scientific language, but it will have to be sung, set to music and painted in such a way that its beauty and grandeur can lure us away from the life-destroying story that now grips us.

Sean McDonagh¹

Thomas Berry, among others, writes about the three mediations – i.e., the significant relationships between the human and the Divine, between humans, and between the human and the rest of creation. He argues that while humanity has given due attention to the mediations between humans and the Divine, and among ourselves, we have neglected the third mediation (the relations between humanity and the rest of creation).² Chapter One reviewed how theological conversations concerning suffering have mainly focused either on humanity’s relations with God or inter-human interactions, allowing our theological appreciation of the relationship between humanity and the rest of creation to atrophy. Chapters Two and Three considered how scientists and theologians have discovered, via new language, images and metaphors, how humanity is neither the centre of the universe nor the sole possessor of intrinsic worth. We have also discovered our dependence on the diverse expressions of Earth’s dynamic creativity for our survival and flourishing, and that, at every level of the universe and at every moment of time, the Divine is present, both celebrating the great works of creation and labouring to bring forth a new creation. Today’s planetary crises require a new way of envisioning and understanding human relations with Earth. What the midwives of the previous chapter have shown is that when Earth and Earth’s most vulnerable subjects are the context for theological labour, then humanity can begin to understanding

¹ McDonagh, To Care for the Earth, 96.
² Berry, Dream of the Earth, 88.
God, ourselves, and the cosmos in new ways. Thus, by addressing the one atrophied relationship, namely human-Earth relations, all three vital mediations or relationships will be revitalized. The content of this chapter will be the construction of a distinctly ecological theological anthropology (ETA) that aid in this tri-fold revitalization. It will be asserted that anything other than an integrative, tri-fold approach that appreciates all three mediations or modalities of relationship will be insufficient. The constructive efforts of this chapter will reveal three established pillars as the foundation of modern ETAs\(^3\) – Eschatological Hope, Intrinsic Worth of Creation, Numinous-Cosmic Communion – and will also propose a fourth pillar that directly affects how we describe and interpret human suffering, viz., the kenotic-kinetic.\(^4\) Each pillar is vital and collectively, they offer a firm foundation upon which to build modern theological constructs, including models for understanding suffering in a globalized, evolutionary world.

Since the birth of ecotheology, many scholars from varying disciplines have revealed how dysfunctional cosmologies have contributed to an over-emphasis on divine-human and human-human relations in theological anthropologies. This neglect of human-creation relations has contributed to our ecological crisis and our alienation from Earth.\(^5\) It will be

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\(^3\) From my research into the work of various ecotheologians, including but not limited to the midwives offered in Chapter three, these three common tenets emerged in the work of all these authors although in different ways. It is beyond the scope of this thesis to delineate the many ways ecotheologians promote these three tenets.

\(^4\) These two adjectives are coupled to represent the dynamic self-sacrificial-self-affirming readiness that animates cosmogenesis. Cosmogenesis is characterized by movements of destruction and creation; of the fiery destruction of the first generation stars and the creation of the new elements that emerged from that alchemical furnace; of the rabbit being consumed by the mother fox and the kits that are fed by her; of the self-emptying of one entity (kenosis) into the new emergence of another (kinetic). This dynamic interplay between the kenotic and kinetic dynamics of cosmogenesis I summarize by the term kenotic-kinetic.

shown that the new appreciation of the third mediation offered via Earth literacy, as outlined in Chapters Two and Three, supplies the linguistic tools, metaphors, images, ideas, and methodology to construct an ETA. However, prior to assembling this ETA, the following questions must be asked and answered: How are present attempts at forming more “relational” theological anthropologies (i.e., the underappreciation of ecos) still insufficient? How is an ecological theological anthropology distinct from an ecological anthropology (i.e., the elimination of theos)?

**ETA Rather than Relational Theological Anthropologies**

The previous two chapters presented how cosmogenesis broadens and deepens our understanding of relationality in unprecedented ways, and thus all three mediations can and must be appreciated and incorporated into theological anthropologies today; if not, then these anthropologies will be incomplete. This tri-fold approach will allow humanity to re-image the relations among God, other-than-human creation, and humanity in innovative, teleological and prophetic ways. What will be offered here are two snapshots of late twentieth century theological anthropologies offered by Karl Barth (1886-1968) and Pope of mastery propagated by advances in science and technology as a cause of our ecological predicament. See: M. Darrol Bryant, “The Modern Myth of Mastery and the Christian Doctrine of Creation: A Journey in Ecology and Creation Theology,” Dialogue & Alliance 9, no. 2 (Fall-Winter 1995): 56-68. Systematic theologian Ernst Conradie (An Ecological Christian Anthropology: At Home on Earth?) presents the lack of distinction between Creator and creation and an under-emphasis of God’s transcendence as factors contributing to humanity’s disregard for creation. Constructive theologian Gordon Kaufman declares that the unintelligibility of anthropocentric descriptions of God in Christian religious traditions is a vital problem. See: Kaufman, “Re-Conceiving God and Humanity in Light of Today’s Evolutionary-Ecological Consciousness,” 335-348. Scripture scholar Douglas John Hall (Imaging God, 1986) asserts that a distorted understanding of the imago Dei has resulted in a sundry of threats to the biosphere. Ecumenical social ethicist Linda Hogan connects our present dysfunctional and unjust social relations with the diminishment of the role of the arts in the formation of ethical imaginations (June 7, 2013 CTSA Plenary Session entitled “Conversion and the Work of the Ethical Imagination: A Perspective from Social Ethics”). Ecofeminist theologians Rosemary Radford Ruether (Gaia & God, 1992), Elizabeth Johnson (Women, Earth, and Creator Spirit, 1993, Ivone Gebara (Longing for Running Water: Ecofeminism and Liberation (Minneapolis, MN: Fortress Press, 1999), and Heather Eaton (Introducing Ecofeminist Theologies, 2005) expose patriarchy as a key distorting influence on Christianity’s understanding of God, women and creation, and this has resulted in abusive political and social structures that are killing Earth and those associated with Earth.
John Paul II (1920-2005). These are offered as exemplars of how even intentionally relational theological anthropologies (i.e., underappreciation of ecos) are valuable but not sufficiently complete if they do not appreciate humanity’s emergence from, and communion within, creation.

Karl Barth, an influential twentieth century Protestant theologian, offered his anthropological vision in *Church Dogmatics*. His anthropological perspectives reflect both his appreciation of humanity as “being-in-encounter” (e.g., I-Thou relations as espoused by Martin Buber) and his overarching understanding of creation as an external stage for the drama of human salvation characteristic of an anthropocentric cosmology. Barth, called by Hans Urs von Balthasar as “radically christocentric,” grounds the goodness of creation in Jesus Christ, emphasizing God’s presence with, and for, creation in Christ rather than in other-than-human creation. As a result, other-than-human creation only possesses instrumental worth as the means for enabling God’s covenant with humanity via Christ: “Creation is the external—and only the external—basis of the covenant. It can be said that it makes it technically possible; that it prepares and establishes the sphere in which the institution and history of the covenant take place....” Thus, Barth’s theology emphasized intra-triune, human-human, and God-human relations to the detriment of human-creation relations. This allowed him to articulate how humanity’s salvation is only connected to


9 Karl Barth, *Church Dogmatics*, III.1 (Edinburgh, UK: T & T Clarke, 1986), 97.
creation in an external, superficial, technical way. This thesis asserts that other-worldly understandings of salvation that does not include other-than-human creation (such as what is offered by Barth) has affected how Earth is understood (e.g., creation as an object or stage) and how caring for Earth is enacted (e.g., commodification of Earth for human consumption).

Pope John Paul II also employs a relational theological anthropology that appreciates the goodness of Earth but this relational framework is still too rooted within an anthropocentric cosmology. In his papal message promulgated on January 1st, 1990 in celebration of the World Day for Peace, Pope John Paul II acknowledged the moral dimension of the ecological crisis; however, he offered a human-centred solution for this dilemma. He writes that “respect for life, and above all for the dignity of the human person, is the ultimate guiding norm for any sound economic, industrial or scientific progress.”

This emphasis of the intrinsic worth of human life without situating this particular valuing within the broader context of the intrinsic worth of all of creation, the matrix out of which human life emerged, detracts from Pope John Paul II’s relational anthropology. In

_Evangelium Vitae_ (1995), written as an authoritative response to the “gravity of threats to the life of individuals and peoples, especially where life is weak and defenceless,” the transcendent, supernatural character of human existence (divine-human interaction) is promoted and the biological or cosmic character of human existence (human-creation interaction) is shown in a more negative light. However, as argued in Chapter Two, without an appreciation of how humanity is a participant in a larger, sacred planetary communion of

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10 Pope John Paul II, “Peace with God the Creator, Peace with All of Creation.” Section II, 7.4.


12 Ibid., 7.8.
subjectivity as offered by cosmogenesis, our understanding and articulation of humanity’s value or intrinsic worth will be incomplete and insufficient. Human worth and purpose as articulated by theological anthropologies must emerge from a larger cosmological horizon that appreciates the unique purpose, giftedness, and inherent worth of other-than-human creation.

Thus, without all three relations or mediations – divine-human, inter-human, and human-creation – theological anthropologies will be incomplete. Cosmogenesis has revealed how “our human genome is but one haunting, dominant chord in one melody of the symphony of life” and that “we are utterly attuned” to the totality of this great symphony that is creation because we have “been born into it.” Humanity’s formation from the inspired stardust of the cosmos beckons theological imaginations to expand beyond merely the recognition of Divine-human and inter-human relations towards an ETA that affirms planetary connectivity, creativity, interdependency, subjectivity and alterity. This is the wisdom resonating in the ancient, ever unfolding, sacred story of cosmogenesis. Anything less than cultivating a holistic vision of the intrinsic-instrumental worth of all created life within theological anthropologies will prevent a full appreciation of human dignity, worth, creativity and purpose that comes from grounding theological anthropology within the sacred universe story.

**ETA Rather than an Ecological Anthropology**

Two contemporary ecotheologians, Rosemary Radford Ruether\(^{14}\) and Thomas Berry,\(^{15}\) condemn anthropocentrism as a facet of patriarchal religious coding, and name this

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\(^{13}\) Feehan, 54-56.

\(^{14}\) Ruether argues that the male ruling class has been sacralized as God’s exclusive representatives and rulers over the Earth, and through an exploration of four other social, political, religious, and cultural patterns,
as one of the leading causes of human and other-than-human suffering. As a result, some could argue that there is no place for theos (God) within ecocentric endeavours. An ETA argues otherwise; the elimination of theos will severely truncate the ability of cosmogenesis to resonate authentically within the trifold human-Earth-Divine relations and will restrict humanity’s ability to concretely address the complexity of issues that are contributing to the degradation of Earth’s life systems and the augmentation of human suffering.16

If one holds that religious understandings of God are too enmeshed within patriarchal constructions to be useful, then one could argue that an ecological anthropology, one bereft of theos, would be a sufficient. Secular movements, such as forms of materialism, atheism, and humanism, argue for the extraction of God from discussions concerning the relations of ecology and humanity. Some advocates of this separation portray nature as a collection of individual objects, devoid of a spiritual dimension and the purely material substrate that humans ultimately control by human rationality and technology. Others see the emergence of humanity as a freak accident of biochemistry, the existence of a supernatural Creator as fiction or crutch, the existence of society a delusion, and the ecological crisis as having a

15 Thomas Berry in *Dream of the Earth* indicates that Christian beliefs in their totality involve a radical orientation away from the natural world. Berry, *Dream of the Earth*, 80. He also names religion (spirituality) as one of the four destructive patriarchal establishments controlling humanity and Western history, the others being: government (politics), corporations (economic), and the university (intellectual). Ibid., 146; Berry, *The Great Work*, 4. He argues further that all four patriarchal institutions are trapped within the entrenchment of the Industrial Age and are committed to radical discontinuity between human and non-human life forms, as well as ruling class male and female (or non-ruling class male) modes of being. See: Berry, *Dream of the Earth*, 83; 149-151.

16 Since this thesis asserts that humanity emerged from Earth and God desires to live in a personal relationship with all God created, then no argument will be made here to prove the necessity of Divine-human relations in an ETA. Some could argue convincingly that resituating humanity within cosmogenesis negates the need to delineate our specific relationship with God (i.e., the elimination of anthropos), however since this is a thesis concerning theological engagement with human suffering, anthropos will remain within the relational framework outlined in this chapter.
purely technological fix. An ETA argues otherwise; ecological degradation and exploitation is a crisis of imagination, consciousness, and values, which in part are derived from the vision of *theos* offered by religion. In Chapter Three it was argued that when sojourners are equipped with the wisdom generated from a robust Earth literacy of the sacred cosmic narrative of cosmogenesis, different analogies to describe *theos* can be cultivated such as hidden or serendipitous creativity, God of cosmogenesis, and Creator who makes space in Godself for creation. From this new description of God, vibrant understandings of *ecos* as a communion of subjects not a collection of atomized objects can be envisioned, and *anthropos* can be re-imagined as both ordinary citizens and uniquely empowered beings in which the universe has awakened to itself. Thus, despite human deficiencies in the articulation of what *theos* entails and the practical living out of this understanding of the Sacred in religious traditions, a theological dimension must not be eliminated. The elimination of one symbolic path (*theos*) in order to emphasize another (*ecos* or *anthropos*) distorts the worldview this truncated anthropology creates (i.e., theological anthropology or ecological anthropology). It also eliminates the vital modality of internal critiquing, and silences many valuable sources, images, and narratives needed to transform human imaginations, consciousness, and values. Ecotheologian Denis Edwards explains quite frankly that “there is a profound link between an adequate theology and an ecological

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18 Stephen Scharper affirms this duality of the human role in creation for we can never “shed our human skin” so the *anthropos* has to remain. However, he names his new integrative vision “anthropo-harmonic” ethic. Scharper, 182.

19 In both models humanity becomes either the penultimate (theological anthropology) or ultimate (ecological anthropology) authority concerning what is valuable or meaningful.
stance,” and thus, within the new horizon of meaning offered by cosmogenesis, *anthropos* is supported and guided by *ecos* which together form a communion of subjectivity that emerged from, and is nourished by, the divine Source of all life, *theos*. Consequently, only an ETA with a trifold orientation will allow God’s self-revelation to be read from both the Book of Creation and the Book of Scripture, and will be the best framework for engaging with suffering in the twenty-first century evolutionary world.

Constructing an ETA is contrary to the urge to find ‘the’ singular, simple, universal, absolute answer; an ETA merely provides a framework that theologians can use to flesh out their many encounters with God and all of creation in the twenty-first century. This synthetic and interdisciplinary approach resists the urge to assimilate dynamism and diversity into a static vision of divine-human relations that are merely acted out in creation. It will also be

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21 This thesis recognizes that a major fear people have with the adoption of an ETA (i.e., Earth as the context for theology) is an overemphasis of humanity’s connection to Earth and God’s immanence. It is feared that this will lead to the diminishment in humanity’s understanding of transcendence (which leads to human arrogance and disobedience), a loss of wonder and awe of God and God’s creation (which sanctions deification of human *techne*), and the embrace of pantheism and associated heresies. However, at its core, ETA embraces the ambiguity of created life, the divine paradox of transcendence and immanence, the mystery of suffering, and a unity in diversity present at all levels of the trifold series of relations among the human, creation, and God. To elevate one dimension, such as divine immanence to the detriment of God’s transcendence fractures this respect of ambiguity and undermines foundational pillars of ETA, as outlined in the following section. It is from an ETA, born from a well-formed Earth literacy and employed critically, creatively, and prophetically, that a profound cosmotheandric conversion can occur and inspire more authentic, just, and healthy human relations with God and creation.

22 Rosemary Radford Ruether identifies this human impulse as imperial colonization which eliminates all others for the propagation of one dominant religion, one dominant culture, economy, race or gender. See: Ruether, “The Politics of God in the Christian Tradition,” 337.

23 Cosmogenesis offers many tangible models to mould theological imaginations and affect theological constructs. For example, the cosmos emerged from the creative interplay between forces of repulsion (that generated sufficient openness to allow expansion) and attraction (that held the particulate and planetary bodies together). This description of the nativity of the universe can serve as a model for constructing an ETA; our appreciation of the relations among God, humanity, and other-than-human creation must be sufficiently open and fluid to allow creative interchanges and growth and yet fixed adequately enough to enable stability and intelligibility for fruitful dialogue and concrete praxis to emerge.
argued in Chapter Five that the employment of an ETA could allow for a more coherent and compassionate understanding of the mystery of human suffering.

Construction of an ETA

Our current destructive ethical practices are destabilizing Earth’s life systems and this is not occurring in isolation from the many experiences of human suffering manifest as immense poverty, deprivation, affliction, and economic exploitation within our human ecologies. Planetary and cultural degradation and suffering are a living testimony to the connectivity of these moral realities.\(^\text{24}\) To engage that which thwarts human well-being without addressing that which is affecting Earth’s well-being will not sufficiently confront the root cause of either forms of suffering. The intertwining nature of these moral realities demands that Christianity describe “the contours of a specifically Christian anthropology” via “an ecological hermeneutic of retrieval and suspicion.”\(^\text{25}\) This is the goal of this chapter, namely to offer an Earth-centred, relational framework – an ETA – that will more coherently connect the flourishing or degradation of human and Earth’s ecologies. In this thesis, it will be shown that an ETA requires four pillars: eschatological hope; the intrinsic worth of creation manifest in interconnectivity, interdependency, and diversity; a creative synthesis of the numinous and cosmic; and, kenosis as the kinetic of cosmogenesis. Each pillar of an ETA has been taken from contemporary ecotheological constructions but is also found in the work of their Christian predecessors, such as St. Irenaeus, the Desert Mothers, Maximus the Confessor, Hildegard of Bingen, St. Francis of Assisi, St Clare and Pierre Teilhard de


\(^{25}\) Conradie, 22.
Chardin. These ancient insights and ideas will be presented to properly root the constructive efforts of modern ecotheologians who have contributed to the development of an ETA.  

Four Pillars of an Ecological Theological Anthropology

**First Pillar: Eschatological Hope**

The first pillar of an ETA is eschatological hope understood as an Earth-centred promise – both in the present and at the end times – of abundant life, healing, ecosocial justice and love. Eschatology engages the tension between the world that is (i.e., the “already”) and what human imaginations can envision that it ought to be (i.e., the “not yet”). This pillar asserts that we participate in the realization of our future with God and that this ultimate communion with God who is perfect love, justice, wholeness, and peace also breaks through into the here and now for us to glimpse, experience, and participate in, although partially. This first structural pillar will be a synthesis of three genres of eschatological discourse – i.e., the teleological, apocalyptic and prophetic – and it is this attention to multiformity that will inspire hope, consolation, and trust in God even in the midst of our current crises, cultural ennui, and moral paralysis. Cosmogenesis offers a new horizon of meaning for both eschatology and hope by appreciating both the vertical (i.e., the process of divinization) and the horizontal (i.e., temporal and historical consciousness) dimensions of created life in new ways. This innovative way of understanding our encounter with our

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26 It is noted however, that despite standing on the shoulders of these theological giants, any modern ETA must appreciate the limits of this endeavour; any human description of the deep, abiding, ultimate mystery that is God and God’s relation with creation will be real but partial.

27 This trifold approach is inspired from the description of Teilhard de Chardin’s three-fold dimensions or modalities for eschatological discourse offered by Robert Faricy in *The Spirituality of Teilhard De Chardin* (Minneapolis, MN: Winston Press, 1981), 50.

28 Faricy indicates that a purely vertical metaphysical engagement has given way to a more horizontal, historical perspective and this offers an organic grid or framework for understanding past, present and ultimate future. Ibid., 35.
evolutionary world enables a re-imagining of theological language, images, and metaphors. It also spurs a deeper engagement with human suffering today by confronting distorted human understandings of existence that exclude cosmogenic suffering, frustrations, limitation and violence, and inspire indifference or even vengeance towards creation and planetary suffering.\(^\text{29}\)

The first step to facilitate the construction of this pillar is an exploration of the formative ideas and constructs offered by theologians working prior to the birth of ecotheology in the 1980s including those working at the dawning of our modern evolutionary consciousness. Three influential theologians and their contributions will be investigated: St Irenaeus’ optimism in creation; St Maximus the Confessor’s attention to diversity and his vision of humanity’s immersion into the ocean of God within the cosmic liturgy of creation; and Teilhard’s Christological vision of God’s luring of creation upward and forward. The legacy of these contributors has allowed modern ecotheologians – i.e., theologians who have cultivated a level of Earth literacy surpassing that of their predecessors – to lay a firm foundation for this first pillar of an ETA.

\(^{29}\) For example, in her essay “No More Sea: The Lost Chaos of the Eschaton,” ecotheologian Catherine Keller prophetically articulates how theological metaphors within eschatology are practical, living embodiments of an ecological struggle. In Genesis the tehom is defined as the great material and metaphorical primordial, oceanic Abyss or Deep where Rūah hovers (Genesis 1:2) and can be described as “the indeterminate, the transitional, the wild.” See: Catherine Keller, “No More Sea: The Lost Chaos of the Eschaton,” in Christianity and Ecology: Seeking the Well-Being of Earth and Humans, eds. Dieter T. Hessel and Rosemary Radford Ruether (Cambridge, MA: Harvard University Press, 2000), 196. In classic Christian eschatology the tehom is often described as an evil wasteland or chaotic abyss of salt waters and thus, it must be controlled and ultimately vanquished at consummation. Catherine Keller calls this demonizing of the primordial deep “tehomophobia” and this distorted description of both the beginning of creation and end times (the eschaton) distorts humanity’s activities: “If the seas had been primordially identified as a churning waste, a watery wilderness, we have correspondingly treated them as the ultimate sewer.” Ibid., 185. This thesis will also show that this distorted understanding of creation has affected human interpretations of suffering.
Contributions Made Prior to the Birth of Ecotheology

St. Irenaeus (130-202 AD) rooted his eschatological visions in his radical optimism of creation manifest by his refusal to affirm the eradication of creation at consummation. This theologian worked to challenge the Gnostics’ description of a passive, alien, transcendent God, and the subsequent denigration of the material world. Thus, Irenaeus described creation as a dynamic, continually maturing, universal creation history encompassing God’s first creative act until the end of days. He asserts that “[n]either the substance nor the essence of the creation will be annihilated...” at end times, and this optimism is centred in his belief in the unity of all created things and the immanence of God in creation: “For even creation reveals Him who formed it, and the very work made suggests Him who made it, and the world manifests Him who ordered it.” Every moment, including the present moment, is connected with the beginning and end for “the material-vital-spiritual-goodness” of the end time flows back and qualifies the present. This is not a circle that emphasizes the backward momentum to the beginning and the eradication of material life at the consummation but rather an ever-spiralling, forward momentum towards the End that never loses its vital interconnectedness with the beginning. The Incarnation, as part of this dynamic movement towards full communion with God, overcomes the incompleteness and distortion of creation and inaugurates the final days of salvation.

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30 However, Irenaeus was not eager to explore “speculation,” namely, the essence God’s eternity before God’s first creative act, which he saw was preoccupying and fuelling the Gnostic movement. See: Santmire, The Travail of Nature, 36.


32 Ibid., 2.9.1.


34 “The Word, being made man, summing up all things in Himself, so that as in the super-celestial, spiritual and invisible things the Word of God is supreme, so also in things visible and corporeal He might
realized present moment is always being nourished, critiqued, and renewed by both the fullness of God’s self that is only realized at the eschaton and the vitality of God at the moment of creation’s birth.  

This cosmic, eschatological optimism is expanded upon by St Maximus the Confessor (580-662 AD), as described by Hans Urs von Balthasar, in *The Cosmic Liturgy*. Balthasar offers Maximus the Confessor as a guide for contemporary spiritual world-travellers, especially for those who share his optimism for the created world’s participation in the bridging of the great chasm between God and the world. The essential question for Maximus was how finite, created beings could be in an intimate relationship with an infinite, non-created Being both now and at end times. Maximus’s answer to this question lies in his understanding of the Cosmic Christ, the beating heart of the cosmic liturgy; his Christocentric vision of creation’s worth precludes a pessimistic destruction of the fallen created world at the eschaton. The genius of this “metaphysician” is in the clarity with which he describes how a relationship with the Divine is possible and in his struggle to affirm the intrinsic worth of creation in the unconfused Christ of Chalcedon. It is precisely his methodological commitment to polarity that allows him to highlight an often under-
appreciated cosmic facet of the Incarnation’s saving work, namely the sustaining and preservation of creation in all its diversity.\textsuperscript{41} It is Maximus’ synthetic Christology, one that embraces and respects the polarity manifest in both of Christ’ two natures and the unified multiplicity at the core of the universe that will aid a cosmotheandric rather than anthropocentric understanding of eschatological hope. His attention to both the particularity of the individual and the unity of the cosmic whole allows him to recognize that an individual being cannot realize his or her fullest particular selfhood in isolation from the whole cosmic community of which he or she is a member. It is only in and through the sacrificial dialectic of receptivity to an ‘other,’\textsuperscript{42} animated by the self-emptying / self-affirming love of God made visible through Christ, that a person’s true, natural self is revealed and participates in the divine Source of all life – both now and at the end time. Maximus’s eschatology led him to imagine God’s transcendence (“not of this world”) in a way that does not mean it is “not of nature.”\textsuperscript{43} Maximus is clear that when one becomes immersed within and receptive to the unifying, Christological heart of the universe itself,\textsuperscript{44} there, and only there, can one find one’s true, unique, personal and natural self and telos.\textsuperscript{45}

\textsuperscript{41} Balthasar revels in how Maximus never had enough praise for all the different syntheses in the created universe that are realized through Christ. It is Christ who “unites man and woman,...unites the earth by abolishing the division between the earthly paradise and the rest of the inhabited globe,...unites earth and heaven, ...unites sensible and intelligible things,...and ultimately – in an ineffable way – unites created and uncreated nature.” See: Maximus, \textit{Orationis Dominicae expositio} (Exposition of the Lord’s Prayer) in J.P. Migne, \textit{Patrologia Graeca} (PG) 90, 877 AB. http://graeca.patristica.net (March 2014). Accessed Feb 9, 2012. English translation offered by Balthasar, 273.

\textsuperscript{42} It is important to note that Balthasar’s interpretation of reciprocity and receptivity is infused with androcentrism and some feminists, such as Michelle Gonzalez, have critiqued this distortion. Michelle A. Gonzalez, “Hans Urs von Balthasar and Contemporary Feminist Theology,” \textit{Theological Studies} 65, no. 3 (2004): 566-595.

\textsuperscript{43} This idea of asceticism from Maximus is echoed by contemporary theologian Larry Rasmussen. Larry Rasmussen, “Drilling in the Cathedral,” \textit{Dialog} 42, no. 3 (2003): 220.

\textsuperscript{44} This Christological heart of the universe is described by Maximus as the inner, eternal origin and goal that orients and orders the world, making it intelligible.
Maximus respects both the horizontal (phenomenal) and vertical (noumenal) dimensions of reality and this, claims Maximus, is why humanity can discover the “seeds of truth planted by the Creator” in the cosmos. However what is missing in Maximus’ work is the appropriate language and imagery to capture the evolutionary dynamism of the world. This was the gift given by Pierre Teilhard de Chardin.

Pierre Teilhard de Chardin (1881-1955 AD) was a pioneering theological figure who helped to lay the linguistic and theological foundations for a contemporary, ecocentric eschatology that appreciates our 13.8 billion year history. Teilhard de Chardin, as both a scientist and priest, proclaimed that “[t]he joy and strength of my life will have lain in the realization that when the two ingredients, God and the world, were brought together they set up an endless mutual reaction, producing a sudden blaze of such intense brilliance that all the depths of the world were lit up for me.” His optimism towards created life, his enthusiasm for understanding the physicality of matter, and his hope for the future converged via his primary metaphor that grounded his work and spirituality, viz., the sacred heart of Jesus beating at the core of an evolving, unfinished universe. His devotion to Christ’s sacred

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46 Maximus affirms the transcendent God in every principle of created order but still radically other, “... inaccessible to all of creation.” Ambigua, PG 91, 1288B. Balthasar indicates that Maximus keeps separate but in “perfect balance” the noumenal and phenomenological realms. See: Balthasar, 172. Thus Maximus, he claims, affirms a holistic vision: “The material, that is, intellectual dwells in the material in the mode of images; but the result of both is a single world.” Mystagogia (chap.2), PG 91, 669BC. English translation offered by Balthasar, 173.

47 Quaestiones ad Thalassium 51, PG 90, 477A.

48 Teilhard de Chardin, Le Milieu Divin, xl.

49 It is in his devotion to the Sacred Heart that Teilhard de Chardin united his faith and his love of the world, long before his formal theological articulation (i.e., “Universal-Christ”). See: Teilhard de Chardin, The
heart allowed him to imagine the fire of love as an apt descriptor for God’s action in the world, and to formulate a Christic Omega Point as the future point of convergence of all human progress and evolutionary history. Thus, the sacred heart of the Risen Christ, the divine originator and inspiration of cosmogenesis, was the Love (personal essence and energy) that was within the cosmos moving it onwards towards complexification and luring all things forward to union with God. Teilhard moved eschatological discourse from the classic, static, entirely otherworldly vision of redemption and consummation towards an understanding of God as being active in the present within the process of cosmogenesis and yet, eternally up ahead drawing all of creation forward towards divinization. For Teilhard, God was never statically trapped in the material bondage of created life but was the pinnacle to which the world was being carried both in the present moment and at the end of time:

“The rising Sun was being born in the heart of the world. God was shining forth from the summit of that world of matter whose waves were carrying up to him the world of spirit.”

Thus, God cannot be merely a fixed end point but was both the animator preceding the process of evolution, the “Prime Mover, Gatherer and Consolidator, ahead of us...,” and the eternal God above, connecting the entire evolutionary process as one unified, eternal, sacred story of becoming. This hopeful eschatological vision allowed Teilhard to imagine new


50 “So, my God, I prostrate myself before your presence in the universe which has now become living flame.” Teilhard de Chardin, Hymn of the Universe, 29.

51 “If we say ‘God of the Above’ + ‘God of the ahead’, what does this new equation, fundamental to all Religion in the future, give us if not an ultimate whose dimension are ‘theocosmic’, that is christic? In a system of Creative Union, it is not only the Universe but God himself who is necessarily ‘Christified’ in Omega, at the upper limits of Cosmogenesis.” Teilhard de Chardin, The Heart of Matter, 54-55.

52 Teilhard de Chardin, Hymn of the Universe, 68.

53 Teilhard de Chardin, Man’s Place in Nature, 121.
metaphors to describe God, including God as the “cosmic eddy”\textsuperscript{54} of animating force behind every event from the atom to the vast mountain. This, he claimed is the intangible at the heart of the universe.\textsuperscript{55} Teilhard’s optimism and evocative language enabled his readers to understand how intimately and eternally God loves creation, and to come to know God, the goal of eschatological hope, by bathing oneself “in the ocean of matter,”\textsuperscript{56} never separating oneself from the universe and it’s beating heart, the Sacred heart of Jesus.

\textbf{Modern Ecotheological Constructions}

Jürgen Moltmann has said that “[e]verywhere people feel deceived, abused, dispirited, exploited, and estranged so that they no longer trust the inbuilt goals and hopes of our progressive societies, universities, churches, and sciences. They refuse to live goal-oriented and future-conscious, since they refuse to freeze that future in its present image.”\textsuperscript{57} Ecotheologian Arthur Peacocke affirms Moltmann’s appraisal,\textsuperscript{58} and indicates that hope is vital for “driv[ing] out the vertiginous fear induced both by [humanity’s] new lofty experience of ascendancy over the world and by the concomitant challenge to control the evolutionary processes of the world’s ecosystems.”\textsuperscript{59} Thus the first pillar of an ETA must be eschatological hope – the horizon of ultimate hope that situates all human proximate hopes. It will be proposed that this pillar is strongest when grounded in Irenaeus’ optimism,

\footnotesize
\begin{itemize}
\item \textsuperscript{54} Teilhard de Chardin, \textit{Le Milieu Divin}, xxii.
\item \textsuperscript{55} Ibid., xxvi.
\item \textsuperscript{56} Teilhard de Chardin, \textit{Hymn of the Universe}, 65.
\item \textsuperscript{58} “Hope has become one of the lost virtues of our age and its loss infects every aspect of our cultural and social life. ‘Where there is no vision, the people perish’ (Proverbs 29:18) applies as ever.” Peacocke, \textit{Creation and the World of Science}, 319.
\item \textsuperscript{59} Ibid., 320.
\end{itemize}
Maximus’ affirmation of polarity, and Teilhard’s dynamic linguistic tools. When rooted in such a manner, contemporary ecotheologians can “provoke a bottomless love for that endlessly rotting and renewing riot of life of which we are a clever and troublesome bit.”

This affirmation of Earth in our understanding of eschatological hope is vital because anthropocentric eschatologies that exclude Earth’s participation are exacerbating our planet’s rapidly destabilizing systems. The traditional creation myth is being coupled with both classical understandings of nature as fallen and anthropocentric apocalyptic eschatology; what has ensued is “a gospel of annihilation” promoting despair. This vision of a fallen creation in turn sanctions the destruction of Earth and places all hope in an otherworldly, disembodied existence. Ecotheologian Catherine Keller states that “symbolic tehomophobia” within Christian systematic theology manifests humanity’s unease and dislike for all things “mortal, fleshy, feminized, unpredictable and complex” and this sanctions “indifference and even vengefulness of church and culture toward creation” because the wild always resists human exploitation and self-immortalization. However if the vivid imagery of Revelation that announces that “the sea was no more” (Rev. 21:1) is understood as an astute ecological critique of the unjust imperial marketplace economy (facilitated by maritime trade) then the eschaton can be understood to proclaim the end of unjust economic paradigms carried out by those who “work the sea” (Rev 18:17) rather than

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60 This affirmation of polarity is in no way an advocacy of duality – an idea ecotheology opposes. Rather, it is the affirmation of multiplicity, and Maximus’ work played an important role in developing modern theological conversations concerning Earth and Trinity as a unity of diversity.

61 Keller, 195.


63 For a definition of tehomophobia, see footnote 466.

the promotion of the vanquishing of the sea itself. Thus modern ecotheological discourse affirms that human sufferers need to appreciate Earth’s many narratives in order to form optimistic, biospiritual theological imaginations capable of re-imagining new, “tehomophilic” eschatological perspectives. This promises hope to human sufferers.65

Modern constructions of Christian eschatological hope, enabled by scientific and theological Earth literacy, offer radically different understandings of the relationships among creation, God, and humanity and this affects eschatological discourse. This pillar affirms that an ecocentric eschatology offers novel ways of articulating how the universe is “going somewhere” (telos) and how God is breaking into the present as well as moving the present toward completion or fullness in God at the eschaton.67

Modern ecotheology offers humanity a vision of hope that the universe story is “going somewhere” and that God is present and active – e.g., directing, sustaining, empowering – at the creatively chaotic “edges of spatio-temporality brim with potential cosmos.”68

Scientific explorations of chaos theory have undermined the stranglehold of mechanical determinism and reductionism that emerged over the last four centuries that diminished humanity’s vision of Earth’s inherent dynamism and transformational power. Wisdom gained via our Earth literacy is challenging the pessimism, autism, alienation, and apathy that human sufferers have been bequeathed by the mechanical and atomistic ways of

65 Ibid., 187.
67 These three movements in eschatological discourse could be identified as teleological, apocalyptic, and prophetic. This thesis uses Faricy’s delineation between apocalyptic and prophetic perspectives, namely that prophecy interprets signs of the present time to point toward the future whereas an apocalyptic perspective is the future breaking into the present. Faricy, The Spirituality of Teilhard de Chardin, 63.
encountering the world⁶⁹ and the Creator of this “clock-like” world. In the nineteenth century, poets and wordsmiths such as nature writer Richard Jefferies (1848-1887), articulated how in divine chaos is “limitless hope and possibilities”⁷⁰ while in the twentieth and twenty-first centuries artisans of science began to articulate this concept of unpredictability within order, though in another medium. Modern scientific and theological disciplines have broadened our understanding of time and space, uncertainty and order, matter and spirit, and have awakened humanity to the universe’s infinitely open, creative telos or trajectory of the universe story as well as its connectivity and complexity.⁷¹ More recently physicists and theoretical scientists, such as Werner Heisenburg,⁷² Stuart Kauffman,⁷³ and David Bohm,⁷⁴ have eloquently described the indeterminacy within quantum and atomic levels of life and the complexity in behaviour systems (i.e., cells, neural networks, ecosystems, and economic systems) as cosmic potentiality laying hidden in disorder or chaos. Also, developments in ecotheology have highlighted our universe’s radical interconnectivity and Earth’s creativity that emerges from the interplay of order and

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⁷¹ For example, our scientific appreciation of aspects of Earth’s hydrosphere, our growing knowledge of terrestrial evolutionary transformations and the nature of ambiguity and uncertainty within indeterminate stochastic systems (e.g., tornados, tides, gas particles, and cloud formations) aid theological conversations concerning uncertainty, ambiguity and God’s providential care. Instead of being places of utter fear, desolation and the absence of God, these planetary experiences of chaos, uncertainty and emergence remind us of how chaos, transformation, and cruciformity are built into the fabric of the universe story. Thus, having emerged from Earth, ambiguity and painful transformations are part of human existence as well as God’s presence, power, and care.


randomness. Thus, this new appreciation of indeterminacy, ambiguity, and interconnectivity in both science and theology has allowed for the emergence of a new, “non-interventionist” and organic understanding of divine activity in the world. Contemporary ecotheologians have been able to describe the universe as evolving to the edge of chaos as it is drawn into the open horizon of the future by the Risen Christ who is known as both the promise of new life and the cosmic Attractor or divine Magnetism that encourages, directs, and sustains Earth’s own innate creative capabilities. Thus, Earth literacy contributes to the renewal of a teleological understanding of how God is a personal deity who animates theosis, the luring all of creation toward the fullness of life. This promises great hope to those who are experiencing alienation, futility, and loneliness in the chaos brought on by their suffering. Randomness, indeterminancy, and chaos no longer delineate merely the limitation or deficiency in human knowledge or health, and God’s providential care is not limited to special moments of divine intervention. Divine creativity is the well-spring for both cosmic order and the randomness that allows novelty to emerge, and thus God is present and labouring even in ordinary moments of growth and suffering. This vision of Earth’s potentiality and the innate forces of destruction and creativity present quite literally at the

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75 Robert Russell explains that from many scientific discoveries in the twentieth century “a compelling case can be made that quantum systems are ‘non-local’: when two particles that had been in a bound state are widely separated, their individual properties remain correlated in ways that defy a classical explanation. These correlations may indicate that the particles, ... remain part of a single, ‘non-separable’ system.” Russell, “Natural Sciences,” 335.


water’s edge\textsuperscript{78} has informed our understanding of divine immanence and activity in the world and has deepened the symbolic meaning of the term Immanuel presented in the Gospel of Matthew – i.e., God with us.\textsuperscript{79} Scientific and theological Earth literacy appreciate the great expanses of intertidal habitats as places where small and great evolutionary leaps have taken place\textsuperscript{80} and which can describe God’s presence and activity during transformative moments in Earth’s evolutionary narrative. God’s self-communication in these moments of costly creativity reveals God’s presence and not absence, and speaks to God’s self-limitation and labour to bring forth new life from death. Thus, cosmogenesis offers new depth to Christian hopefulness, especially when one’s suffering seems meaningless, when transformation seems impossible, and when great courage is needed to face that which thwarts individual and global well-being today.

Ecocentric eschatology also inspires a new prophetic commitment to ecosocial justice by cultivating new language and imagery to describe the hope for the future that lives at the creative edges of vulnerability, tension, uncertainty, finitude, and chaos. It is here where our continuously creative and loving God waits, eternally luring the cosmos towards abundant life, healing, and justice in the present moment and at the \textit{eschaton}. Cosmogenesis continually encourages humanity to courageously embrace the wild, partially unpredictable creativity inherent to creation as sources of divine revelation. A deep appreciation of God’s


\textsuperscript{79} Immanuel appears in Chapter 7 (7:14) and 8 (8:8) in the Book of Isaiah as well as in the Gospel of Matthew (Matt. 1:23).

\textsuperscript{80} These evolutionary leaps are where the new emerges from the disintegration (and modification) of that which had preceded it. Some examples of creativity at the water’s edge are the Mudskipper fish that use their pectoral fins to move and perch on mangrove roots or the marine Horseshoe crabs who scuttle over sandy beaches to spawn in the moonlight at the water’s edge. Aquatic life transfigured within interfluent areas into terrestrial tetrapods who then began to ramble over \textit{terra firma} during the Devonian Period over 360 million years ago and diversified into every imaginable creature from turtles to seals, dinosaurs to birds, \textit{Homo sapien sapiens} to whales and dolphins – adventurous mammals who have returned back to the hydrosphere.
presence and activity in cosmogenesis can inspire individuals and human communities to look into the darkness and sustain them as they compassionately and tirelessly work to correct injustice whenever possible. In light of planetary destabilization and wide-spread injustice, theology needs a new, prophetic horizon of hope, nourished by an appreciation of cosmogenesis. Distortions within theological, social, and economic constructions are contributing to the unprecedented scale and scope of ongoing ecological devastation and human suffering, and this needs redress. Theological conversations concerning eschatological hope cannot be blissfully ignorant of atrocities such as the Holocaust, the Rwandan genocide, or slavery, nor assimilate them into a nebulous, disembodied vision of the *eschaton*, or worse, believe they are justified as a by-product of natural selection or a warped belief that the more horrific the atrocities, the closer to the end (and perfection) humanity will be. Ultimate answers to how God reconciles, heals, and transforms these wounds of the past transcend human intellectual capacities but modern ecocentric eschatological visions of justice at the *eschaton* can better equip people of faith to experience wholeness and healing and labour to address injustice in the present.81

This first pillar of an ETA reveals how embracing cosmogenesis as a rich source of revelation can foster hope-filled eschatological discourses on several different levels. First this cosmic perspective offers a new level of intimacy in our understanding of transcendence. Next, it cultivates an appreciation of the inherent intelligibility and creative unpredictability of creation that kindles surprise, wonder and joy. It also retrieves Leviathanic revelation that

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81 Two modern ecotheologians attempting to wrestle with the immensity of loss and suffering in the past through their respective studies of eschatology are: Conradie,168-169, 180; and, Denis Edwards, “Every Sparrow That Falls to the Ground: The Cost of Evolution and the Christ-Event,” *Ecotheology* 11, no. 1 (2006): 103-123.
discloses the tehomophobia embedded in classic, anthropocentric eschatology and reveals a new understanding of mutual co-dependence within an open universe that is still unfolding and being lured somewhere unexpected. On another level, cosmogenesis provokes a description of divine immanence that is expressed within our complex, ambiguous and yet ordered creation. This asserts that God is ‘with us’ in a cosmos that is expressed as being (i.e., a vacillating ergodic-nonergodic biosphere) and becoming (i.e., a world that is co-constructing itself into its ever-changing form of potentiality). Cosmogenesis also enables the recovery of the ecocentric wisdom of the whirlwind in Job that speaks to the delusion of human power and control, and of great hope laying hidden in creativity. This allows eschatological discourse to move towards eco-social-poetic justice that takes, with utmost seriousness, the painful biosocial wounds of injustice. This new cosmological horizon also resists understanding end times as an evaporation or annihilation of creation and affirms a fuller, helical concept of time “that has space for us all and a space that has time for us all.”

It also inspires humanity to embrace the ecological depths of the Book of Revelation that envisions God’s future home on Earth and empowers humanity to work now to transform our dying world. Finally, cosmogenesis affirms God’s ceaseless enthusiasm for, and love of the

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82 As demonstrated previously, theological imaginations that were inspired by anthropocentric cosmologies understood the tehom as the mythical marine materiality that must be controlled and vanquished by an imperial God to liberate humanity.

83 Keller, “No More Sea: The Lost Chaos of the Eschaton,” 190. She indicates that the whirlwind blows away the conventional, negative valorization of the sea as chaos (Job 3:3, 8, 26:12), depicts a great interrogation of human ecological ignorance (Job 39:1-4), and portrays the radicalness of divine immanence and enthusiasm “for the wet and wild (Job 41) that collapses Job’s understanding of humanity and the rest of creation (i.e., to be controlled, commodified, and domesticated by humanity). Keller indicates that in the Whirlwind, humanity is offers a “rare witness to God’s bottomless enthusiasm for the wet and wild.” Ibid.

84 This must be done without negating the importance of the apocalyptic urgency of our present ecological crisis or losing the “eschatological edge of irreversible historical time.” Ibid., 195.


86 Barbara R. Rossing offers a powerful re-imagining of Revelation and grounds her renewal of Revelation in the genre of prophesy – i.e., the concrete and urgent need to empower change here and now. “It is
diversity, intricacy and costly creativity of the universe and this will inspire humanity to do the same.

Eschatological hope inspired by cosmogenesis and manifest within an ETA is intentionally present-centred, radically prophetic, apocalyptically hopeful and intensely courageous; it is both a friend of embodied reality and of transcendent futurity:

Human wisdom means coming back down to earth; not closing ourselves up in a beautiful ideal which we must attain, but welcoming reality just as it is; discovering God present in reality; not struggling against reality, but working with it; discovering the seed of life, the possibilities hidden in it. Of course we must have a vision for the future and focus on it, we must have a plan, and be aware of and responsible for the future, but our hope and vision must be rooted in the present.

An ETA inspires our human eyes to search the distant horizon searching for our ultimate destiny, while planting our feet firmly within evolutionary world. Thus, via this first pillar, an ETA cultivates biospiritually informed theological imaginations that not only engage abstractly with concepts of fluidity and paradox but also are open and trusting enough to envision alternative ways of living that resist contemporary society’s flight from suffering, transience, and indeterminacy. It also condemns multi-systemic cultural illusions of human self-sufficiency, rigid individualism, and invincibility that sanction the destruction and exploitation of Earth, and compound human suffering. Finally, this pillar is an important foundation for theological conversations concerning human suffering for it inspires theologians to imagine the final judgement as “ecopoetic justice” that addresses two

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important delusions in contemporary society: imperially driven visions of individual retribution and anthropocentric driven visions of a death-free world devoid of all suffering.88

Second Pillar: The Intrinsic Worth of Creation Manifest in Interconnectivity, Interdependency, and Diversity

Cosmogenesis affirms how each creature possesses intrinsic worth as a unique realization of cosmic and divine potentiality and contributor to the great unfolding universe story. A contemporary ETA desires both to retrieve wisdom from the past and imaginatively construct new metaphors and descriptions that will best articulate this truth and to impact the way humanity lives, loves, and suffers in the twenty-first century. This second pillar of an ETA will articulate how human dignity, worth, belonging and purpose are derived from a much larger context of meaning, viz., the intrinsic worth of all other interconnected, interdependent, and diverse expressions of created life. This second foundational column of an ETA will affirm the living reality that our creaturely brothers and sisters are unique, incarnate manifestations of the Rūah, the life breath of God, and will express how humanity can appreciate the cruciformity of our evolutionary world anew by understanding how it is transfigured in the life, death and resurrection of Christ.

Akin to the methodology of the first pillar, wisdom offered by Christian theologians working prior to the birth of ecotheology, namely Maximus the Confessor’s affirmation of the polarity of Christ of Chalcedon, Thomas Aquinas’s commitment to diversity as a manifestation of divine revelation, and St Francis of Assisi’s intimate kinship ontology, will be used as the foundational sources to ground this pillar. Subsequently, contributions from contemporary ecotheologians will be offered to develop this pillar further in order to use it as a framework for engaging human suffering today.

Contributions Made Prior to the Birth of Ecotheology:

To begin, Maximus the Confessor’s anthropology indicates that Scripture and the cosmos narrate the same story of God’s revelation although with different language and syntax. Both forms of this one sacred narrative speak of the intrinsic value of the diversity and polarity within the created world, despite the differences between both forms. Maximus best describes this in and through his understanding of Christ, the incarnate Son of God; Christ as Logos is the crux of Maximus’ affirmation of the inherent merit or worth of creation.  

For Maximus, the diverse created world is where the “incarnational mission is playing itself out to full completion,” and he makes use of Irenaeus’ term “recapitulation” to demonstrate both the union of the divine with the material world and the participation in God by all created things.

This same Logos, whose goodness is revealed and multiplied in all the things that have their origin in him, with the degree of beauty appropriate to each being, recapitulates all things in himself (Eph 1:10). Through this Logos there came to be both being and continuing to be, for from him the things that were made came to be in a certain way and for a certain reason, and by continuing to be and by moving, they participate in God. For all things, in that they came to be from God, participate proportionally in God, whether by intelligence, by reason, by sense-perception, by vital motion, or by some habitual fitness.  

It is the vocation of the cosmic Christ, Logos, that affirms the worth and unified source of the architectural components, the logoi of the universe. Maximus’ affirmation of Cyril of Alexandria’s use of “theandric” to describe the intimate kinship between the divine and

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89 Balthasar, 71.


91 Maximus, Ambiguum 7 in J.P. Migne, Patrologia Latina (PL) 91:1080B. As quoted by Ibid., 55.
human natures of Christ, his own vision of the perfect hypostatic union manifest by the Incarnation, and his praise of “all the different syntheses between diverse creatures that are realized through Christ,” are key components of modern ecotheological arguments asserting that all creatures bear of the image of God as *logoi*. Consequently, because of this connectivity with *Logos*, all created life must be respected and honoured, each in its own way. Biodiversity can be said to give glory to the Creator and as offered by Maximus, “proves that heavenly and earthly beings join in a single festive dance, as they receive the gifts that come from God.” This optimism is embraced by subsequent theologians including St Thomas Aquinas.

St. Thomas Aquinas, in *Summa Contra Gentiles*, reveals how the created world affirms God the Triune Creator through its myriad forms: “... God would not make the whole universe to be the best of its kind if he made all the parts the same, because many levels of goodness would be missing in such a universe....” Similarly, in his *Summa Theologica* Aquinas proclaims: “For goodness which in God is simple and uniform, in creatures is manifold and divided; and hence the whole universe together participates in the divine goodness more perfectly, and represents it better than any single creature whatever.” Unfortunately this facet of Aquinas’ (and other subsequent theologians’) work has been underemphasized due to the anthropocentric and hierarchical ordering of the universe.

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94 Ibid.


96 Aquinas, *Summa Theologica* Ia.47.1.
bequeathed by Origen and others. Thanks to the work of some modern ecotheologians, theology is beginning to rediscover traditional biophillic understandings of the intrinsic worth of biodiversity and how all the intricate architecture of the created world reveals (albeit partially) the wisdom, goodness, and power of God.

St Francis of Assisi (1182-1226 AD) contributes a vital element to the discussion of the intrinsic worth of diversity, namely a model of ontological kinship among all facets of creation based on the Pentecost. It is the third Person of the Trinity who is the “magnetic force” of Francis’ vision of the relationality of the Trinity, and this is the same force or animating energy of the entire cosmos. Francis understands the divine Holy Spirit’s affirmation, preservation, and nourishment of creation as encompassing “married women,” “youths,” “sick,” “children,” “all peoples everywhere on earth who are and will be,” and all elements of the created world. It is through the interconnected, animated cosmos that Francis comes to know and experience God. Francis discerns and experiences in nature a genuine, loving, ontological kinship among his fellow creatures, and offers a complex and


100 Francis, The Early Rule, 23.7 in Ibid., 132.


102 Bonaventure admits this: “In beautiful things [Francis] saw Beauty itself....” Quoted from Bonaventure’s Life of Saint Francis, IX. 1 in Ibid., 19.
interdependent vision of creation’s intrinsic and instrumental worth that is greatly needed today. Francis’ affirmation of the sacred gift of diversity is quite provocative, both in his historical moment and ours. His belief that the ascent to God is not just reserved for more ethereal creatures such as humans (or birds) but that all parts of creation mutually empower each other in their mutual spiritual journeys animates his kinship model. Francis experienced the “intimacy of the Most High,” inspired by the Spirit, as he lived and loved in the world as Christ the Suffering Servant did. Thus, his vision of life was transformed from being in love with nature’s radiance to seeing and loving in all of creation “Beauty” itself. This understanding of God being revealed in creation is being engaged by ecotheology and is affecting how the intrinsic worth of creation is appreciated today.

Modern Ecotheological Constructions

Modern ecotheological constructions have germinated from Maximus’ exploration of cosmic and sacred polarities, Aquinas’s systematic reverence of the range of God’s creativity, and Francis’ passionate ontological kinship model. From this firm root system and coupled with scientific Earth literacy, ecotheologians have made the intrinsic worth of creation manifest in interconnectedness, interdependence, and diversity the second pillar of an ETA. This pillar is vital to challenge the radical individualism and systematic destruction of biological and cultural diversity that is currently putting all futurity into question.

To begin, Earth’s prolific creative urge – manifest concretely as biodiversity – will be explored in order to understand how this has influenced theological discussions of the intrinsic worth of both human and other-than-human creation. Maximus, Aquinas and Francis could not have even begun to imagine the scale of Earth’s interconnectivity,

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103 Santmire, *The Travail of Nature*, 109. This was a legacy left also by Abbess Hildegard of Bingen who believed in a natural order constrained by Cosmic law but not as one species dominating another. Book 2, Vision 1.6 in Hildegard, *Scivias*, 152.
interdependency, and diversity for even the human Western scientific mind in the seventeenth century still only envisioned about 10,000 species of invertebrates as an upper limit of Earth’s creative abilities. Modern ecotheological visions of connectedness and intrinsic worth have been cultivated by scientific discoveries including the common origin of the universe, the vast fecundity of the cosmos and Earth, and the physical consanguinity of our 13.8 billion year family history. This has revived pre-modern ontological kinship models of solidarity offered by Francis and others. The data of humanity’s encounter with creation has enabled the formation of distinctly biospiritual imaginations that cultivate new ways of understanding core theological constructs—e.g., divine activity as creatio continua and concursus, the unity of diversity that is the Trinity, the Incarnation as a manifestation of evolutionary emergence, and the Creator Spirit as the green face of God. This can be clearly seen in the work of pioneering ecotheologian Sean McDonagh. McDonagh indicates that Earth’s creativity is an attribute of God and can be understood as an outpouring of the

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104 Feehan, 62. Feehan indicates that today we know that in a small amount of soil there could be upwards of 10 trillion bacteria (representing as many as 10,000 species), that the class Arachnida manifests more than 38,000 species, and viruses outnumber all other life forms (over 10 million varieties existing in the virosphere that pervades every ecosystem on Earth). This is a vastly different knowledge and encounter with creation than what our theological predecessors experienced. Ibid., 66.

105 Biologist Colin Tudge affirms: “We don't even know how many kinds of creatures there are—how diverse biodiversity really is. So far biologists have listed around two million different species. But about 30 years ago an American scientist counted all the beetles in one fairly ordinary tree in Panama and found 1100 species of them, many of which were new to science; and beetles are only one group among many—what about the mites and worms and fungi and goodness knows what else. From all this he concluded that in the world as a whole there could be 30 million different species—but that's not counting microbes, of which there could be hundreds of millions of kinds. Now most biologists feel that he may have got carried away, and there are probably (only!) between five and eight million. But we don't know.” Colin Tudge, “Evensong at St. Paul's Cathedral: Why Nature Is Ultimately Unfathomable—and Why Reverence Towards It Is the Only Sensible Attitude “ (Feb 27, 2007). http://www.colintudge.com/articles/article09.php. Accessed May 12, 2012.

106 Robert John Russell affirms this when he writes that “...the discovery that all things had a common origin at t = 0 can inspire a spirituality of connectedness through a cosmological common origin to all creatures.” Russell, “Natural Sciences,” 334.

Divine creative urge: “[t]he principle of expressive Being which we identify with the Father is the urge to create. This outpouring surge of energy manifests itself in our highly differentiated universe ... all finely tuned into one living community.”  

McDonagh also allows his understanding of biodiversity and cosmogenesis to impact how he understands the Incarnation:

Each reality in the universe has its own inner radiance, which points to and reflects the ultimate mystery of God. ... If, for example, flowering trees and shrubs had not appeared 300 million years ago, then mammalian life would not have followed. Without that concentration of nutrients no human being, including Christ, would ever have walked on Earth. So that particular memory and every other memory of the emergent process is carried within the Christ reality. In him all things are united.

Modern ecotheologians have asserted in varying ways that each reality in the universe possesses its own unique, divine inner radiance, that each is coextensive with the totality of the Universe story, and each reflects, although partially, the ultimate mystery of God.

The results of allowing the fecundity of Earth to mould theological imaginations are manifold. First, it has enabled the cultivation of a new theological appreciation of how the intrinsic worth of the human “self” is interconnected to and dependent upon the “other” (i.e., human and other-than-human subjects of Earth). Earth’s tendency toward creativity, manifest in Earth’s interdependent and abundant biodiversity, celebrates this tenet and any student of the universe story must acknowledge and engage with the tension of independence and interdependence, particularity and universality, and being and becoming. Thus, cosmogenesis allows a broader understanding of intrinsic worth and enables the term “respect” to be imagined as a biospiritual verb that can elicit a response to alterity that counters today’s wanton destructiveness. This verb is also more profound than merely

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108 McDonagh, To Care for the Earth, 117.
109 Ibid., 118-119.
tolerating, acquiescing, or homogenizing difference (i.e., the “melting pot” metaphor). In addition, cosmogenesis highlights our “participatory” context; there are no disengaged observers only participants and subjects who uniquely contribute to (and/or frustrate) the realization of Earth’s creative potential. This challenges us to name who we see as intrinsically worthy or authentic dialogue partners in ethical conversation. Finally cosmogenesis, as a relational, cosmological horizon for understanding diversity, interconnectedness and interdependence, can critique radical forms of individuality and autonomy prevalent today that are intolerant to vulnerability and dependency and impact how sufferers understand limitation and suffering.

Another dimension offered by this pillar is an acute awareness of the rate of habitat loss, mega-extinctions, ecosystem disruptions, and the immense loss of biodiversity that are contributing to cultural degradation and human suffering. This unprecedented experience of planetary destabilization and loss of diversity is a death knell for Earth and all its creatures, and must impact (and be impacted by) theological constructs. In response to this crisis, McDonagh allows his synthetic ecotheological constructions to be inspired by creation and pneumatology: “...The Spirit leads us to a deep respect for the beauty of the world and the balance in nature. He also leads us to a deep appreciation for the dignity and excellence of people. Violence to the ecological balance in nature and violence to the rights of people are a contradiction to the Gospel.”

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111 McDonagh, *To Care for the Earth*, 212. This statement however, is not unopposed. Even McDonagh’s congregation did not make this a central tenet of the life and work of the Columbans; the cited
driving the formation of Earth literate people of faith who have a broader appreciation of intrinsic worth. This source of revelation is required to inform innovative theological constructs that more coherently and faithfully describe the three mediations and inspire more adequate and just ethical practices that protect Earth’s diversity. For example, St. Thomas articulated the need for diversity in creation to manifest God’s self-revelation (ST 1a 47.1) but the intellect of Aquinas was not privy to modern scientific discoveries that would have possibly enabled him to incorporate a fuller understanding of biophilia and the incarnation of God in creation into his articulation of the nature of theological virtues. But it would be an unfair expectation to hold Aquinas to such an understanding. Contemporary ecotheologian James Nash, on the other hand, has been informed by the discoveries of science and the knowledge of the unfolding sixth mass extinctions at the hands of humanity and thus, he is able to articulate nine ecological virtues in ways Aquinas could not even imagine. Thus for contemporary ecotheologians, biodiversity is both an empirical fact and a moral value, and the appreciation of the dialectic of connectivity, alterity, and the protection of diversity has very real moral dimensions to which theology must attend. This attention can take many

quote was McDonagh’s attempt to inject the Columban constitution with a distinctly ecological and social justice orientation. However, after the third and fourth drafts of the constitution it was dropped.

112 These virtues include: sustainability; adaptability; relationality; frugality; equity; solidarity; biodiversity; sufficiency; humility. See: Nash, Loving Nature, 54-67.

113 Nash is not the only theological voice articulating this. Jay McDaniel indicates that to overcome the anthropocentrism of the past and to adopt a biocentric ethic requires the embrace of three “moral virtues”: 1) a reverence for life articulated as an “inward disposition that is respectful of, and caring for, other animals, plants and the Earth” that refuses to “draw a sharp dichotomy between human life and other forms of life”; 2) non-injury or non-violence (ahimsa) articulated as the refraining (as much as is possible) “from the violation of other creatures' interests;” 3) the exercise of active goodwill understood as “the active fostering of opportunities for an animal to realize its interests.” See: McDaniel, 73.

114 The main cause of the loss of biodiversity is the destruction, degradation and fragmentation of natural habitats by human development. James Nash indicates that “the destruction of habitat – which may be a single type of size of tree or grass – will mean the extinction or numerical decline of a species. And if the species is a ‘keystone,’ on which many other species are dependent in the intricate bridgework of nature, whole ecosystems may decline or disintegrate.” Nash, Loving Nature, 56.
forms. For example, if other-than-human species, such as indigenous Amazon flora, obscure oceanic invertebrates, or nocturnal cave dwellers are intrinsically worthy as our kin, then their instrumental worth to human welfare must be informed by a reciprocal movement of care that pays close attention to individual, species, ecosystemic, and planetary well-being.\textsuperscript{115} Humanity’s infringement and destruction of habitats, regardless of whether it is by the paving and concretizing of massive swaths of the lithosphere, or the poisoning of the hydrosphere, or the constant bombardment of the atmosphere with pollution and artificial light, does not recognize the intrinsic worth of the other. Furthermore, thanks to the work of ecofeminists, the diminishment of biodiversity has been shown to mirror a degradation of diversity in human communities; the adoption of rigid dualisms of worth that render certain groups (e.g., women, nature, animals, non-dominant groups, poor, disabled) inferior to and in service to others (e.g., male, human, white, North American, wealthy, abled) has promoted cultural degradation and stagnant and non-sustainable monocultures.\textsuperscript{116} Adopting cosmogenesis as the context for understanding the relational facets of the intrinsic worth of all created life also speaks prophetically to the worth of those within the human family who fall outside of constructed cultural norms, whose “otherness” manifests physically, mentally, economically, socially, or ethnically, and causes them to be marginalized and exploited by

\textsuperscript{115} For example, fishing (as the sacrifice of the lives of fish to sustain human lives) can be affirmed theologically when the appropriate reverence (i.e., an appreciation of the spiritual significance of the fish) for the life is demonstrated and the ecosystems fish are a part of are not harmed and perhaps are enhanced by human interactions. Christians who are equipped with a broader understanding of Earth’s biospiritual nature and intrinsic worth can join other prophetic voices condemning unjust ethical practices such as trawling for fish with nets the size of football fields to accumulate profit for transnational corporations. It is sinful because it endangers ecosystemic biodiversity by not respecting the sacredness of Earth in all its myriad forms.

\textsuperscript{116} Stephen Scharper succinctly categorizes the voices in ecofeminism that have critiqued the dualisms that mark European patriarchal culture as: a) classical philosophy and Judeo-Christian heritage is critiqued by Rosemary Radford Ruether and E. Dodson Gray; b) modern European mechanistic thought and Enlightenment’s focus on autonomy and objectivity is evaluated by Carolyn Merchant and Vandana Shiva; c) the evisceration of Earth’s sacredness in light of a transcendent “Sky God” is engaged by Charlene Spretnak, Starhawk, and Sallie McFague. Scharper, 87.
the powerful. Within an ETA the anthropocentric myopia and “hemorrhaging of biological diversity today”\textsuperscript{117} that enables this discrimination within, and destruction of, the Earth community is critiqued within a new understanding of Earth as a communion of subjects and not as a collection of objects.\textsuperscript{118}

In conclusion, the second pillar of an ETA affirms the innate value of creation in all its diverse, interconnected, and interdependent manifestations. This is an important component of the anthropological foundation that will inform humanity how to live, love, and suffer as members of this planetary community. “Each creature lives in God’s presence, and has its own relationship with God, to whom it is all valuable and intimately known. Only after that realization may questions of human ethical conduct arise.”\textsuperscript{119} Ecotheologian Ruth Page also illustrates the interdependency of the first two pillars of an ETA. The intrinsic worth of creation manifest in diversity informs and is informed by an eschatological hope; i.e., “a kaleidoscope vision of eternity, in which all that has pleased God, human and non-human alike, is gathered like a harvest from the whole web of creation.”\textsuperscript{120} The study of cosmic, intergenerational biodiversity is the etymology of the sacred universe story and the manifestation of the “kaleidoscope of the creativity” is the realization of the potentiality of God. This new awareness must shape the syntax of human pursuits, including theology.\textsuperscript{121}

\textsuperscript{117} Feehan, 67.

\textsuperscript{118} Berry indicates that human formation is governed by three principles: differentiation, subjectivity, communion, and all are vital elements of this pillar. Berry, \textit{The Great Work}, 162. Thomas Berry also illustrates how humanity is violating all three principles within modern industrial monoculture where standardization is mandatory and diversity or difference is eradicated. Ibid., 163. Carol J. Adams speaks of the unity of diversity that is ecofeminism and that the diversity is held together by three common threads grounding ecofeminist solidarity: inter-relationship, transformation, and embodiment. See: Carol J. Adams, \textit{Ecofeminism and the Sacred} (New York, NY: Continuum, 1995), 4-8. Thus, without this pillar affirming diversity, the relations among humanity, God and world could be skewed to the detriment of all three.


\textsuperscript{120} Ibid.

\textsuperscript{121} Feehan, 79.
Modern ecocentric visions of intrinsic worth will allow for more fruitful theological engagements with painful cosmic phenomena, such as limitation, extinction, frustration, predation, and suffering. This will enable human sufferers to re-imagine how they are necessary components of both the costly, creative and transformative activity of the universe and their own personal life story.

**Third Pillar: Numinous-Cosmic Communion**

Nineteenth century English poet, Lord Byron (1788-1824), wrote *Childe Harold’s Pilgrimage* to describe a journey of conversion to a deeper experience of the created world.

There is a pleasure in the pathless woods,  
There is a rapture on the lonely shore.  
There is society where none intrudes,  
By the deep Sea, and music in its roar:  
I love not Man the less but Nature more,  
From these our interviews in which to steal  
From all I may be, or have been before,  
To mingle with the Universe, and feel  
What I can ne’er express, yet cannot all conceal.\(^\text{122}\)

His intuitive coupling of the numinous and cosmic was shared by many others who both preceded and followed him, including theologians such as Hildegard of Bingen and Pierre Teilhard de Chardin. The commonality among a twelfth century mystic, a nineteen century poet and a Jesuit anthropologist was their ability to express an encounter with the ineffable lying at the heart of the cosmos.\(^\text{123}\) This ability to respond to God in the world was either dismissed or forgotten when scientific and theological imaginations were infected by a

\(^{122}\) Lord Byron, *Childe Harold's Pilgrimage*, Canto the Fourth, CLXXVIII (1818) in Feehan, 121.

mechanistic and anthropocentric understanding of the world during the sixteenth and seventeenth centuries, as outlined in Chapter Two. However thanks to nineteenth and twentieth century Earth literacy, Earth and all of Earth’s constitutive parts have been repositioned within a much larger galactic and cosmogenetic context that speaks poignantly of the biospiritual nature of Earth, the cosmos, and the human person as well as the uncertainty inherent within this numinous-cosmic communion.\(^\text{124}\) Thus, Earth literacy has allowed theology to re-discover the deep unity of the cosmic and numinous and how this synthesis is a foundational principle of all reality. Any cognitive framework that appreciates the synthesis of the cosmic and numinous will liberate both the human narrative from being the only subject and beneficiary of the doctrine of creation, and the Earth narrative from being a mechanical, spiritually bereft, static entity. Thus, theological attention to this facet of the universe story is the content of this third pillar of an ETA, and will help transfigure humanity’s encounter with Earth and impact our understanding of human suffering.

Just as the Earth’s landscape is solid but never still, an ETA must reflect this same ordered dynamism and potential for growth. These are the strong roots offered by abbess Hildegard of Bingen and Jesuit Pierre Teilhard de Chardin, both theologians and artisans of science, one privy to knowledge of evolutionary mechanisms and the other not. Hildegard’s understanding of viriditas – inspired, embodied fecundity – and Teilhard de Chardin’s dual commitment to the cosmic and numinous gives this pillar both a solid footing within the Christian tradition as well as the space and sustenance to develop further.

\(^{124}\) For more details concerning this element of unpredictability or freedom incorporated in this creative synthesis see McDaniel, 132-137.
Contributions Made Prior to the Birth of Ecotheology

St Hildegard of Bingen’s (1098-1179 AD) astute consciousness of the sacred balance, dynamism, and order of the universe offers much to a contemporary ETA. Her articulation of God’s overflowing, powerful, vivifying, redeeming, and sustaining love as viriditas, defined as an inspired and embodied fecundity – the “greening freshness of life” – is a vital aspect of her legacy.\textsuperscript{125} Hildegard uses this vitality of creation to describe the main activity of the Word, Christ, whom she indicates “ha[s] kindled every spark of life” and has “awaken[ed] everything to life.”\textsuperscript{126} Matthew Fox, in \textit{Illuminations of Hildegard of Bingen}, explains how this term viriditas celebrates the “exquisite greening of trees and grasses” as well as the bringing of “lush greenness to shriveled and wilted people.”\textsuperscript{127} Earth’s “greening power” is an evocative metaphor in Hildegard’s writings\textsuperscript{128} and is a “multivalent symbol”\textsuperscript{129} that effectively dismantles the prevailing dualistic view of matter and spirit inherent to classic theological anthropologies. It also articulates her radically immanent understanding of

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\textsuperscript{126} Vision One: 2 in Hildegard, \textit{Scivias}, 8; 10. Hildegard also indicates that “[t]he soul is the green life force of the flesh.” Vision Four: 21 in Ibid., 97. As above.


\textsuperscript{128} Vision Four: 1 in Hildegard, \textit{Divine Works}, 80.

\textsuperscript{129} Craine, 121.
\end{flushleft}
God’s Otherness and creative power within the universe. Thus, her appreciation of viriditas as immanent Otherness (i.e., cosmic-numinous) penetrates, animates, and transforms the very depths of the material world and this understanding of God and creation grounds her theological anthropology.

Another key facet of her anthropology was belief that creation is birthed within God, out of God’s very spiritual essence, rather than God withdrawing Godself to allow space for creation. In her art, hymns, and writings she draws upon the imagery of pregnancy and interconnected concentric circles to illustrate this profound intimacy of matter and spirit. She also did not shy away from a corporal earthiness within her descriptions of the Incarnation:

> You see that the fire has a flame in it the color of the sky, which burns arderntly with a gentle breath, and which is as inseparably within the blazing fire as the viscera are within a human being; ...But after he assumed flesh, the Word also remained inseparably in the Father; for as a person does not exist without the vital movements within his viscera. So the only Word of the Father could in no way be separate from Him.

Thus, the numinous communion with the materiality of the cosmos is elegantly articulated via an ambience from within, an internal quickening rather than a separate, external force

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130 Her analogy of greening power to describe an important attribute of the divine nature is more helpful for describing God’s relation with the unfinished, dynamic, evolutionary world than that of the potter or craftsman (as described in Isa. 64:8; 2 Cor 4:7; Rom 9:20, 21). The latter evokes purely anthropocentric understandings of God and the product of God’s creative efforts, creation, as a complete, static object. Hildegard’s metaphor viriditas is dynamic and thus, is a vital contribution to modern ecotheologians attempting to understand God’s activity in an evolutionary world.


132 Marsha Newman indicates that “Hildegard’s was a very visual and visceral experience of the spirit, prompting her to create an intricate symbolic expression of nature and the universe. What some have thought to be the feminine aspects of Hildegard’s art emerge in images of womb-like enclosures, and images of fertility, like the world egg and the mandala; and of pregnancy, with the child fully depicted within its mother’s translucent womb. She sees evidence of the spirit in the life-giving universe: the begetting of children, the blossoming of plants. These are for her symbols of the pregnancy of matter with spirit, and therefore of the holiness of the material universe.” Marsha Newman, “Christian Cosmology in Hildegard of Bingen’s Illumination” in Logos: A Journal of Catholic Thought and Culture 5, no. 1 (Winter 2002): 42.

being imposed by God. Her synthesis of the numinous and cosmic, based on her understanding of *viriditas* and *ariditas*, was not an abstract exercise but sanctioned how she articulated and lived out her medical, moral, sacramental, and ecclesial praxis.

Pierre Teilhard de Chardin’s work also engages this synthesis, although with the scientific understanding and language of a twentieth century scientist aware of evolution. He states that “[a] different view now prevails: in a universe whose evolutive structure has finally been appreciated, matter and spirit are not seen as two terms mutually integrated in the unity of one and the same movement (spirit emerging experientially in the world only upon progressively more fully synthesized matter).” Teilhard believed in a personal God who was eternally labouring in the world to divinize and redeem it: “God is at work within life. He helps it, raises it up, gives it the impulse that drives it along, the appetite that attracts it, the growth that transforms it. I can feel God, touch him, ‘live’ him in the deep biological current that runs through my soul and carries it with it.”

His dual commitment to the divine and to the world encountered through science and theology is how he articulated the communion of the cosmic and numinous. Teilhard’s “Christic Density,” the numinous, sacred dimension of the created world, is deeply interconnected with the “cosmic Density” of his work delineating evolution. In one of his many letters, Teilhard exclaims:

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134 Barbara Newman writes the following: “Hildegard’s keen sense of divine immanence led her to envisage the creative power not as a force propelling the world from without but as an ambiance enfolding it and quickening it from within.” Barbara Newman, *Sister of Wisdom: St. Hildegard’s Theology of the Feminine* (Berkeley, CA: University California Press, 1987), 64-65.


137 Teilhard de Chardin and King, 50.

My views, as you know, hardly change, but they simplify themselves and interlock with such an increase of intensity – in the interplay (so wonderfully contrived) of what I call the two lines of curvature (or convergence) – the cosmic (‘natural’) and the Christic (‘supernatural’).\(^{139}\)

Teilhard’s cosmic-Christic synthesis reawakens humanity to the numinous essence of matter during a time of great alienation in the Western scientific mindset. His synthesis offers another dimension to Hildegard’s Christic understanding of \textit{viriditas} by understanding the Incarnation in light of evolution. Teilhard was able to develop the language to describe how God who is Love dwells within the Earthly, evolving, communion of subjects transforming those willing to open themselves to this transfiguring encounter.\(^{140}\)

Thus, both Teilhard and Hildegard search and find the numinous at the heart of created life in all its grandeur and partiality but their journey for truth never ends with this discovery; for these great minds, as with modern ecotheologians, this unity or synthesis is a verb and not a noun, inspiring their action in the world.

\textbf{Modern Ecotheological Constructions}

In a modern rendition of Carl Sagan’s cosmic clock,\(^{141}\) Neil DeGrasse Tyson offers a vivid portrait of the “Cosmic Calendar” that narrates how the Big Bang, January 1\(^{st}\), was the birth of our universe and all matter and energy originated in that first energetic moment.\(^{142}\) Another understanding of our universe’s birth is given by NASA:

\begin{quote}
According to the theories of physics, if we were to look at the Universe one second after the Big Bang, what we would see is a 10-billion degree sea of neutrons, protons, electrons, anti-electrons (positrons), photons, and neutrinos. Then, as time went on,
\end{quote}


\(^{140}\) “Lord, since with every instinct of my being and through all the changing fortunes of my life, it is you whom I have ever sought, you whom I have set at the heart of universal matter, it will be in a resplendence which shines through all things and in which all things are ablaze, that I shall have the felicity of closing my eyes.” Ibid., xlvii.

\(^{141}\) Sagan, \textit{The Dragons of Eden}, 14-17
we would see the Universe cool, the neutrons either decaying into protons and electrons or combining with protons to make deuterium (an isotope of hydrogen). As it continued to cool, it would eventually reach the temperature where electrons combined with nuclei to form neutral atoms.\textsuperscript{143}

Theologians also add depth to our understanding of the Big Bang; this moment was the great creative birthing of abundant life from a primordial singularity of “pure undifferentiated energy”\textsuperscript{144} and it was the “celestial furnace” out of which all matter and energy emerged.\textsuperscript{145} Our Milky Way galaxy is now known to be merely one of billions of galaxies within this ever expanding universe. This new scientific meditation upon the remarkably dynamic and radical interconnectedness of matter and energy can be described as a biospiritual dance that began at the Great Flaring forth. Every material that is derived from that originating movement of the cosmos reflects the communion of the numinous and cosmic, and thus experiences radical interconnectivity, interdependence, and intersubjectivity. Presently there is a need to recover an openness and humbleness within science and theology to allow humanity access to a fuller understanding of the biospiritual message echoing within our 13.8 billion year family history. If we do not, Earth’s existence as a branch of this family tree will be withered. An intentionally cultivated Earth literacy will be able to articulate our re-awakened sense of the communion of the numinous in and through creation, and this way of envisioning the created world will transform how we describe and understand human experiences, including suffering.\textsuperscript{146} Contemporary science, enlightened and guided by a cosmogenetic consciousness, has come to understand the


\textsuperscript{144} O’Hara, 236.

\textsuperscript{145} Berry, \textit{The Sacred Universe}, 72.

\textsuperscript{146} Robert J. Russell indicates that the “Book of Nature” can serve as a profound source of our experience of God and indicates that one type of spirituality, “a kataphatic spirituality,” appreciates the “numinous encounter with the Holy in and through nature.” Russell, “Natural Sciences,” 326.
material world as consisting of “more” than merely the sum of its physical, material parts and
the mechanistic understanding of how they work: chaos theories in mathematics, such as the
Butterfly effect, point to an elegant partial unpredictability inherent to materiality that
transcends purely mechanistic natural laws governing life and physical structures; the field
of epigenetics grapples with the mystery of how external lifestyle changes act at a genetic
level by the turning off of detrimental genes (e.g., those promoting heart disease,
inflammation or oncogenes) and the turning on of disease preventing genes; in the study of
Monarch butterflies, spawning salmon, or migrating geese, zoology has recognized that each
creature is beautifully adapted and equipped with diverse gifts of perception (e.g.,
electromagnetic sensory perception) to encounter creation within their own niche in ways
humanity may never fully understand; neurobiology wrestles with the elusive and complex
nature of consciousness that defies a purely physiological explanation; astrophysics, when it
began to explore the “Dark Universe” found that dark matter and dark energy (whose
existence and properties can only be inferred) constitute approximately 96 percent of the
universe, whereas ordinary matter (planets, stars, etc.) only makes up just marginally more
than 4 percent. These few examples expose the immensity of existence and levels of
unpredictable creativity that are beyond and within the material realm that humanity is able

147 Robert C. Hilborn, “Sea Gulls, Butterflies, and Grasshoppers: A Brief History of the Butterfly
148 A corollary is that “chemicals in our environment and in our food can alter genes, leaving people
vulnerable to a variety of diseases and disorders, including diabetes, asthma, cancer and obesity.” Bette
Hileman, “Chemicals Can Turn Genes On and Off: New Tests Needed, Scientists Say,” Environmental Health
June 14, 2013.
149 Planck Captures Portrait of the Young Universe, Revealing Earliest Light, ed. University of
universe-revealing-earliest-light. Accessed June 2, 2013. This data from the European space agency is
confirmed by the data offered by NASA. NASA Science (Astrophysics). Dark Energy Dark Matter.
to see, feel, hear, touch and understand. These findings, coupled with the celebrated finding of the Higgs boson particle in March 2013, an entity that is neither force nor matter and yet fills the universe, open our eyes to new ways of understanding the universe, its constitutive parts, their relations and the numinous-cosmic dimension of the universe.

Affirmation of this third pillar does not entirely reside in science for contemporary ecotheology demonstrates an emerging ecological retrieval of the Holy Spirit as an ecological hermeneutic for understanding the immensely creative biospiritual communion. Mark Wallace and others, describe the third Person of the Trinity as the “Earth God of the Bible” who infuses all things with her sensuous presence, transformative vitality and the essence for constructing a sustainable spirituality responsive to our evolutionary reality and planetary crisis. Other ecotheologians such as Elizabeth Johnson and Thomas Berry also explore the synthesis of the mystical, numinous, and spiritual with material existence and offer a vision of this unity that inspires a dynamic description of the cosmos – an unfinished, ancient entity that is being drawn toward new ways of abundant life. As scientific and theological Earth literacy intertwined more purposefully after the 1980s, it has become clear that the interdependence humanity shares with all of creation must be imagined in two irreducible and intimately intertwined dimensions held together in a creative synthesis: the material and spiritual. This is the promise of cosmogenesis.

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150 Wallace, Finding God in the Singing River, 82. Matthew Fox also highlights the sensual description of the numinous Spirit in Wisdom literature even to the point of accenting the “almost voluptuous” depiction of the Spirit, to make use of Gerhard von Rad’s terminology. See: Fox, Original Blessing, 38.

151 For example, Elizabeth Johnson offers many metaphors to better describe the presence of the Creator Spirit in creation. She offers the personal presence of God as the One “who pervades the world in the dance of life.” Johnson, Women, Earth, and Creator Spirit, 2. In Dream of the Earth and The Great Work, Thomas Berry envisions Earth as a biospiritual planet and our primary referent. Berry, Dream of the Earth, 117; Berry, The Great Work, 59.
An ETA expresses a new, cosmogenetic horizon of meaning within which to understand how Earth is a biospiritual planet, and as a result, humanity becomes one of many unique, interconnected manifestations of this active, creative, dynamic communion of matter and spirit. Twenty-first century theology encounters reality very differently than classical theologians formed and trained within what is now considered to be a dysfunctional cosmology. Thus, an ETA can recover and discover deeper, more ancestral perceptions of biospirituality atrophied by Descartes and others. An ETA awakens us to how our physiological dependence on visual stimuli and our intellect’s bias towards mechanism and constructed philosophical and cosmological systems of thought (e.g., Enlightenment constructs, Scholastic frameworks, and anthropocentric patriarchal mechanical philosophy) have limited our encounter with the cosmic-numinous synthesis inherent in creation and our perception, regardless of how deep it becomes, will always be narrower than the totality that is offered by the Creator. Nevertheless, when we do cultivate a rich Earth literacy in all facets of human ecology, humanity will encounter anew our forgotten other-than-human brothers and sisters, and truly appreciate the intrinsic worth of our planetary communion of subjects. The inherent dynamism and partially unpredictable creativity embodied in the empirical reality of a biospiritual communion enhances our appreciation of what many have known intuitively for centuries – that the cry of the wild pierces us to the heart of our being, awakening our cosmic memories, and, despite being deaf to it previously, “...it is more familiar to us than our mother’s voice” and is inviting us to new, unexpected ways of living and loving abundantly. An ETA can affirm an innate healing, nourishing, and educating


Spirit continuously being present in, and working through, all created matter. The eruption of memories, previously stifled, of a deep ontological kinship held in the very genetic coding of the human body offers an unique understanding of biospiritual communion, intrinsic worth and purpose; “...the experience of the trees and flowers, birds and wind and stars, rocks and the sight and sound of the rivers and the sea” can once more satisfy our deepest psychological and spiritual needs because they rekindle in us “memories” of an even deeper childhood. Expanding how humanity imagines and articulates the numinous-cosmic communion reinforces humanity’s intuitive awe of creation, enhances how intrinsic worth has a much broader application, and amplifies the human response to the sacred narrative of cosmogenesis “so that it is now more than a cry: it is a hosanna.” This revelation of the numinous-cosmic communion should also feed our horror at the present empirical data concerning the destruction of Earth and the extinction of Earth’s biodiversity by human hands.

In conclusion, the synthesis of the numinous and cosmic is that which connects, vivifies, and sustains all created life, past, present and future in our unfolding cosmic family history. Hildegard, Teilhard de Chardin and contemporary ecotheologians describe this communion as a dynamic, creative synthesis that can become distorted when one of these poles – numinous or cosmic – is overemphasized to the detriment of the other. The

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154 Feehan, 68. This is not just experienced by humans; every creature’s role and purpose in not merely ecological but also spiritual as it is inscribed in the origin of all things. Feehan offers John Muir’s lyrical account of the American Dipper (an aquatic insectivore) who in its genes, proteins, and morphology is so attuned to its environment, belonging so intimately and joyfully to its dwelling place, that it resonates and emanates the spirit of the stream or waterfall. John Muir indicates that “[i]n a general way his music is that of the streams refined and spiritualized.” John Muir, The Mountains of California (Garden City, NY: Double Day, 1961, c1894) in as quoted in Feehan, 81.

155 Ibid., 124.

156 Current research shows the rate of current loss is highly unusual and thus, this geologic period is one of the six great periods of mass extinction in the history of Earth. See: Anthony D. Barnosky et al, “Has the Earth’s Sixth Mass Extinction Already Arrived?” Nature 471 (March 3, 2011): 51-57.
disassociation of the numinous from the cosmic during the Enlightenment sanctioned the possession and exploitation of creation by humanity, and effectively threatened the abundant fecundity, fulfilment and even survival of creation. And for many process theologians and ecotheologians alike, this distortion or ariditas has also affected the Creator who responds in great love and lament, endlessly working to redeem. Thus, the communion of the numinous and cosmic entails a mutual dwelling in vulnerability and openness or receptivity to the ‘other’ which leads to the content of the last pillar: the kenotic-kinetic inherent within the sacred narrative of cosmogenesis.

**Fourth Pillar: Kenosis as the Kinetic of Cosmogenesis**

Philosopher Holmes Rolston III wrote poignantly of the cruciformity of our evolutionary world: “Biological nature is always giving birth, regenerating, always in travail. Something is always dying and something is always living on. ...This whole evolutionary upslope is a calling in which renewed life comes by blasting the old. Life is gathered up in the midst of its throes, a blessed tragedy lived in grace through a besetting storm.”

Biologist Ursula Goodenough also indicates that “[d]eath is the price paid to have trees and clams and birds and grasshoppers, and death is the price paid to have human consciousness.” However as scientists Lynn Margulis and Dorion Sagan indicate, Alfred Tennyson’s popular depiction of nature as “red in tooth and claw” might just as well have cast nature as “green in stem and leaf.” Theologians Niels Gregersen and Gloria Schaab affirm that this cosmic sacrifice can be imagined as part of the birthing woes of nature’s

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159 Margulis and Sagan, 350.
“unstoppable creativity” and offer a midwifery model to aid our understanding of the labour involved in evolution. This pillar asserts that adopting cosmogenesis as the context for constructing an ETA requires that theological attention be paid to the shadow side of our creative, unfolding universe, namely the sacrificial dialectic of receptivity (i.e., openness to, or making space for, or loss of self to, the ‘other’) manifest in the cruciformity of creation. In this section the phrase “kenotic-kinetic” has been specifically created to engage this shadow side within the unique dialectic of self-actualization and self-sacrifice (i.e., creativity and cruciformity) that characterizes the processes of cosmogenesis.

The term kenotic in this phrase has been chosen because it is derived from kenosis. Kenosis is derived from the Greek terms keno and kenoein, meaning “to empty.” From Scripture kenosis can be understood as two movements – i.e., affirming and emptying – and these are articulated in tandem. A main example is in St. Paul’s second letter to the Philippians (Phil. 2:6 –11) where there is a movement of descent or self-emptying (vv. 6 – 8) and ascent or self-affirming (vv. 9 – 11). Thus, in his self-emptying Christ affirmed his true self as the second person of the Trinity – i.e., “born in human likeness” and “Lord, to the glory of God the Father.” Jürgen Moltmann affirms this dual movement. He indicates that many classic theologians have engaged with the idea of kenosis as self-limitation or self-sacrifice with respect to Christ alone (e.g., within discourses concerning the two natures of

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162 Both self-actualization (i.e., creation, growth, development, flourishing) and self-giving (i.e., destruction, disintegration, diminishment, extinction) can occur at the individual level (i.e., self) but also occur at the community and planetary level. This novelty could also occur at the morphological or, behavioural, or psychological level.

Christ) as well as within the doctrine of the Trinity. Regarding the latter, Moltmann highlights the work of Hans Urs von Balthasar to show that “kenosis is not a self-limitation and not a self-renunciation on God’s part; it is the self-realization of the self-surrender of the Son to the Father in the trinitarian life of God.” Thus self-sacrifice is intimately intertwined with the affirmation of the true identities and activities of God, Christ, and the Holy Spirit. Pioneering and contemporary ecotheologians, including Ian Barbour, also indicate how traditional understandings of kenosis (i.e., Christ’s self-emptying only) have broadened to appreciate both the self-sacrifice of Christ on the cross and our Triune God’s self-sacrifice in creating the world. In addition, Holmes Rolston III in his essay connecting kenosis and nature argues that kenosis involves acts of dying or sacrificing as well as the active building up of a life beyond one’s own. As a result of this groundwork made by ecotheologians, this thesis understands the term kenosis to mean both an emptying or sacrifice (e.g., disintegration) and a building up (e.g., genesis). This thesis also asserts that due to our finite nature, humans and other-than-humans are unable to achieve kenosis but we do possess a kenotic disposition. The Incarnation and the cross are our gateways for glimpsing the kenotic self-affirming / self-sacrificial propensity of the Trinity and this is reflected, albeit dimly, in the creative / cruciform dynamic animating our planetary


165 “The Son by virtue of his self-surrender exists wholly in the father, the Father wholly in the Son, the Spirit wholly in the Father and Son. Kenotic self-surrender is God’s trinitarian nature....” Ibid. Moltmann indicates that “[i]n his Christmas hymn, Luther sees in ‘the self-emptying Christ” the Creator of the world, while Vanstone sees in the sustainer of the world ‘the crucified God’.” Ibid.


communities. Each member of creation – in their own way according to their unique nature – participates in this cosmic dialectic of receptivity that couples creativity (self-affirmation) and cruciformity (self-sacrifice). For this reason the term “kenotic” in the phrase kenotic-kinetic has been chosen.

The term kinetic was chosen in order to be faithful to the inherent dynamism of cosmogenesis understood theologically as continua and concursus – God’s ongoing creative activity in the history of the universe that enables and nurtures creation’s own creative impetus. This pillar asserts that the tension or force generated by creation’s “powerfully pulsing drive, to become something more” – namely the creation of newness or the emergence of novelty arising from the disintegration or destruction of the old – animates cosmogenesis. This cosmic movement toward differentiation and complexity requires a descriptive term that is associated with movement or dynamism, and thus, the word kinetic was chosen.

For this pillar of an ETA, the term kenotic-kinetic recognizes the inextricable coupling of self-emptying or self-sacrifice (manifest as loss of identity, death, diminishment, disintegration, and destruction) with genesis, innovation, and the emergence of newness.

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168 Robin Ryan, in his exploration of Elizabeth Johnson’s theology concerning human suffering, indicates that Johnson believes that “[t]he self-emptying that is affirmed of Christ in the New Testament (Phil. 2:6-11) is characteristic of God from the beginning of creation.” See: Ryan, 287. Thus, cosmogenesis is the process of God emptying God’s self kenotically, making space (i.e., zimzum) for that which is non-divine.


170 Elizabeth Johnson indicates that although God is continuously creating, “God does not act like a bigger and better secondary cause determining chance atomic events, or initial conditions of chaotic systems, or genetic mutations. Rather, divine Love empowers the structure of creation which operates with its own integrity.... God lets the world be what it will be, ..., not intervening arbitrarily in its evolution but participating, lovingly, in its becoming.” See: Johnson, Ask the Beasts, 183.

171 Johnson insists that the emergence of novelty in our evolutionary world can only occur “because it has been endowed by its Creator with an inner tendency, a quiet, powerfully pulsing drive, to become something more.” Ibid., 175.
Each member of our Earth’s communion participates in this cosmic dialectic due to its emergence from and participation in cosmogenesis. Thus, a kenotic disposition is inherent to all created life but is revealed in different ways.\footnote{There are many examples of this cosmic kenotic disposition and the following only name a few: the self-giving of the first stars during a supernova offered the matter for the creation of new life forms; solitary hydrogen atoms with unique forms and functions lose their individual identities as hydrogen and couple with oxygen to form an innovative new molecule – water; a carrot’s disintegration and ingestion enables the transfer of energy and materials within a complex food web; a predatory bacteria sacrifices motility and independence for a new symbiotic relation within a eukaryotic cell and enables an innovative form of life (mitochondria) to emerge; the second, “backup” pelican chick is displaced from the nest and left to die to ensure the survival of the other chick (see: McDaniel, 19-21); the death and disintegration of a human body after death releases vital molecules and minerals back to Earth. But within Earth’s life systems, only humans possess the capacity to try to deny our participation in this innate dynamic. This distorted belief in our ability to transcend this kenotic disposition has contributed to the current human and ecological crises. All subjects in Earth’s planetary communion are participants in this universal movement of self-actualization and self-giving, and it will be shown how a human creature’s kenotic disposition can be modelled on the loving movement of self-actualization and self-giving inherent in the cosmos, the Trinity, and the Incarnation.

As with the other pillars, an excavation of the historical rootedness of this pillar in the Christian Tradition will be undertaken. In this instance it will be done via an examination of St Clare (1194-1253), The Desert Mothers (4-6th century) and Hildegard of Bingen. Each offers valuable contributions that have enabled modern ecotheologians new ways of describing a kenotic-kinetic within cosmogenesis that is modelled after Christic kenosis: radical poverty, the spiralling movement to abundant simplicity, and the dynamic of receptivity and interdependence. This pillar will become the cornerstone for the next chapter, namely a contemporary engagement with the mystery of human suffering.
Contributions Made Prior to the Birth of Ecotheology

St. Clare, a diligent student of St. Francis, indicated that Christ, “Poor Crucified,”
reigns over and holds together all of created life because of his poverty and humility.173
Since humanity was created to be “the diligent imitator of the Father of all perfection,”
and since pride and vanity has destroyed our true nature,175 our faith in Christ calls us to radically cast
aside “earthly riches” and dismiss temporal things for those realities that are eternal.176
Thus, radical poverty is a tool that awakens humanity to God’s indwelling in creation, and it is
prayerful contemplation and emptying oneself of Earthly vanities that enables a person to
transform into the image of God.177 However, to prevent St. Clare’s movement toward self-
emptying from becoming a distorted form of oppression of self or others, it requires
strengthening by the wisdom of “abundant simplicity” offered by the Desert Mothers and the
dynamic of receptivity and interdependence presented by Hildegard of Bingen; to do
otherwise risks promoting a distorted kenotic self-abnegation that glorifies or valorizes
suffering itself and alienates or rejects creation.

The human condition is fraught with the tension of incompleteness and completeness,
of immaturity and maturity, and the Desert Mothers engaged this with gentleness and
wisdom. “Just as it is impossible to be at the same moment both a plant and a seed, so it is
impossible for us to be surrounded by worldly honour and at the same time to bear heavenly
fruit.”178 Self-deception blocks humanity from God, each other, and creation, and spiritual

173 Letter 1.13 in Armstrong and Brady, 191.
174 St. Clare, Letter 3. 26 in Ibid., 201.
175 St. Clare, Letter 3. 6 in Ibid., 200.
176 St. Clare, Letter 1. 29 in Ibid., 193.
177 St. Clare, Letter 3. 7 in Ibid., 200.
178 Syncletica 22 in Swan, 60.
stagnation stems from a denial of the movement toward fulfilment in God. A kenotic disposition as a dialectic of receptivity with self-affirming or creative properties, desires on some level to find congruity within the embodied created order, an authentically reciprocal indwelling, through humility and deep interior listening. The Desert Mother’s description of this paradoxical dialectic – the strengthening of oneself by becoming more receptive to the Other – can be understood when coupled with an equally paradoxical term: abundant simplicity. To live with abundant simplicity entails two concurrent actions: an interior and exterior detachment from all that possesses the sojourner’s heart or mind (e.g., materials, emotions, attitudes) and blocks an intimate relationship with God, the Source of abundance; and, a creative and active growth of one’s “burning love for God” through compassion and service.179 The Ammas never sought to exalt or denigrate themselves, nor did they deny themselves for the sake of the denial. Instead their lives reflect their desire to live harmoniously and thus, abundantly in creation. In the same vein as St. Clare who saw poverty as the “strong arms” that take hold of that “incomparable treasure hidden in the field of the world and in the hearts of men,”180 the Desert Mothers understood that their utter dependence on God, lived via simplicity and service, would initiate and sustain their interior movement into abundant life in God at the heart of the created world.181 The ascetic Mothers find and accept their true created nature as participants in a communal, cosmic body of Christ

179 Ibid., 21.
180 St. Clare, Letter 3. 7 in Armstrong and Brady, 200.
181 Swan indicates that it was Macrina the Younger’s ascetic training that taught her the important lesson of “abundant simplicity” and when “Basil returned from his studies in Athens with a head swelled with pride,” she passed along this wisdom, “cut[ting] him down to size,” humbling him, and this simplicity became an important thread in his monastic rules and his abundant life discovered in his life of service. Swan, 129. Amma Syncletica also spoke to this sense of simplicity and balance achieved through the ascetic life of discipline. See: Syncletica 8 in Swan, 49. Amma Sarah, via her words spoken about daily, small, unostentatious practices of self-discipline, speaks to the humility at the heart of the ascetic’s movement to God. See: Sarah 7 and 8 in Swan, 40.
and can be offered as a critique for humanity’s contemporary obsession with the individual acquisition of material goods rather than living communally with abundant simplicity.\footnote{Sarah 9 in ibid., 41.}

Thus Amma Syncletica challenges her disciples to constantly be open in vulnerability to recognize their dependency on God’s tutelage, and yet remain hopeful that they will arise and act with the “strength and courage of the desert.”\footnote{Ibid., 52. Hope and trust in the resurrection shines forth clearly in Amma Theodora’s words: “Another of the old ascetics questioned Amma Theodora saying, ‘At the resurrection of the dead, how shall we rise?’ She said, ‘As pledge, example, and as prototype we have him who died for us and is risen, Christ our God.’” Theodora 10 in ibid., 70.}

This lesson of living simply and abundantly within creation is often misunderstood. The Ammas’ embrace of austere corporal disciplines and physical withdrawal from the busyness of the world through a life lived in the desert is not a rejection of creation. Instead, it is an affirmation of a modality of life that embraces abundant simplicity to procure the necessary freedom to see the intrinsic worth of creation as a diverse and divine gift. It is through solitude, prayer, sacrifice and contemplation of God that they are able to perceive and understand the kenotic movement embedded in the created order. Amma Matrona indicates that the physical isolation of the desert is not of utmost importance but rather it is important to nurture the inward pursuit of God. She writes that “[m]any people living secluded lives on the mountain have perished by living like people in the world. It is better to live in a crowd and want to live a solitary life than to live a solitary life but all the time be longing for company.”\footnote{Matrona 2 in ibid., 35. Amma Synelctica also emphasizes that geographic isolation is the tool to moderate one’s life and it is the latter that is of utmost importance in an inner journey to God. See: Synelctica 2 in ibid., 44.} It is by withdrawing from corporeal distractions through poverty that one grows in true knowledge of oneself and God, and via interior contemplation that one...
becomes aflame with God’s love and eager to serve the world.\textsuperscript{185} It is this harmony or balance between denial and growth, contemplation and action that helps an ascetic to recognize when poverty itself is becoming an idol;\textsuperscript{186} the Desert Mothers embraced harsh physical discipline to cultivate “a spiralling movement of simplicity” towards God, ever hopeful because “God has chosen humanity along with all creation as the vehicle of Divine Revelation.”\textsuperscript{187}

Benedictine Abbess Hildegard offers even more depth of meaning to this spiralling movement of abundant simplicity by emphasizing receptivity and interdependence in her understanding of the relations among God, creation, and humanity. This is done via her intimate portrait of the “greening power” of creation,\textsuperscript{188} her visions of humanity as a microcosm of the macrocosm, and her integrative vision of interdependence with creation.

In Hildegard’s Vision Two “On the Construction of the World” and Vision Three “On Human Nature” in her \textit{Book of Divine Works}, she presents a Christ-like human figure at the centre of concentric circles who chooses to continuously give of himself (i.e., stretch himself outward) to sustain creation. Her choice of geometric shape is intentional; circles not only symbolize the cyclical patterns of creation but also the eternal oneness of God with creation.\textsuperscript{189} This vision depicts all of creation enveloped within and dependent upon the central bodily cavity of the Godhead and the outer levels of creation expel their vivifying breath inwardly to vitalize Earth’s greening power and to nourish the human figure.

\textsuperscript{185} See footnote 621.

\textsuperscript{186} Syncletica warns her followers of the motives of obsession with perfection and physical austerity that is not grounded in freedom with God but is in fact an idol: “...So how are we to distinguish between the divine and royal asceticism and the demonic tyranny? Clearly through its quality of balance.... In truth, lack of proportion always corrupts....” Syncletica 15 in ibid., 55.

\textsuperscript{187} Ibid., 36-37.

\textsuperscript{188} Vision Four, 1 in Hildegard, \textit{Divine Works}, 80.

\textsuperscript{189} Vision Two in Ibid., 23 and Vision Four, 11 in Ibid., 86. See also: Craine, 51.
Reciprocally, humanity’s arms radiate outwardly from a central position signifying an interdependent and yet stabilizing force (not unlike a spoked wheel) manifest as an outpouring of love for the Creator’s generous gift of life in and through creation.\textsuperscript{190} Thus, the Christ-like figure both sustains (self-giving) and is sustained by (reception of creation’s vivifying life-forces) creation.

In Vision Three, “On Human Nature,” Hildegard offers humanity as a microcosm of the macrocosmic universe. In this vision she explains how the nature and purpose of air and winds are reflected in what she calls “the humors” and organs of the human organism.\textsuperscript{191} Thus humanity, perfected in and through Christ, is inextricably intertwined with other-than-human creation – not the lords over creation – and is called to act as a balancing, strengthening element in creation not unlike the centre axel of a cosmic wheel. From Hildegard’s depiction of humanity, this thesis asserts that humanity’s unique gifts and obligations can be celebrated without desecrating, exploiting, or dominating the gift and purpose of other-than-human creation. This interconnectivity requires that humanity build our relations with creation based on receptivity and self-giving rather than objectification and exploitation.

Hildegard’s emphasis on the interdependence between humanity and the cosmos is fulfilled in her fourth vision. “On the Articulation of the Body” depicts human persons, in various stages of life, labouring to cultivate Earth throughout Earth’s many seasons. Matthew

\textsuperscript{190} “God has composed the world out of its elements for the glory of God’s name. God has strengthened it with the winds, bound and illuminated it with the stars and filled it with the other creatures. On this world God has surrounded and strengthened human beings with all these things and steeped them in very great power so that all creation supports the human race in all things. All nature ought to be at the service of human beings so that they can work with nature since, in fact, human beings can neither live nor survive without it.” Vision Two, 2 in Hildegard, \textit{Divine Works}, 26.

\textsuperscript{191} “Thereupon, I noticed how the humors in the human organism are distributed and altered by various qualities of the winds and air, as soon as such qualities come into conflict with one another, because the humors themselves take on these same qualities.” Vision Three, 1 in ibid., 56.
Fox indicates that “Hildegard celebrates the deep psychological healing that occurs when microcosm and macrocosm are wedded again.”¹⁹² In this integrative vision the rhythm of human creativity, manifest as cutting wheat, tending the soil, harvesting fruit, being birthed from the ground, returning to the soil after death, rest, celebration, and contemplation, is directed by the rhythm of Earth’s life systems. From her depictions, one could surmise that Hildegard is teaching her modern readers the worth of acknowledging and living attuned to the dynamic, cosmic ebb and flow of giving and receiving. If we do, perhaps we will be recipients of the power and vitality of Earth.¹⁹³ Hildegard states that “God has formed humanity according to the model of the firmament and strengthened human power with the might of the elements. God has firmly adapted the powers of the world to us so that we breathe, inhale, and exhale these powers like the sun, which illuminates the Earth....”¹⁹⁴ Hildegard’s appreciation of the dynamic of life and death, viriditas and ariditas, can deepen humanity’s receptivity to God in and through creation – “the realm of the living which glorifies and praises God.”¹⁹⁵ She instructs her readers that we must be receptive to Earth’s powers to grow and fulfil our unique telos given by our Creator, and this is how Earth is at the service of humanity and we are at the service of creation. This understanding of service is based on receptivity and interdependency (i.e., the dynamic of giving and receiving) not domination and exploitation. “All nature ought to be at the service of human beings so that they can work with nature since, in fact, human beings can neither live nor survive without

¹⁹² Fox and Hildegard, Illuminations, 47.

¹⁹³ Renate Craine indicates that in this vision Hildegard is specifying appropriate actions for humanity to undertake: “to participate in the fruitfulness of the earth by cultivating the soil and harvesting, and to enjoy its fruitfulness as well.” Hildegard believes that human “[w]ork is the fruit of thought, and when the mind is attuned to the source of all creation, human work will be established in harmony with divine work.” Craine, 56.

¹⁹⁴ Vision Four, 16 in Fox and Hildegard, Illuminations, 91.

¹⁹⁵ Vision Four, 11 in Hildegard, Divine Works, 86.
This passage, argues Fox, is “not only talking about interdependence” but is an example of true receptivity; humanity is being invited “into the hospitable cosmos that will befriend humankind and lend us its very great power.” Thus the human may be a central figure in many of her visions, standing at the centre of the world, but the emphasis in the above mentioned visions on the abundant gift of life given by Earth and received by humanity, and the self-giving of the human figure (and receptivity of this gift by creation) in return, offers much to modern understandings of the kenotic-kinetic.

St Clare, Desert Mothers and Hildegard all offer nuanced visions of mutual reliance, receptivity, and self-emptying that can be cornerstones of our understanding of the kenotic-kinetic. Also, as our ecological crisis intensifies and our call to participate in the cosmic kenotic-kinetic becomes more emphatic, Hildegard offers us further guidance: “Those who trust in God will also honour the stability of the world: the orbits of the Sun and the Moon, winds and air, earth and water.... We have no other foothold. If we give up this world we shall be destroyed....”

Modern Ecotheological Constructions

Contemporary ecotheology affirms that moments of cosmic destruction, disintegration, self-giving, and limitation cannot be uncoupled from cosmic creativity, innovation, self-affirmation, and growth; this is the promise of the green lying hidden in the darkness that will be explored more fully in Chapter Five. Cosmogenesis, including Earth’s evolutionary processes, shows humanity that from death, new life can arise. From this

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196 Vision Two, 2 in Ibid., 26. Italics are added.
197 Fox and Hildegard, Illuminations, 40. Matthew Fox indicates that “[i]t is significant in Hildegard’s theology that of the three rings – Divinity, humanity and creation – humanity is placed in the center. ... Humanity is meant to be a bridge, a link, a bonding force such as a marriage ring symbolizes between Divinity and nature.” Ibid., 112-113.
198 Vision Two, 22 in Hildegard, Divine Works, 41.
encounter with Earth some theologians have understood, in new, and creative ways, how “exuberant creativity often emerges from profound destruction – from the destruction of one can emerge another as newly transformed.”¹⁹⁹ This dimension of Earth literacy now offers new horizons of meaning for understanding the Trinity, the Holy Spirit, the Incarnation and the Cross. The tension and interplay between violence and creativity, sacrifice and surprise, growth and extinction, ambiguity and stability, is part of the kenotic-kinetic intrinsic to all created life and requires a place in any ETA. If this kenotic-kinetic does not become a more established concept within theological dialogue, humanity may have a skewed vision of the cosmos (e.g., either a romantized denial of cosmic cruciformity or a truncated belief that creation is only “ruled by death”²⁰⁰) and this, in turn, will affect how we understand God and humanity. The challenge for theology today is to find a way to speak coherently and faithfully of our loving Creator’s involvement with and providential care of creation and humanity in light of evolution, predator-prey relations, extinction, the radical evil of the Holocaust, the sacrifice of the first generation stars, or every sparrow that falls to the ground (Mt 10:29; Lk 12:6). The last chapter of this thesis will assert that a new appreciation of our participation in the cosmic kenotic-kinetic will broaden our understanding of human suffering so that we can adopt a fruitful and faithful approaches to constraints, diminishment, limitations and even some suffering. Perhaps some will be able to interpret their suffering as a source for new beginnings and a way that the numinous might call them to greater intimacy. It may also help to critique modern Western cultural trends claiming that every frustration, limitation, pain or inconvenience is intolerable and must be controlled; that death should be an instantaneous passing from life to non-life; and a high and attainable goal

¹⁹⁹ O’Hara, 172.

to aim for is a suffering-free life. In addition, the unjust infliction of suffering on the most vulnerable that is concealed (and tolerated) within social structures may also be uncovered and eradicated.

The kenotic-kinetic animating cosmogenesis reveals anew the immensely transformative power hidden in the sacrifice, self-giving, and receptivity at the heart of the cosmic creative effort. Not only is the movement of destruction and creation, self-nourishment and sacrifice interwoven into the very fabric of the unfolding universe, this sacred narrative also endlessly illustrates that the cosmos responds to unavoidable disintegration and suffering through genesis and innovation. As part of this 13.8 billion year family history, humanity can resonate with this transformative principle in response to our own suffering and respond in unimaginable ways to God’s invitation to greater intimacy in the darkness before the dawn. The root of this ancient kenotic-kinetic animating an ETA is in the moment God made space in Godself for the emergence of the universe 13.8 billion years ago. This kinetic was again manifest uniquely by pre-sentient beings (i.e., through disintegration/reintegration), and then sentient beings (i.e., through suffering/emergence of novelty),\(^{201}\) and then by *Homo sapien sapiens* (i.e., through human suffering/transformation), and then even more uniquely by Christ two thousand years ago (i.e., through kenosis). The kenotic-kinetic is continuously present and is the force that is luring creation towards divinization and final fulfilment. This deep connectedness of the cosmic kenotic-kinetic to the movement of self-giving / self-affirmation of our Creator, the Incarnation, and the Spirit can inform a theological understanding of the inherent movements of sacrifice and receptivity of the cosmos. This pillar reminds humanity that as participants in and

\(^{201}\) In chapter five there is a fuller definition of what this suffering entails. This re-birth includes the emergence of novelty at the genetic, molecular, morphological, psychological or behavioral level.
contributors to cosmogenesis, our journey is unavoidably costly but it can also be deeply creative, always moving to the edges of chaos and testing the boundaries of all qualities of biological life, including human personalities. Thus, the kenotic-kinetic within an ETA speaks vibrantly and inradically new ways to how new life emerges out of suffering and death.

Conclusion: Chapter Four

Based on the Earth literacy offered in Chapters Two and Three, a functional ETA needs a fourfold foundation in order to re-imagine theological conversations concerning human suffering in an evolutionary world. Each pillar demonstrates that an ETA is not a superficial repackaging of Scripture or tradition in “green wrapping paper” via the superimposition or mapping of modern scientific language onto pre-existing classical formulations. This is most vividly understood in the modern understanding of the human offered by ecotheology: human rationality and self-awareness is a gift in which “the universe activates, reflects upon, and celebrates itself in conscious self-awareness.” Within an ETA, the first pillar, eschatological hope, affirms that God is eternally unexpected, infinitely complex, and that the cosmic narrative is ancient and unfinished. Thus, human seekers of truth with their eyes searching the farthest horizons are called to be open to ambiguity, trusting that God’s ways are not our ways (Isa 55:8), hopeful that our intelligible, good, and dynamic universe is “going somewhere,” and confident that we are participants on, and unique contributors to, this cosmic adventure. An ETA’s second and third pillars are firmly rooted in an embodied understanding of the immanence of God as is revealed in our 13.8

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billion year history. The second pillar affirms the intrinsic goodness of creation manifest in Earth’s interconnectivity, interdependence, and diversity, while the third affirms the synthesis or communion of the numinous and cosmic. By way of these three pillars, humanity is re-situated within Earth’s sacred, interdependent communion of subjects. Finally, the fourth pillar of an ETA attunes humanity to the costly creative dynamic inherent to this unfolding, sacred universe – the kenotic-kinetic – and reveals the giftedness and costliness of being re-situated. Awakening to the kenotic-kinetic and our participation in this cosmic ebb and flow could offer new avenues for humanity to re-imagine and re-engage human suffering beyond the prevailing understandings of suffering as punishment for sin, or as something to be avoided and denied at all cost, or glorified and inflicted on others. The kenotic-kinetic speaks anew of communal and individual moments of disintegration, sacrifice, suffering, and grace present in the unfolding universe that includes, but is not exclusive to, humanity. In the next chapter another category to describe and interpret suffering will be offered to help sufferers understand their experiences of the kenotic-kinetic in an evolutionary world. Divine, cosmic, and personal experiences of suffering will be explored in order to outline the ways in which cosmogenesis promises hope, empowerment, and comfort to human sufferers
Chapter Five: An Exploration of Human Suffering in Light of Cosmogenesis

Seek the eyes of Death as Lover, bestowing compassion; as Prophet, foretelling the uselessness of anything less than love.

Magdalena Gomez¹

Within the preceding four chapters, traditional descriptions and interpretations of human suffering and the cosmologies from which they arose have been offered. In addition ecocentric language, imagery, and metaphors that describe Earth as both subject and participant in cosmogenesis have been presented. This Earth literacy, cultivated within both science and theology, has enabled the construction of a new model for understanding the relations between Creator and creation and will affect how individuals engage with human suffering today.

This chapter will explore how human suffering is a unique manifestation of the kenotic-kinetic: a sacrificial pathos or cruciformity necessarily accompanying the prolific fecundity or creativity of Earth’s creative processes. However, the reader is reminded that this chapter not only offers new constructions but also is deeply connected to what was offered in the three categories in Chapter One. Without subcategories such as cosmic travail, lament, mystery, breakdown of relationality, resistance to unnecessary violence and radical suffering, the subcategories offered here would lack a depth of meaning. This new category of suffering witnessed by our planetary communion of subjects is still an exploration of the mystery of suffering; there is no pretense that a comprehensive explanation will be offered here that will be more satisfying than those in Chapter One, nor will any interpretation in Chapter Five remove the pain experienced and questions asked by those enmeshed in the anguish of that suffering. This chapter “bumps up” against the limits of human

¹Gomez, 76.
comprehension and asks the reader to embrace uncertainty and mystery through the practice of trust, an essential component of faith. Nevertheless, even though the new constructions this thesis offers cannot fully pierce the veil of mystery concerning suffering, it can explore and describe the cruciformity of creation and the suffering experienced by the Trinity in ways that will contribute to theological explorations of the phenomena of human suffering in our evolutionary world. This approach resituates personal human experience within a cosmic context to help sufferers better understand their individual experiences of suffering and their interconnectedness with the dynamic, sacrificial, and grace-filled universe story. It will be asserted that this new understanding can inspire responses to suffering that could bring forth abundant life in spite of suffering and death.

Adopting cosmogenesis as a new horizon of meaning within theological dialogues concerning human suffering is not about circumventing the mystery pervading suffering nor is it a way to judge which interpretations of suffering are ultimately “right” or “wrong;” rather, cosmogenesis reveals how theological examinations of human suffering must be equally “on the ground” (to minimize the danger that our examination of suffering will be abstracted from the concrete experiences of suffering experienced by humanity), “of the ground” (to minimize the danger that our understanding of human suffering might become separate from the inherently and necessarily violent, and ultimately creative cosmos out of

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2 The meditation of Trappist monk Thomas Merton describes and guides the practice of risk and trust in the face of mystery. “My Lord God, I have no idea where I am going. I do not see the road ahead of me. I cannot know for certain where it will end. Nor do I really know myself, and the fact that I think that I am following your will does not mean that I am actually doing so. But I believe that the desire to please you does in fact please you. And I hope I have that desire in all that I am doing. I hope that I will never do anything apart from that desire. And I know that if I do this you will lead me by the right road though I may know nothing about it. Therefore will I trust you always though I may seem to be lost and in the shadow of death. I will not fear, for you are ever with me, and you will never leave me to face my perils alone.” Thomas Merton, Thoughts in Solitude: Meditations on the Spiritual Life and Man’s Solitude before God (New York, NY: Dell Publishing Co., Inc., c1956, 1958), 103.

3 Dreyer, 133.
which humanity has emerged) and “rooted in” the suffering, compassionate heart of God.\textsuperscript{4} The goal of this chapter is to articulate various dimensions of promise offered to human sufferers that adopt cosmogenesis as a functional cosmology and allow this new cosmology to inform their understandings of suffering. Note, however, that while the full story of cosmogenesis provides a new context for understanding humanity, it is the period of emergence of sentient life (what we think of as the “birth” of a life) that provides particularly useful insights into our understanding of human suffering. The task of this chapter is not the development of an absolute argument that pre-sentient beings suffer (e.g., to provide an absolute argument for the “suffering” of rocks). Due to the theological method employed in this thesis, this chapter is instead tasked with offering a pragmatic understanding of human suffering that arises from the adoption of cosmogenesis and the recognition of the kenotic-kinetic that animates cosmogenesis; this chapter desires to do more than merely develop an understanding of suffering for the sake of understanding it.

To achieve this goal, a working definition of suffering is offered by employing several components of the hermeneutical lens outlined above, i.e., being “on the ground” and “of the ground.” From this approach and via the vital precedents offered in the three other categories, a fourth category to describe human suffering within theological discourse can be articulated: Post-Newtonian Period witnessing to the suffering inherent within cosmogenesis.\textsuperscript{5} Following an explorations of the descriptions emanating from the witness of cosmogenesis, theological interpretations of human, ecosystemic, and divine suffering will

\textsuperscript{4} The term “compassionate” is being used in a broad sense and means those who “suffering with” from the Latin roots \textit{com} (together or with) \textit{pati} (to suffer or endure).

\textsuperscript{5} The three previous categories offered in Chapter One were “Witness of Scripture and the Early Church,” “Witness of Liberative Writers,” and “Witness of the Holocaust.”
be offered. This is done in order to outline nine dimensions of promise that emerge from adopting cosmogenesis as the theological context from which to engage human suffering.

**Definition of Suffering Within the Context of Cosmogenesis**

Cosmogenesis, a twenty-first century cosmology that takes our 13.8 billion years of evolutionary history into account, hinges upon an understanding of creation as a dynamic, irreversible, ancient, sacred, and inherently costly story of both being and becoming. The universe’s journey is one imbued with creative impulses and destructive tendencies. Our new understanding of the costly creativity inherent to cosmogenesis is the result of an intensification of Earth literacy in science and theology and a gradual deepening of our ecocentric understanding of the relations between the cosmos and God that include (but are not limited to) humanity. Chapter Two and Three, in addition to the ETA constructed in Chapter Four, provides a foundation for how we can begin to understanding theologically that humanity has emerged from Earth and is both a product of, and participant in, Earth’s costly creative process; thus, this chapter will look at how human suffering is a unique manifestation of a larger cosmological dynamic, i.e., the cosmic kenotic-kinetic that couples Earth’s cruciformity and creativity. However, one must be circumspect to delineate inescapable disintegration, loss of identity, and suffering associated with Earth’s “evolutive effort”\(^6\) from exploitative, inflicted, anthropogenic suffering that is caused by “the bungling and malevolence of humanity.”\(^7\) Misconstruing the latter as the former has provided a justification for blaming innocent victims for their suffering or accepting injustice as

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\(^7\) O’Hara, 179.
“natural” or “how it has always been,” rather than labouring to alleviate sinful anthropogenic structures that cause and compound the suffering of the most vulnerable.  

Chapter Four presented an understanding of creation in terms of its participation in the kenotic-kinetic and that this term expresses the coupling of the cruciformity and creativity of our evolutionary world. Thus, disintegration, destruction, and suffering are all expressions of the kenotic-kinetic, but so, too, are joy, delight, and wonder. The former are associated with the cruciformity of creation while the latter are associated with the creativity, innovation, and genesis of the cosmos. Since the kenotic-kinetic is the coupling of destruction and genesis in our evolutionary world, all of these terms are appropriate descriptors for expressing kenotic-kinetic events; however, for this project on human suffering, the experiences of creativity (e.g., joy, wonder, and awe) associated with kenotic-kinetic events will not be explored.

A key feature in Chapter Four was the ways in which the kenotic-kinetic animates cosmogenesis. Thus, in this exploration of the shadowy side of the kenotic-kinetic (and how it affects our understanding of human suffering), all the various expressions of cosmic cruciformity can be understood in terms of their connectivity to each other – although this connectivity manifests differently in each expression. Connecting Earth’s abiotic and biotic subjects via the kenotic-kinetic is not about arguing that rocks, plants, or cats suffer as humans do; it is about resituating human suffering within the larger cosmological context of

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8 Both maladies are caused by a naïve and simplistic vision of natural selection (neo-Darwinism) which conflates sinful social structures (the tools of human oppressors) with natural forces selecting genetic and physiological traits most apt within select ecological niches.

9 This thesis does not argue that all human experiences of the kenotic-kinetic are experiences of suffering for some experiences of the kenotic-kinetic are joyful; rather this thesis understands that certain human experiences of the kenotic-kinetic involve suffering and others do not. Due to the main question of this thesis project (i.e., engagement with human suffering) the synthetic (i.e., syntropy or negentropy experienced by pre-sentient beings) or joyful aspects (exhibited by sentient beings) of the kenotic-kinetic will not be addressed.
cosmic sacrifice and genesis, and reconnecting human sufferers with their fellow suffering companions in our sacred planetary communion.

The question remains: If all of creation participates in the kenotic-kinetic, then how is this participation expressed by the many different subjects in the universe? It will be argued that manifestations of the kenotic-kinetic can be broadly grouped into two categories, i.e., 1) that which is experienced by pre-sentient subjects, and 2) that which is experienced by sentient subjects.¹⁰ This two-tiered method of categorization is hinged upon the subject’s awareness of, and response to, its participation in the kenotic-kinetic. The term “suffering” cannot accurately describe the manifestation of the kenotic-kinetic in pre-sentient subjects because they lack the necessary means for being aware of (and responding to) the kenotic-kinetic. This thesis argues that pre-sentient subjects experience the kenotic-kinetic via disintegrative, entropic experiences, including instances in which one identity is lost and another is gained.¹¹ When a rock undergoes erosion to become sediment or soil in a stream bed (enabling plants to grow), this experience of disintegration and reintegration is an expression of the kenotic-kinetic. This thesis also asserts that sentient beings are not only participating in the kenotic-kinetic, but are also aware that they are experiencing the kenotic event and can respond to their awareness. For example, when the first stars disintegrate during a supernova to give off the matter for the creation of new life forms, they are

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¹⁰ For further elaboration on how Earth literacy and ecotheology has broadened the meaning of this term, see subsection “New Horizons for Sentience” within this chapter’s investigation of ecosystemic suffering.

¹¹ Entropy is the measure of disorder, chaos or multiplicity of a system and can also be known as the natural decay of structure in a social system. Entropic experiences are crucial to the second law of thermodynamics which states that any system which is free of external influences becomes more disordered with time. Kenneth D. Bailey, “Entropy Systems Theory” in Encyclopedia of Life Support Systems (EOLSS). http://www.eolss.net/sample-chapters/c02/e6-46-01-04.pdf. Accessed May 5, 2014. Thus, entropic experiences are those that promote disorder and disintegration and constituent components of our evolutionary universe and are a vital facet of experiences of suffering and a manifestation of the kenotic-kinetic. Conversely, syntropy or negentropy is the opposite of entropy (e.g., the building up or coalescing of materials). See: Mario Ludovico, “Evolving Systems: Recognition and Description” in Syntropy 3 (2013): 24. http://www.lifeenergyscience.it/english/2013-eng-3-02.pdf. Accessed June 7, 2014.
unknowing participants in the kenotic-kinetic. However when unicellular eukaryotic organisms (e.g., Paramecia), plants, or humans experience the kenotic-kinetic, they not only participate in the event, but they are also aware (in varying degrees) of this experience and can respond to the event in ways stars cannot. The awareness of Paramecia in terms of their participation is expressed via a tendency to avoid negative stimuli and move away from noxious or less than optimal environmental conditions; plants’ awareness and response include generalized defence mechanisms that detect and avoid negative stimuli (i.e., drought, wind or touch) and pathogens. The evolution of complex physiological and behavioural capacities in Homo sapiens sapiens allows us to be aware of, interpret, and respond to noxious, painful, or lethal stimuli and threats in ways uniquely suited to our capacities. It is our Earth literacy that reveals that, even in our very distant sentient cousins (e.g., plants and paramecia), the shadowy side of Earth’s kenotic disposition manifests in their ability to perceive and avoid that which detracts from abundant life. Earth literacy has also revealed the ways in which the cosmic movement of self-sacrifice and self-affirmation became amplified in the human due to the emergence of a highly sophisticated central nervous system and brain. Thus, when pre-sentient beings participate in the cruciform dimension of the kenotic-kinetic, the term that will be used to describe this participation will be entropic experiences (i.e., disintegration of organized systems); however, when humans and other

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12 This manifestation of the kenotic-kinetic is discussed in Chapter Four. See also footnote 665.

sentient beings participate in the shadowy side of the kenotic-kinetic and are aware of their participation (via their ability to respond), the term that is used to describe this experience is “suffering.”

Drawing on both the description of the cosmic kenotic-kinetic offered in Chapter Four and the delineation between manifestations of the cruciform dimension of the kenotic-kinetic offered above, a definition for suffering will be offered to facilitate an exploration of the human expression of the destructive aspect of the kenotic-kinetic, viz., human suffering. As stated above, the nomenclature used to describe the cruciform manifestation of the kenotic-kinetic by sentient beings is “suffering,” and “human suffering” is used to describe manifestations of the shadowy side of the kenotic-kinetic in the species Homo sapien sapiens.

The following is offered as a definition of suffering as it pertains to distinctly human suffering: suffering is a complex, relational, multidimensional, tragic, fundamentally cosmic manifestation of the shadow side of the dialectic of sacrifice and genesis (i.e., the kenotic-kinetic) in sentient subjects, including humans. Human suffering, as a unique expression of the sacrificial, self-emptying aspect of the cosmic kenotic-kinetic, can be both an unshareable, potentially destructive, alienating experience, as well as an expressible, potentially transfiguring, bonding experience. Human suffering can also involve all, or any, of the following: unpleasant sensory stimuli; distressing diminishment in adaptive capabilities; unjust social, political, economic systems; unnecessary individual or social acts of violence against the well-being of creation; and painfully distorted social or physical experiences of meaning.\footnote{This definition, offered by this thesis, is influenced by many authors but two in particular. Marjorie Suchocki’s text, The Fall to Violence: Original Sin in Relational Theology, offers a direct connection between...}
Cosmogenesis is a new cosmological context, as compared to classic mechanical and anthropocentric cosmologies, that can facilitate fresh theological conversations concerning an often misunderstood or ignored facet of human existence, i.e., the unavoidable yet necessary and “good” suffering, violence, and destruction that are essentially creative when engaged within the larger horizon of cosmogenetic unfolding.\textsuperscript{15} When humanity looks to the cosmos and appreciates the kenotic-kinetic events animating cosmogenesis, we are offered new insight into our own participation in this ancient and eternal dialectic. Thus, from this new cosmological context emerges a renewed category for describing and interpreting human suffering.

Fourth Category: Post Newtonian Period (Witness of Cosmogenesis)

**New Theological Descriptions:**

Identifying, describing and interpreting the suffering inherent to evolution can be problematic when one is equipped with only the traditional theological categories constructed from within anthropocentric, mechanical cosmologies; for example, theological frameworks that understand suffering as punishment for sin are inadequate to explain suffering prior to the emergence of humanity (and thus sin). In the second chapter it was shown how humanity acquired knowledge of our cosmic birth circa the eighteenth century, and in the subsequent centuries scientists and theologians have begun to describe in great detail our emergence from Earth’s costly creative processes.\textsuperscript{16} The emergence of *Homo* humanity and creation in her vision of sin and suffering. See: Suchocki, 12; 16; 29; 48. Another important influence is Kristine Rankka, in her text *Women and the Value of Suffering*. Here she indicates that the painful experience of distorted meaning involves socially constructed interpretations made by sentient beings. See: Rankka, 50-51.

\textsuperscript{15} Berry, *Dream of the Earth*, 217.

\textsuperscript{16} For example, today we know that the cosmos and all that has emerged in the universe are characterized by differentiation, subjectivity, and communion. Swimme and Berry, 66-77.
sapiens, like all eruptions of newness in the cosmos, reveals the complexity, irreversibility, and dynamism that characterize the universe story. Our uniquely human nature models the tensions between violence and creativity, growth and extinction, ambiguity and stability that characterize the cosmos. Since humanity now comprehends the scale and scope of violence, destruction, and creaturely loss inherent within the cosmos’ 13.8 billion year unfolding and our own more recent emergence from the cruciform Earth, theological descriptions of human suffering must extend beyond purely anthropocentric visions of suffering as punishment for human sin and attend to human suffering that is a unique manifestation of the cruciformity inherent to the evolving cosmos. This new perspective is offered by a fourth category of theological descriptions.

Science tells the story of how, thanks to natural selection, billions of interesting genetic combinations have survived while billions of others have been destroyed or eliminated. Contemporary investigations of fossil records have shown that loss at an immense scale is an integral part of our cosmic family history and the emergence of newness.\(^\text{17}\) We have also begun to realize that as more complex neurologically based

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\(^{17}\) In the Permian mass extinction 248 million years ago, more than 90% of the planet’s species and many other living organisms were destroyed. See: Hillel J. Hoffman, “The Permian Extinction—When Life Nearly Came to an End,” *National Geographic*. [http://science.nationalgeographic.com/science/prehistoric-world/permian-extinction/](http://science.nationalgeographic.com/science/prehistoric-world/permian-extinction/). Accessed April 2014. However, this great death afforded new opportunities for life. The Permian loss allowed the extensive diversification of terrestrial vertebrate fauna such as insects, amphibians and reptiles. The Cretaceous–Paleogene extinction event nearly 65 million years ago saw more than half of the Earth's species, including the dinosaurs, eliminated. Again this death made space for the smaller mammals and eventually *Homo sapiens*. Currently, it is approximated that 98% of species that have ever existed are now extinct. See: Edwards, “Every Sparrow That Falls to the Ground,” 106. Today there is an added sense of urgency for we are currently experiencing an “extinction spasm at levels not seen since the transition from the Cretaceous to Tertiary Period some 60 million years ago – and it has reached those levels almost entirely as a result of human activity.” See: Christopher Southgate, “God and Evolutionary Evil: Theodicy in the Light of Darwinism,” *Zygon* 37, no. 4 (2002): 820. For scientific data affirming this, see the International Panel on Climate Change’s (IPCC) Fifth Assessment Report (Working Group I: *The Physical Science Basis*) available at [https://www.ipcc.ch/report/ar5/](https://www.ipcc.ch/report/ar5/). Accessed May 6, 2014.
pleasure/pain systems evolved, such organisms had an advantage over those with simple chemical or mechanical systems; but the cost of this innovation was the emergence of imaginative, barbarous, and extremely effective hunting, feeding, and reproductive strategies. The appearance of these strategies enabled some organisms to gain nourishment by way of eating another organism, thus causing the prey to experience pain, suffering and death. Complex feeding relationships stimulated the emergence of new psychological pain, namely, a fear of death and “nervous vigilance.” Examinations of sexual reproduction also reveal the shadow side of cosmic creativity. With the evolution of this mode of fecundity emerged intense competition for limited resources (e.g., reproductive partners; food; habitats), and painful emotions became associated with sex and parenting (e.g., jealousy, grief). With the emergence of Homo sapiens, even more complex psychological and physical pains emerged.

Within the context of natural selection, it becomes clear that we require a re-evaluation of some of our theological descriptions and interpretations of suffering, especially the primacy given to the interpretation of suffering as punishment and expiation for sin. Suffering as diminishment, disintegration, and death – i.e., some of the many manifestations of the kenotic-kinetic – is deeply woven into the tapestry of creation, and highlights the insufficiency of the previous traditional understandings of suffering as punishment or

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18 Some of the adaptations include central nervous systems, larger brains, pain receptors, and complex forms of intelligence and sentience.

19 For example, the Fluke worm, a parasitic flatworm, secures its survival at the cost of the suffering of another organism. The Ichneumon wasp lays eggs into an organism and the larvae feed on the living flesh of the host, which ultimately kills the host when the larvae are mature. John Haught indicates that upon realizing the cruel and destructive lifestyle of the Ichneumon wasp, Darwin rejected divine design for he could find no holy message in this story in the book of nature. Haught, “Evolution and the Suffering of Sentient Life,” 190. Elizabeth Johnson, however, outlines a more personal reason for Darwin’s rejection of divine design and faith in God. “More powerful yet as a dissuasion to faith was the death of [Darwin’s] beloved daughter Annie. The tragedy of her innocent suffering and his loss muted any attraction he might have for a caring, beneficent God.” Elizabeth A. Johnson, Ask the Beasts, 39.

20 Williams, 212.
expiation. The kenotic-kinetic and suffering in sentient beings existed long before the appearance of humans (and sin) in the evolutionary story, and is intimately intertwined with the emergence of newness. Thus, our evolutionary consciousness and Earth literacy require a fourth category to help describe and interpret human suffering within theological conversations today. This fourth, “Post-Newtonian” historical category witnesses to the suffering inherent within our evolutionary universe and has three thematic subcategories: the Cruciformity of Creation; Sacrifice and Labour to Bring Forth Newness; the Costly Creative Kenotic-Kinetic.

**Cruciformity of Creation**

Holmes Rolston III identifies a “cruciform naturalism” in cosmogenesis to highlight the inherent cosmic tensions that both couple and check “prolific and pathetic” cosmic tendencies.21 Suffering, claims Rolston, is “the shadow side of sentience,” and yet it is also “...all the excitement of subjectivity waking up so inexplicably from mere objectivity. Rocks do not suffer, but the stuff of rocks has organized itself into animals who experience pains and pleasures....”22 John Haught also appreciates the cruciform visage of our evolutionary world and incorporates this into his description and understanding of God:

A truly compassionate God, it would seem, is influenced deeply by all that happens in the evolutionary process. Everything whatsoever that occurs in evolution – all the suffering and tragedy as well as the emergence of new life and intense beauty – is “saved” by being taken eternally into God’s own feeling of the world. Even though all events and achievements in evolution are temporal and perishable, they still abide permanently within the everlasting empathy of God.23

We see a similar appreciation for the vital role of cruciformity in theological interpretations of human suffering in the words of ecotheologian Denis Edwards:

First, [the term cruciform as a descriptor of creation] acknowledges honestly the pain and cost of evolving creation. Second, it leads to the thought that, in the cross, God embraces not just suffering humanity but the whole of creation in its travail. Third, it can be taken as raising the question of whether all creatures are in some way to be redeemed in Christ.24

_Sacrifice and Labour to bring forth Newness_

This subcategory recognizes the sacrifice and labour involved in the emergence of newness in the universe and connects this with descriptions of human suffering. The sacrifice and labour characterizing cosmogenesis enable traditional descriptions of sacrifice, witnessing, cosmic travail, testing, and schooling (as presented in Chapter One) to be described in novel ways that may help some sufferers today. Thomas Berry in _Dream of the Earth_ suggests that all great transformations involve moments of great sacrifice that can be affiliated with the imagery of midwifery and the process of new birth.25 These embodied metaphors, alongside biblical references from an agrarian context (e.g., John 12:24), are dominant descriptors of cosmic sacrifice.26 Gloria Schaab iterates: “The procreative model of cosmic creation with its emphasis on natural processes and structures and its stance of interdependency parallels the model of human procreative process facilitated through the practice of midwifery.”27 Earth literacy and an ETA enable the terms “sacrifice” and “labour” to describe human suffering in new ways. This enabling will reinvigorate the meaning

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25 Berry, _Dream of the Earth_, 132.
26 Ibid., 136.
27 Schaab, _The Creative Suffering of the Triune God_, 180.
allotted to both terms and broaden their application to inspire new responses to suffering. Thus, this subcategory emphasizes how the universe is caught up in the laborious process of bringing forth newness from the sacrifice of another; this practical way of describing and understanding kenotic-kinetic events will deepen theological conversations concerning human suffering beyond that which is offered by anthropocentric and mechanical cosmologies.

*Costly Creative Kenotic-Kinetic*

The kenotic-kinetic animating cosmogenesis has been outlined as the final pillar of the ETA constructed in Chapter Four. This novel nomenclature, kenotic-kinetic, stands as a reminder to humanity that the creative cosmic tendencies to actualize potentialities and propensities are costly and describes anew God’s presence and activity in the laborious process that is cosmogenesis (i.e., *creatio continua* and *concursus*). Both of these dimensions need to be incorporated into our descriptions of suffering. Robert John Russell indicates that contemporary theologians such as Ian Barbour, John Haught, and John Polkinghorne have used kenotic theology to facilitate descriptions of God’s response to the cruciformity in creation and “... extend it to include the whole sweep of life on earth.”28 They use the kenosis of Christ as a model for describing (albeit partially) human suffering. What is offered here is a reminder that creation is animated by the kenotic-kinetic and thus, human suffering can be informed by both the incarnation and by the experience of other-than-human suffering, regardless of whether the subject is a star that must “die” so that heavy elements can form in its supernova, or a rabbit sacrificed within its complex relationship with its predator, the fox.

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28 Robert John Russell, “Natural Sciences,” 337. John Polkinghorne edited a text called *The Work of Love: Creation as Kenosis* (2001) that was dedicated to exploring all aspects of creation (including suffering) with respect to kenosis.
These are all distinct modalities of the inherent kenotic disposition that enables transformation and genesis in Earth’s evolutionary processes. Humanity manifests a unique experience of the world via its more complex information processing, pattern recognition, and information storing systems, and concomitantly has an intensified awareness and experience of the kenotic-kinetic animating the universe. Thus, any consideration of human suffering must be situated within a larger creative horizon or “arc”\textsuperscript{29} that is animated by the kenotic-kinetic. This will allow a new appreciation of the experiences of all the concomitant “victims” or “casualties” of cosmogenesis,\textsuperscript{30} and will help sufferers understand that they are not alone or abandoned in their suffering, i.e., they are part of a planetary communion of compassionate subjects.\textsuperscript{31}

This fourth category describing the suffering intrinsic to our evolutionary universe, enables theological discourse to envision and employ the terms “cruciformity, sacrifice, labour, and the kenotic-kinetic” within creation to describe human suffering today. In the following section, these new terms and descriptors (and the images they conjure) will be used to invigorate theological interpretations of human suffering.

**New Theological Interpretations:**

Theological interpretations of human suffering in the twenty-first century are achieved through a comprehensive Earth literacy guided by an ecological-theological

\textsuperscript{29} Berry, 217.

\textsuperscript{30} Southgate, “God and Evolutionary Evil,” 806.

\textsuperscript{31} The etymology of compassion indicates that the root of this term is the Latin term *compati* and *compassio* meaning “suffer with.” For this thesis the term “compassionate” is being used to describe subjects who “suffer with” another within the 13.8 billion-year cosmic communion. Thus other-than-human subjects (e.g., rocks) are compassionate in that they endure deterioration and disintegration with the rest of creation including humans (e.g., as humans age they undergo biological and psychological deterioration). However, the distinct expression of compassion that humans exhibit towards each other (e.g., the feeling or emotion that a human feels in response to the suffering of others that often motivates a desire to help) is not the same expression that rocks exhibit (i.e., the uninhibited participation in the cosmic processes of disintegration or entropic experiences), nor does it have to be.
anthropology that recognizes and engages all three primary mediations developed in Chapter Four. Thus, modern theological engagement with the mystery of human suffering requires an integrative tri-fold approach: an exploration of human suffering, ecosystemic suffering, and divine suffering. From a pluralistic approach, cosmogenesis offers nine dimensions of promise to those who suffer today.

In keeping with the thesis’ commitment to being on the ground, of the ground, and rooted in the heart of God, this section will be organized by three metaphors designed to contextualize the perspectives offered by each commitment: to be on the ground, we will look in the mirror at the reflection of the biospiritual human person; to be of the ground, we will look out the window at the rest of creation; and to be rooted in the heart of God, we will look to the Creator for a map of our pilgrimage. This first orientation – i.e., an intimate look in the mirror at our human personhood – is necessary in order to maintain a concrete connectivity with the human subjects who are suffering, rather than merely presenting an abstract theoretical exploration of suffering. It also reminds readers that there are many dimensions to the self, i.e., personal, familial, communal, planetary and cosmic; however, we must begin by examining closely that which is most intimate and familiar (i.e., human suffering) and then work our way outwards to explore that which is pushing the boundaries of our human rationality (i.e., ecosystemic and divine suffering). Next, looking out the window is imperative because contemporary theological conversations concerning human suffering cannot ignore the way in which the human subject has emerged from Earth; nor the

32 These are unique manifestations of the three mediations offered in Chapter Four as they pertain to suffering: Divine-human relations (map); inter-human relations (mirror); and human-creation relations (window).

33 This mirror-window-map metaphorical framework was initially imagined by social innovator Carolyn Taylor as a way to understanding human existence in the twenty-first century. Ms. Taylor graciously agreed to let me employ it in this chapter as an organizational schema.
interconnectivity of human, ecosystemic, and divine suffering. We must gaze upon the cruciformity present within the planetary ecosystems, since humanity has evolved from Earth’s systems and some of our suffering is a manifestation of the kenotic-kinetic animating cosmogenesis. Human suffering cannot be understood in isolation from the suffering inherent in the cosmos. Looking outwards upon creation identifies a singular and sacred story of kinship that strengthens our acuity of the human perception of suffering within a planetary communion of compassionate subjects; this perspective will address the myopia causing humans to inflict suffering on those deemed “other,” both within our human and other-than-human communities. The final orientation stems from the realization that cosmogenesis is a sacred, unfolding narrative that is not finished. All of creation is being continually moved toward fulfilment by its Creator. Thus, a map for the sacred narrative is an appropriate metaphor for guiding theological conversations concerning human suffering. It will be shown that divine suffering is part of the topography of this map and emerges from contemporary understandings of the Trinity, the Incarnation and risen Christ, and the Cross.

The Mirror: Human Suffering

I’m not feeling very hopeful these days, about selfhood or anything else. I handle the outward motions of each day while pain fills me like a puspocket and every touch threatens to breach the taut membrane that keeps it from flowing through and poisoning my whole existence. Sometimes despair sweeps across my consciousness like luna winds across a barren moonscape. Ironshod horses rage back and forth over every nerve. Oh Seboulisa ma, help me remember what I have paid so much to learn. I could die of difference, or live – myriad selves.

Audre Lorde

34 Here, Lorde is referring to the African goddess Seboulisa, the mother of us all, and in the first stanza of her poem “Dahomey,” she intimately connects this deity with her own struggles with breast cancer. “It was in Abomet that I felt the full blood of my father’s wars and where I found my mother Seboulisa standing with outstretched palms hip high one breast eaten away by worms of sorrow magic stones resting upon her fingers dry as a cough.” Audre Lorde, The Collected Poems of Audre Lorde (New York, NY: W. W. Norton & Company, 2000), 239.

The metaphor of looking in the mirror to explore the human face of suffering requires outlining a human account of suffering, such as the silhouette of suffering cast by Audre Lorde. Lorde’s personal narrative accounts how one particular woman, who struggled against racism, sexism, and other forms of oppressive thought patterns and societal structures, found healing and new life in spite of suffering and death. She wrote poignantly of her efforts to integrate her experience of suffering with cancer into her life story, and in this struggle, she revealed that her most vibrant source of resistance and healing was her deep connectivity with Earth, fellow artisans and activists, and Black women. She offered the world her journey of awakening in her journal documenting her life with, and death from, cancer. Through her life, love, and work, this Caribbean-born feminist, activist, and poet offers new descriptions of personal suffering and outlines many dimensions of the promise of cosmogenesis to human persons who suffer.

**Audre Lorde Gives Voice to the Sacred Communion of Compassionate Subjects**

I have been blessed to believe passionately, to love deeply, and to be able to work out of those loves and beliefs. Accidents of privilege allowed me to gain information about holistic/biological medicine and their approach to cancers, and that information has helped keep me alive, along with my original gut feeling that said, *Stay out of my body.* For me, living and the use of that living are inseparable, and I have a responsibility to put that privilege and that life to use.... If one Black woman I do not know gains hope and strength from my story, then it has been worth the difficulty in telling. *Audre Lorde*  

Cosmogenesis embraces the principle that Earth, as a manifestation of the costly creative processes of the unfolding cosmos, is imbued with and animated by the Spirit; Earth, and the humans who dwell on Earth, form a planetary communion of suffering subjects and not a collection of inert, anesthetized objects. Yet what consolation does this bring to those

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37 Ibid., 130.
who suffer, including Audre Lorde? Lorde will be our guide, demonstrating how a
reconnection with the sacred, creative currents of the cosmos made manifest and sustained
within a communion of subjectivity connects a sufferer to an ancient source of
transformative power. In the case of Lorde, the planetary communion of subjectivity is
represented by the communion of women who shared Lorde's deep connection with the
divine Mother, her desire for truth and justice, and her appreciation of embodied eros. Lorde
is clear that by reconnecting as a communion of women who are in touch with Earth and who
are compassionate – i.e., who share in the experience of suffering and stand in solidarity with
the sufferer – one can find one's voice and escape the intense loneliness, invisibility, and
pressures of conformity that face women in general (but more especially women suffering
from cancer):

May these words serve as encouragement for other women to speak and to act out of
our experiences with cancer and with other threats of death, for silence has never
brought us anything of worth. Most of all, may these words underline the possibilities
of self-healing and the richness of living for all women.38

In her journal, Lorde expresses an appreciation for the shadow side of the immense
cosmic creativity – namely, bodily destruction, violence, diminishment, and alienation – and
yet holds her appreciation in tension with an embodied love and wonder at the sacred healing
power (i.e., eros) within creation.39 Even in the sterility of a hospital in Switzerland, she
offers her readers a glimpse of her Earth-centred, erotic spirituality that does not shy away
from the pain:

Then at 4:30 in the morning, her little fingers of [moon]light reached under the lined
window curtains, and I got up as if bidden and went out onto the terrace to greet her.


39 For a fuller understanding of how Lorde defines, interprets, and uses this term see Audre Lorde,
The night was very very still; she was low and bright and brilliantly clear. I stood on the terrace in my robe bathed in her strong quiet light. I raised my arms then and prayed for us all, prayed for the strength for all of us who must weather this time ahead with me. My mother moon had awakened me, calling me out into her brightness, and she shone down upon me as a sign, a blessing on that terrace with the soft gurgle of flowing water in my ears, a promise of answering strength to be whoever I need to be. I felt her in my heart, in my bones, in my thin blood, and I heard Margareta’s voice again: “It’s going to be a hard lonely road, but remember, help is on the way.”

It is her coupling of life and death that magnifies how human sufferers share in the divine process of creation within the “poetic, artistic, intuitive” journey to healing and wholeness. Her life empowers those without a voice to draw on the embodied spiritual life force within creation that enables both a resistance to and an endurance of suffering. After being diagnosed with breast cancer, Lorde describes a key dimension of suffering in her speech “The Transformation of Silence into Language and Action,” namely the pain associated with being silenced as the “other”: by normalcy in the case of illness; by men in the case of women; by heterosexuality for those with different sexual orientations; by humanity in the case of Earth. For Lorde, these silences in her life left her disconnected and alienated from sources of healing. To remedy this, she documents her awakening to the "source of power within [her]self," to overcome her fears, speak of her experiences, and allow herself to share her suffering within a community of fellow suffering subjects – each gifted, each broken – and in return experienced liberation, even in death. This liberation from fear strengthens her and inspires her transformation in the midst of her suffering:


41 O'Hara, 229.

The women who sustained me through that period [of intense agony] were Black and white, old and young, lesbian, bisexual, and heterosexual, and we all shared a war against the tyrannies of silence. They all gave me a strength and concern without which I could not have survived intact. Within those weeks of acute fear came the knowledge – within the war we are all waging with the forces of death, subtle and otherwise, conscious or not – I am not only a casualty, I am also a warrior.

Lorde’s suffering is an opportunity for “self-revelation” within a community of female, fellow sufferers who empowered her laments and resistance. Her embodied spirituality, which she identified as eros, is the context for interpreting and responding to her pain and struggle with cancer; this consciousness and love of her own inspired body (and the many bodies -- human and other-than human -- she encounters) allowed her experience of suffering to become a space of creativity, conversion, transformation, and strength. In an earlier ground-breaking article, “Uses of the Erotic: The Erotic as Power,” she offers her readers a vision of the power of love not as an external, coercive force, but as an internally cultivated, creative, and harmonious force possessed by women. It is this innate power that will sustain a sufferer – including herself – in his or her pain:

The very word erotic comes from the Greek word eros, the personification of love in all its aspects – born of Chaos, and personifying creative power and harmony. When I speak of the erotic, then I speak of it as an assertion of the life force of women, of that creative energy empowered, the knowledge and use of which we are now reclaiming in our language, our history, our dancing, our loving, our work, our lives.

Lorde’s belief in the sacred Goddess who is the source of all that is, and her understanding of the power held by secular woman as power-with versus power-over, enables a contemporary ecotheological understanding of how the animating, vivifying, creative Spirit works in light

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43 Lorde indicates there was a three-week period between the “telling and the actual surgery,” and this was a three-week period of agony and intense “involuntary reorganization” of her life. Ibid., 40.
44 Ibid., 41.
45 Ibid., 42.
of the cruciformity, sacrifice, and labour of cosmogenesis. Lorde’s work can help to connect the idea of *viriditas*, offered by Hildegard of Bingen, with inspirted bodies of human sufferers – and this offers hope. In the process of immersing themselves deeply within Earth’s vivifying current of costly creative power and trusting their broken yet beautiful bodies as extensions of Earth, sufferers can find peace, transformation, and wholeness, even in the face of death.\(^47\)

Audre Lorde worked passionately, loved ardently, felt deeply, battled unceasingly, and suffered intensely. Her journals reveal her understanding of how connected her suffering was with the cruciformity inherent in creation; she never gave cancer the last word nor let her experience of suffering alienate her from her creative life-force and the mother of us all – “mother Seboulisa” or “[her] mother moon” – which sustained and healed her in spite of the impending death of her body.\(^48\) Instead, Lorde chose to connect with the creative urge present in both cosmogenesis and her human communities to resist and transform the tragic dimensions of her life. Her narrative is a story of defiance and acceptance, particularity and universality, *eros* and *agape*. She lived, loved, laboured, and died as an inspirted, embodied woman, faithful to her belief in a divine Source that permeated and transcended all aspects of Earth, including her suffering and her pain.\(^49\) Her deep physical and spiritual communion with Earth as a spiritual entity, whom she called Mother or Goddess, was a vibrant source of faith, power, love, and healing for her three-year journey with cancer. Audre Lorde creatively and honestly articulated how her inspirted body lived antagonistically (i.e., the

\(^{47}\) “...in this way alone we can survive, by taking part in a process of life that is creative and continuing.” Lorde, “The Transformation of Silence into Language and Action,” 43.

\(^{48}\) See footnote 678 and 684.

\(^{49}\) Lorde, “A Burst of Light: Living with Cancer,” 76, 86.
betrayal of her breast by creating a malignant tumour)\textsuperscript{50} and at the same time tranquilly and uniquely as a unity of being (i.e., a Black, feminist, lesbian woman battling cancer). In her dark moments she cried out in lament to the divine Source of life present in and through the universe, and yet within that anguished cry, she also voiced her own personal commitments and creative abilities to transform her struggles. This illustrated her appreciation of cosmic creativity as a double-edged sword: pain and joy; tragedy and exuberance; freedom and connectivity. Lorde's consciousness informed her request of her Creator: "Do not let me die a coward, mother. Nor forget how to sing. Nor forget song is a part of mourning as light is a part of sun."\textsuperscript{51} It was her Earth-centred, embodied \textit{eros}, the sacred magnetic force drawing her to a fullness of true selfhood in all its complexities and ambiguities that enticed her to a union of all her "selves," and to be in communion with all women of colour battling cancer, racism, apartheid, and sexism.\textsuperscript{52} The depth of connectivity Lorde espoused was a firm commitment to a way of living that was animated by \textit{eros}, viz., the binding force of Earth’s connectivity. This commitment to \textit{eros} grounded how she lived and loved, and ultimately, it transformed her so that her suffering and death were true extensions of her life and ministry.\textsuperscript{53}

\textsuperscript{50} "...I had grown angry at my right breast because I felt as if it had in some unexpected way betrayed me, as if it had become already separate from me and had turned against me by creating this tumor which might be malignant. My beloved breast had suddenly departed from the rules we had agreed upon to function by all these years." Lorde, \textit{The Cancer Journals Special Edition}, 33.

\textsuperscript{51} Ibid., 55.

\textsuperscript{52} Ibid., 116. Her interpretation of \textit{eros} as a transformational life-force, “the personification of love in all its aspects,” “personifying creative power,” “creative energy empowered,” informs how she describes, interprets, and responds to her suffering. See: Lorde, “Uses of the Erotic: The Erotic as Power,” 74. She believes that \textit{eros} stimulates transformation in her inspired body and in her mutually empowering relations: "I find the erotic such a kernel within myself. When released from its intense and constrained pellet, it flows through and colors my life with a kind of energy that heightens and sensitizes and strengthens all my experience." Ibid., 76.

\textsuperscript{53} Lorde, “A Burst of Light: Living with Cancer,” 56, 62, 91, 94, 101. These are just a few references where her love of creation and beauty are expressed very clearly. These also traverse her most painful to her most joyful moments in her cancer journal.
This personal narrative of one woman’s description, interpretation, and response to suffering contributes to this thesis’ investigation by outlining the potential of an ecocentric interpretation of personal suffering, one emerging from one’s Earth literacy. Lorde’s narrative of healing and transformation, despite her physical diminishment and death, empowers a sufferer to resist placing all his or her hope and faith in purely technological fixes offered by institutionalized Western healthcare. Modern technological consciousness, Western healthcare practices, and Western contemporary expectations tend to approach suffering (e.g., disease, diminishment, and disorder) as something that should be ultimately controlled and eliminated. The Western view of suffering fails to acknowledge the unavoidable yet necessary “good” suffering and the contribution made by the complex and ambiguous personal narrative of the sufferer (i.e., addressing the many “selves” a patient possesses) in the healing and transformation process.\(^5\) In Christian ecotheology, the description of God as the magnetic force of Love animating the kenotic-kinetic of cosmogenesis invites sufferers to immerse themselves within their communion of subjectivity – e.g., women, friends, Earth, Church, family – to reconnect within the rich, invigorating Source of life present, rather than denying or avoiding suffering. God’s immanence, described by Lorde as \textit{eros} and by Hildegarde as \textit{viriditas}, is a constant reminder that death and destruction are intimate parts of the fecundity of life and love – but they never have the last word.\(^5\) Thus, Lorde is never passive or powerless in her struggle


\(^5\) Renate Craine indicates that in Hildegard of Bingen’s writings “[\textit{v}]iriditas expresses growth in fecundity which is always experienced together with \textit{ariditas}, a shriveling into barrenness.” Renate Craine, “Hildegard of Bingen: ‘The Earth Hungers for the Fullness of Justice’,” \textit{Cistercian Studies Quarterly} XXVI (1991): 121.
with cancer. Her description, interpretation, and response to her experience of suffering moved both her and the sacred community of women (of which she was a member) toward integration, wholeness, and mutually empowered loving relations in spite of her suffering and death. Her life offers all those who suffer a truth: when awakened to mutually empowering, embodied and relational, transcendentally immanent Love, a sufferer has the “energy to pursue genuine change within our world” and herself, rather than denying the existence of suffering, or dreaming of an escape from the world, or “merely settling for a shift of characters in the same weary drama.”

56 As Jesus Christ cried out in agony to the heavens from the cross at Golgotha, it was first and foremost “a cry for presence, for the felt presence of relationship in the midst of suffering.”

57 An awakening to living and loving in mutually empowering relationships within a planetary communion of subjects allows the voices of those who have been silenced or who are labouring under alienation, self-loathing, and loneliness, to be heard and their suffering named. Audre Lorde’s narrative affirms how cosmic connectedness is a deep source of healing and transformation, and how unavoidable suffering can be a potential locus for personal and communal transformation. Her narrative thus reflects one dimension of the promise offered by cosmogenesis: how mutually empowering relations within a communion of suffering subjects enables new descriptions, interpretations, and responses to suffering that can more coherently expound how tears will be turned into dancing and the dark of night dispelled by the light of love.

58 Another gift of promise offered by Lorde is the way she avoids being scandalized by her own suffering, or by the pain of others, even as she speaks of joy. She holds fruitfulness

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57 Calef, 69.
58 Lyrics from Catholic Hymn City of God. Also see Jeremiah 31:13; Psalm 30:11; John 16:20
and brokenness (manifest as suffering, disease, frustration, limitation) in a painfully realistic and yet constructively poetic tension that ought to inform modern interpretations of suffering. Her journal of her final Earthly journey manifests what ecotheology calls the “prolific and pathetic” cosmic tendencies, and this enables her to reject an understanding of suffering and death as merely unfortunate side effects to be powerlessly tolerated or as punishment for sin. For Lorde, suffering and joy, strength and weakness, and acceptance and resistance are woven into the fabric of a cruciformed communion of subjectivity; each person needs to engage this multiform and complex reality in his or her personal and communal journey toward meaning and fulfilment. Thus, Lorde's journals offer a lantern to guide this journey for sufferers dwelling in an evolutionary world. She lives vibrantly, intimately aware of the green – i.e., the powerful greening freshness – growing in the darkness, and this consciousness affects how she describes, interprets, and responds to living, loving, and dying.

The Window: Ecosystemic Suffering

In the current dialogue between science and theology, the issue of the suffering of human and nonhuman creatures takes on a new intensity, with science making it clear how predation, competition for survival, death, and extinction are built into the 3.8 billion-year-history of life on Earth.

Dennis Edwards

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60 Lorde affirms this in her definition of erotic: “The very word ‘erotic’ comes from the Greek word eros, the personification of love in all its aspects – born of Chaos....” See: Lorde, “Uses of the Erotic: The Erotic as Power,” 74.


Theological engagement of human suffering needs to be on the ground as well as of the ground due to modern society’s failure to consider that some forms of sacrifice and suffering have a necessary place in human ecology. With the rise of the mechanical, anthropocentric cosmologies and the coinciding alienation of humanity from Earth, what emerged in human mindscapes were beliefs that sacrifice, limitation, and suffering were to be denied or avoided at all cost. Elizabeth Johnson outlines the ways the hierarchical dualism associated with anthropocentric and mechanical cosmologies (those advocating the conquering and elimination of what is deemed as “other”) allows “a man to split off the dark side from his essential self, to take his mortality and dependence and project it upon the body, nature, women, the poor which he can then attempt to conquer and control.”

Darwin’s theory of natural selection further strengthened humanity’s reluctance to embrace our participation in the cosmic kenotic-kinetic when “survival of the fittest” was erroneously and perversely misapplied to social and cultural contexts to sanction unjust practices. This “social” Darwinism sanctioned the transferring of the “costs” produced by social, political, and economic progress onto the weaker members of society. As discussed in Chapter Two,

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63 Elizabeth Johnson engages this by way of Catherine Keller’s exploration of the “heroic self.” Johnson, *Women, Earth, and Creator Spirit*, 16-17.


65 Sometimes the “cost” entails discrimination, as was the case with indigenous peoples or the elimination of life itself as seen in the Holocaust. Elizabeth Johnson notes that “...once the fifth edition of *Origin* adopted the phrase ‘survival of the fittest,’ a concept coined by the English political theorist Herbert Spencer, the book’s thesis was unfortunately linked with Spencer’s philosophy of inevitable progress that entailed social winners and losers among human beings. By the turn of the twentieth century, a loose collection of ideologies had gathered under the label ‘Social Darwinism.’ These theories generally held that the powerful in society are innately better than the weak; that their success is proof of superiority; and that social progress requires action toward specific goals that control the less fit, or even eliminate them.” See: Johnson, *Ask the Beasts*, 108. However she does recognize the ambiguousness of his position; although Darwin knew all humans belong to the same species, being descended from a common ancestor, he also believed in a hierarchy of worth among humans. Ibid., 109-110.
with the rise of a dualistic Enlightenment philosophy of science, humanity’s appreciation of creation as an organic, living matrix and primary source of meaning for life diminished; it was replaced with the metaphor of Earth as an inert machine, distant from its Creator and possessing only instrumental value. The emergence of the machine metaphor further intensified anthropocentric and androcentric theological anthropologies of the Enlightenment and caused the “organic connections between human beings and the earth” to be invisible and unintelligible to the modern consciousness. 66 As a result, the human experience of suffering was cut off from its rootedness in Earth’s kenotic-kinetic of mortality and fecundity, finitude and potentiality, and death and new life. This section endeavours to look out the window upon Earth and the kenotic disposition of Earth’s planetary communion to re-awaken human theological imaginations to the presence and worth of ecosystemic suffering. This new awareness will in turn invigorate theological conversations concerning human suffering for it reminds human sufferers that a great proportion of suffering is tragic, undeserved, and outside the “theological grid of guilt and punishment.” 67 Robert J. Russell is clear that theology “must respond to the enormous challenge that suffering, disease, death, and extinction in the natural world pose to Christian faith. ...Clearly biological death is not the consequence of the Fall (Gen. 3) at the dawn of human history; instead it is constitutive of life.” 68 This new appreciation of manifestations of the kenotic-kinetic in pre-sentient and sentient beings will aid in the displacement of retribution and expiation as the predominant interpretations of human suffering.


67 John Haught indicates that “any serious encounter with evolutionary reality/science demolishes or relativizes expiatory interpretation of suffering for it realizes that the great proportion of suffering in an evolutionary world is tragic and innocent.” This, he writes, “does not fit into the theological grid of guilt and punishment offered by the Fall mythology.” Haught, “Evolution and the Suffering of Sentient Life,” 203.

To begin, this section will open with one part of Robert J. Russell’s portrait of creation:

A spider web glistens with dew in a dark night. A dull moon rises behind flowing clouds at sunset. The satiny warm water of a luxuriant coral reef teems with life in a Tahitian atoll. Clouds form on the frozen north face of the Matterhorn. The Serengeti plain streams with numberless herds of wildebeests. Penguins nest by the thousands in the Antarctic. The melody of a parrot lilts through a tropical Hawaiian jungle. Gorillas emerge from their forest to stop and look upwards at a tremendous waterfall, seeming to experience a moment of sacred space. The blistering heat floods the Australian aboriginal peoples’ sacred place, Ulluru (“Ayers Rock”). As the first chapter of Genesis proclaims, all that God creates is good, even very good.69

Russell’s wonder at the fecundity of an evolutionary world, though beautiful, demonstrates his realization that his appreciation of creation remains insufficient without looking at the shadow side of creation. Thus, Russell offers a provocative vision of the cruciformity inherent to the portrait of creation he offered above:

Still there is a “shadow side” to the world without – and within – which we also experience in daily life, and it leads us to cry out to God our Holy Redeemer. The spider web hides the terror of the trapped insect watching the impending jaws of the spider. The full moon rising might cause tidal waves that flood low-lying villages in the Pacific. The brightly-coloured coral reef is often the hunt of a reef shark, while the exquisite beauty of the jellyfish distracts us from the poison in its tentacles. Clouds forming on the face of the Matterhorn may actually come from an avalanche taking the lives of the climbers. Across the Serengeti plain, wildebeests die wrenchingly in the jaws of lions just as Antarctic penguins are sported for and then devoured by killer sharks as they leap an ice shelf into surrounding waters. Indeed, in the food chain that marks the history of life on earth most animals die an agonizing death in the jaws of predation. As Paul’s letter to the church at Rome exclaims, “We know that the whole creation has been groaning in travail together until now” (Rom 8:22).70


70 Ibid., 121.
The above two passages show how created life is prolific and magnificent as well as pathetic and tragic.\(^{71}\) The above description offers a glimpse at the many manifestations of the kenotic-kinetic (both the cruciform and creative elements) within Earth’s ecosystems; it highlights the need to look out the window of human experience into the ecosystems within which we dwell to appreciate the shadow side of the kenotic-kinetic (i.e., ecosystemic suffering) that we will encounter. This requires a robust Earth literacy and an appreciation of an ETA to allow an encounter with Earth's creativity and cruciformity to affect how we understand human suffering. Ecotheology has broadened our understanding of three main concepts – i.e., sentience, sacrifice, and hope – thereby enabling a fuller appreciation of the cruciformity inherent to Earth’s ecosystems. These contributions have in turn allowed for a more comprehensive engagement with problematic areas of our evolutionary reality, namely, an understanding of the expression of the kenotic-kinetic in pre-sentient and sentient beings, predator-prey relations, and extinction. The following section outlines some of the contributions that have been made.

**New Horizons for Understanding Sentience**

Can one speak of the suffering of a star as it explodes as a supernova, or a rock as it disintegrates? Can one speak about the suffering of a chemotactic bacterium as it swims in an acidic medium, or a carrot that is consumed, or a hare caught in the jaws of a fox? This thesis argues in the Introduction to Ecosystemic Suffering that one can connect the disintegrative experiences of a star, rock, bacteria, carrot, and hare via the kenotic-kinetic; but, the term “suffering” is only used to describe the cruciformity of the kenotic-kinetic experienced by sentient subjects (e.g., bacteria, the carrot, and the hare). The nomenclature used to describe

\(^{71}\) For a thorough investigation of tragedy and tragic vision of reality via a feminist hermeneutic, see Kristine Rankka, *Women and the Value of Suffering.*
the kenotic-kinetic in pre-sentient subjects (e.g., star, rock) is an “entropic” experience. Thus, to define experiences of the kenotic-kinetic in Earth’s ecosystems as “suffering” hinges on the ability to perceive and avoid that which detracts from abundant life, i.e., sentience.

Pre-modern understandings of suffering informed by anthropocentric and mechanical cosmologies exclude other-than-human entities from being described as “sentient” (i.e., they were living and non-living matter or objects). As non-sentient entities, these objects were excluded from possessing the ability to suffer. However, thanks to the contributors to Earth literacy in Chapters Two and Three, humanity has been able to describe the ability of other-than-human entities to perceive and respond to stimuli in novel ways. Lynn Margulis and Dorion Sagan in their essay “Sentient Symphony” indicate that perception, choice, and sensation do not only apply to human beings or animals, but also to all life on Earth. They offer many examples: microbes sense and avoid heat; certain bacteria detect magnetic fields; *Amoeba proteus* find *Tetrahymena* “delectable,” while avoiding *Copromonas*; chemotactic bacteria will swim towards sugar and away from acid; *Spiculosiphon* will select sponge spicules to make their shell rather than general sediment. Thus, Margulis and Sagan offer convincing evidence that the horizon for understanding who or what possesses sentience is much broader than that previously thought:

That bacteria are simply machines, with no sensation or consciousness, seems no more likely than Descartes’ claim that dogs suffer no pain. That bacteria sense and act, but with no feeling is possible – but ultimately solipsistic. ... Cells, alive,

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72 They indicate that life is characterized by autopoietic self-maintenance and living purposefulness, reproduction and evolution, and is manifest as five kingdoms (each revealing from a different angle the mystery that is life). However, a comprehensive definition of life is not possible; life will always transcend itself and any definition will “slip away.” Life, they indicate, “can be seen as an intricate pattern of growth and death, dispatch and retrenchment, transformation and decay” and as a living, playful, marvel of complexity and interrelationship. Thus life is far “less mechanistic” as we have been taught to believe. Margulis and Sagan, 340; 342.

73 Ibid., 342.
probably do feel. ... At even the most primordial level living seems to entail sensation, choosing, mind.\textsuperscript{74}

Evidence indicates that the gulf between \textit{Homo sapien sapiens} and other organic beings is a “matter of degree, not of kind. Taken together, the vast sentience comes from the piling up of little purposes, wants, and goals of uncounted trillions of autopoetic predecessors who exercised choices that influenced their evolution.”\textsuperscript{75} As a result, all life is capable of striving (and thus being thwarted in this striving for well-being) and confining “sentience” to the abilities of perception and response (possessed by humans) is no longer sufficient.

As demonstrated above, Earth literacy has expanded our understanding of sentience so that it now can be broadly understood as the capacity to feel and react to influences or stimuli both consciously (e.g., a human feeling the sun burning his or her skin and responding by moving into the shade) or unconsciously (e.g., a plant moving toward the sun). Margulis and Sagan indicate that animals, plants, and fungi no longer directly or consciously respond to their perception of stimuli. This is not unlike the phenomenon of muscle memory when dancers practice a routine until they are no longer consciously aware of it, but their bodies “perform” when cued. “Cells, with eons of practice, do not consciously decide to respire oxygen or reproduce by mitosis” and more complex organisms have many physiological reactions (e.g., metabolic pathways) “submerged” in their permanent unconscious.\textsuperscript{76} Thus, the inability of humans to perceive these submerged perceptions and responses to stimuli should not limit sentience to only human perception and reactions. The broadening of how we understand sentience will affect how human suffering (e.g., the thwarting of human well-being) is understood in theological conversations.

\textsuperscript{74} Ibid., 343.

\textsuperscript{75} Ibid., 344.

\textsuperscript{76} Ibid., 347.
Some Earth literate theologians have broadened the boundaries of sentience by including abiotic entities due to their ability to “feel” and react to subatomic energy events:

With primal traditions the world over, and informed by the speculative insights from the new physics, Christians can assume that sentience, understood as the capacity of energy events to feel influences, albeit unconsciously, from their submicroscopic environments, is itself characteristic of the submicroscopic energy of which mountains, rivers, stars and wind consist. Christians can affirm that there is no sharp dichotomy between sentient and insentient matter and that so-called “dead” matter is simply less sentient – less alive – than “living” matter. That is to say that nothing is really dead....

This thesis agrees with McDaniel’s position that all created subjects, including “dead” matter such as a hydrogen atom, a water molecule, or silicate minerals that make up Earth’s crust, “feel” energetic events and subatomic influences. However, in contrast to McDaniel’s position, this thesis classifies the “feeling” of energetic influences as the participation of the pre-sentient subject in the kenotic-kinetic (i.e., entropic and syntropic experiences) rather than as evidence of sentience. John Haught does not expand his vision of sentience as far as McDaniel, and this is more in line with what is being presented in this thesis. Haught indicates that sentient life, in addition to possessing “centers where feeling is registered and adaptive responses initiated,” also has “the capacity to strive, and therefore to achieve or fail.” Thus, when sentient entities in Earth’s ecosystems strive but fail to achieve fullness of being, they “suffer,” and this is a manifestation of the shadow side of the kenotic-kinetic. For example, a carrot has a less complex or intense form of perception than a human, and yet a carrot does possess an awareness of its environment. It also strives to achieve its full “carrot-

77 McDaniel, 22. McDaniel is arguing that by expanding our understanding of sentience to include “dead” matter, we will have a better understanding of how God loves creation: “...God’s love – indeed, God’s empathy – extends even to mountains, rivers, stars, and wind, or at least to the momentary pulsations of unconscious and yet sentient energy of which these material forms are vast and dynamic expressions.” Ibid.


79 Ibid., 193.
hood" (as inscribed within its genetic code). Thus, that which thwarts its creative efforts (e.g., arid soil, nutrient deficiency) is avoided when possible (e.g., root growth toward more suitable soil conditions) to maximize its survival and flourishing. Thus carrots can be understood as sentient subjects but the question remains: How does this help us to understand human suffering?

Arthur Peacocke is an ecotheologian who has explored the concept of sentience within Earth's ecosystems and broadened theological understandings of human suffering. In his essay “Biological Evolution: A Positive Theological Appraisal” Peacocke indicated that an increased sensitivity inevitably heightens the experience of suffering. Hence, any augmentation in a subject’s capacity to feel “accentuates an awareness of both beneficent and life-enhancing as well as inimical, life-diminishing elements in the world in which the organism finds itself.” In “The Cost of New Life” he developed this further by outlining how pain, suffering, and death are inevitable consequences of created life acquiring advantageous information processing and storage systems. He also delineated the difference between ecosystemic and human suffering by indicating that human beings “experience pain and suffering with a heightened sensitivity and, more than any other creatures, inflict them

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80 Margulis and Sagan comment on the limitations of this striving: “Amoeba proteus does not today set out to make itself into a mouse; it knows only that the swimming Tetrahymena it relentlessly pursues is tasty. Amoeba-knowledge at this level of sensing and moving generates a million little such willful acts.” The living purposefulness of the Amoeba is confined within the parameters of Amoeba-knowledge. This is just one example of how each organism, to varying degrees, is capable of perceiving, interpreting, and responding to stimuli and inducing change (and impacting the relationships of which they are a part). Margulis and Sagan, 345.


82 Ibid., 367.
on each other.”\textsuperscript{83} By his use of the word “accentuates” and his understanding of the gradual process of developing more complicated biological systems in the human species, Peacocke thus includes other-than-human entities as entities with the ability to suffer, although to lesser degrees (with varying levels or degrees of sensitivity or sentience, and differing abilities to process sensory data and respond to these stimuli, varying degrees of suffering can be experienced). In his articles he argues that all living, sentient beings suffer, but he does not connect this experience with the moments of sacrifice and disintegration in which pre-sentient beings participate. Also, despite this space for other-than-human suffering, Peacocke holds that the term suffering is more appropriately applied to self-conscious beings (rather than all sentient beings) because of our capacity to be empathetic.\textsuperscript{84} Nevertheless, Peacocke’s contributions to the ways in which humanity understands sentience allows for a new appreciation of suffering in Earth’s ecosystems.

Thanks to Earth literacy, the uniquely human ability to be aware our surroundings, feel influences, and respond to influences is intimately connected to the ability of other-than-human subjects to feel and respond (i.e., sentience). As a result of this new understanding of interconnectedness, ecotheologians have found sufficient evidence to argue that other-than-human sentient subjects do suffer.\textsuperscript{85} However, ecotheologians have also connected human consciousness (as an intensified manifestation of sentience) to the energy events of pre-sentient subjects. For example, Thomas Berry argues that humans are “that being in whom


\textsuperscript{84} Ibid.

\textsuperscript{85} For example, McDaniel is able to outline five scientific sources of evidence that other-than-human sentient beings experience suffering. McDaniel, 64-65.
the universe reflects on and celebrates *itself* in a special mode of conscious self-awareness."86

Thus, humanity’s special mode of consciousness (and sentience) can be described as an extension of the universe itself, including pre-sentient subjects (i.e., the first stars). Elizabeth Johnson also highlights this extension: “Human consciousness is in continuity with the energy of matter stretching back through galactic ages to the Big Bang, being a special, intense form of this energy.”87 This thesis attempts to highlight this the connectivity of humanity to our pre-sentient ancestors in the context of suffering and does so via the kenotic-kinetic. The kenotic-kinetic enables a connection to be made between sentient and pre-sentient subjects because both participate (in varying degrees) in this ancient evolutionary dynamic, and yet, remain differentiated from each other (i.e., the shadow side of the kenotic-kinetic manifests as entropic experiences for pre-sentient entities and as suffering for sentient subjects). Expanding our understanding of sentience has not only opened our eyes to ecosystemic suffering, but has also allowed human suffering to be interpreted as a unique manifestation of the cruciformity inherent to Earth’s creativity rather than a purely human experience that results from sin. Reconnecting human suffering with the suffering experienced by other-than-human sentient beings and the entropic experiences of pre-sentient subjects in Earth’s communion can teach us how to describe, interpret, and respond to suffering in an evolutionary world in new ways and inspire novel ways to understand how God cares for and redeems all created entities who participate in the cosmic kenotic-kinetic.88

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88 See: Edwards, “Every Sparrow That Falls to the Ground” 103-123.
New Horizons for Understanding Sacrifice

Earth literacy and an ETA have enabled ecotheologians to look out the window at our planetary communion and awaken to ecosystemic entropic experiences and suffering as a manifestation of the cosmic kenotic-kinetic. This manifestation is a sacrificial dialectic of receptivity (i.e., openness to, or making space for, the other in oneself)\(^9\) that couples creativity (self-affirmation or striving to flourish and build one's distinctive identity) and cruciformity (self-emptying or loss of identity). The kenotic-kinetic offers new direction for theological conversations concerning human suffering, especially concerning the ways in which humanity comprehends sacrifice. The sacrificial-creative dialectic (kenotic-kinetic) that animates cosmogenesis appreciates sacrifice and struggle alongside the beauty and flourishing of creation; it does so in a way that does not diminish or trivialize the agony and sacrifice inherent to our evolutionary world, nor erode the redemptive efficacy of Christ. Rather, cosmogenesis reveals to us that Earth’s immensely transformative or evolutionary efforts are enabled by a dialectic of receptivity (i.e., a sacrificial/constructive kenotic-kinetic). Looking out the window at the kenotic-kinetic manifest in Earth’s ecosystems can lead humanity to a new appreciation of sacrifice in its many forms, i.e., the sacrifice inherent within the emerging cosmos (e.g., interpersonal sacrifice in predator-prey relationships), the sacrifice innate to human life (e.g., intrapersonal and interpersonal sacrifice), and the sacrifice of Christ on the cross. The description of sacrifice previously offered in this chapter

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\(^9\) Denis Edwards argues that the concept of divine kenosis is “of creating space for the other” among the three persons of the Trinity. Denis Edwards, *God of Evolution: A Trinitarian Theology* (New York, NY: Paulist Press, 1999), 31-32. He also argues that since “the universe can be understood as unfolding ‘within’ the Trinitarian relations of mutual love” or divine *perichoresis*, then the universe can be understood as possessing a relational, kenotic disposition that involves being receptive to the other. Ibid., 30. This is the foundation of the concept of cosmic receptivity.
will be developed to properly situate sacrifice in theological interpretations of human suffering.\(^{90}\)

In the 1950s, J.H. Fabre outlined how labouring to bring forth new life was the “sublime law of sacrifice.”\(^{91}\) More recently, ecotheologians Elizabeth Johnson and Gloria Schaab have developed the idea of cosmic sacrificial labour using the experiences of women (i.e., child birth, struggling for justice, grief at loss, experiences of degradation) and the experience of midwifery to describe the travail of evolutionary emergence.\(^{92}\) They do this to ensure that the concept of sacrificial labour associated with procreation is not used to oppress women.\(^{93}\) They desire to expand theological descriptions and interpretations of sacrifice beyond the events of human pregnancy and childbirth and connect the sacrifice women experience throughout their lives with the sacrifice inherent within Earth’s ecosystems.\(^{94}\) Thomas Berry expands this understanding of sacrifice even further when he outlines the new spatial and temporal dimensions of ecosystemic sacrifice and cosmic receptivity:

> Everything feeds on other beings and nourishes other beings. The grass is fed by the sun and the sun is fed by energies inherent in the supernova explosion of the star, whence our sun is derived, and so back to the primordial blazing forth. All this

\(^{90}\) The previous description of sacrifice was under the subheading “Sacrifice and Labour to bring forth Newness. ”


\(^{93}\) One formidable danger of connecting theological understandings of sacrifice with the labour associated with female procreative processes is its misuse to justify the unjust, anthropogenic suffering of women due to their unique procreative capabilities. Johnson’s description of cosmic labour and creativity helps to ensure that the sacrificial labour of bringing forth newness is not shouldered by women alone and actively engages all of creation. Johnson, *She Who Is*, 266.

\(^{94}\) This inherent suffering women experience is not the experience of anthropogenic (and andropogenic) suffering which can and should be eradicated. However, it is important to note the suffering experienced by women involves both forms of suffering.
enables us to feed on grass. Fed by each other, we nourish each other. The universe is caught up in this reciprocity.\textsuperscript{95}

The reciprocity Berry is describing requires an intertwining of cosmic receptivity to the gift offered by a concurrent experience of great cosmic sacrifice. Modern theological engagement with sacrifice must appreciate the 13.8 billion-year context required to properly interpret patterns of sacrifice today. This section will use the concept of the kenotic-kinetic — the dance of creativity and cruciformity animating our unfolding universe — as a springboard to explore the barbarous and complex form of sacrifice in Earth's ecosystems, i.e., inter-heterotrophic relations, more commonly known as predator-prey relations. This exploration will help resituate human experiences of sacrifice within a broader horizon of cosmic sacrificial receptivity and uncover unjust oppression that is being hidden and justified under the distorted understanding that it is part of Earth's evolutionary efforts.

Earlier in this chapter, cosmic sacrifice was described as the labour involved in the emergence of newness in the universe. When something is created, something is lost or sacrificed. Pre-sentient entropic experiences involve the disintegration and sacrifice of a subject's present state of self-hood (e.g., star or rock) in the process of creating newness (e.g., new elements or sediment). The subjects are sacrificed (it has no choice but via its structural forces resists this disintegration) within the larger cosmological context of cosmogenesis, and thus sacrifice and genesis cannot be understood in isolation. Thus within the cosmological context of cosmogenesis, sacrifice and genesis cannot be understood in isolation. Sentient subjects participate in the kenotic-kinetic as pre-sentient subjects do and strive to become that which accords to its nature of being or becoming. Paramecia, plants, and animals resist that which thwarts well-being — but do so as participants in the kenotic-kinetic, being called

\textsuperscript{95} Berry, \textit{Befriending the Earth}, 134.
to sacrifice (intrapersonal and interpersonal forms of sacrifice) within the larger cosmological context of cosmogenesis. To better understand how humans participate in the kenotic-kinetic and how humans are being called to understand their inherent invitation to sacrificial receptivity, a particularly challenging sacrificial experience — predator-prey relations — will be explored.

Cosmogenesis reveals that, with the advent of vertebrate life, the central nervous system, and complex behaviours among organisms (e.g., increased parental care and cooperative social organizations) in the Palaeozoic Era to Cenozoic Era (540 - 65 million years ago), there arose a more acute need to reclaim materials (via the process of disintegration and reintegration) to enable the building of the highly complicated physical structures and to provide enough energy to enable this reconstruction. Thus, an immense variety of biological and structural complexity evolved by utilizing structures already existing. This was achieved by modification (via biological evolution) or incorporation (via feeding). This in turn brought forth intricate feeding relationships, including predator-prey relations, and these trophic relations were new manifestations of the sacrificial dynamic that is an expression of the kenotic-kinetic. For example, the spider and fly are participants in the kenotic-kinetic manifest as a predator-prey relationship and represent a microcosm of the larger kenotic-kinetic; their fates are deeply connected within the dynamic flow of fecundity and cruciformity inherent within Earth’s ecosystems. Both spider and fly are receptive to

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96 Arthur Peacocke indicates that since the availability of matter is limited and the incorporation of preformed complex structures into the fabric of an organism increases survival rates, then recycling matter via ingesting other organisms is a viable mechanism to employ. Peacocke, “Biological Evolution: A Positive Theological Appraisal,” 370.

97 Ibid.

98 Both organisms play crucial roles in maintaining the harmony of Earth’s ecosystems. Flies act as pollinators and decomposers (laying eggs in dead matter and when maggots emerge, they consume the dead organic matter to nourish their development), as well as food sources for many organisms. Spiders, as important
their genomic invitation to participate in the kenotic-kinetic (inscribed in their genetic coding). These relationships mean making space for events of self-emptying (disintegration, loss of identity, frustration, limitation, or death) due to their finite nature and self-affirming events (the desire for self-preservation). In striving to be most “fly-like” (a particular, complex, creative emergence in the universe) a fly is caught in the web of a spider that is being as fully “spider-like” (another eruption of Earth’s creativity) as it is capable. Thus, the creativity that brought forth these novel forms of life also demands a cost. Being participants in (and receptive to) the kenotic-kinetic means that the fly will be vulnerable to the spider and in certain circumstances (e.g., when it flies into the web), it will sacrifice its self-hood. The genesis that brought forth such complexity in being (i.e., fly-ness and spider-ness in the interdependent web of life) comes at great individual cost; even though the fly vigorously resists dying to nourish the spider, the fly is consumed as a consequence of Earth’s greater creative effort. This is no comfort to the fly and explorations made here will never lessen this suffering. Nevertheless, both predator and prey are unique expressions of cosmic creativity and each participate in both the self-actualizing drive to survive, fulfilment of needs, and flourishing (within the unique parameters scripted in their DNA); and the self-emptying dynamic involving sacrifice, vulnerability, and death. Cosmic sacrificial receptivity, as a manifestation of the kenotic-kinetic, can be articulated as a necessary

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99 In the case of other-than-human sentient subjects (e.g., spiders and flies or rabbits and foxes) this participation in the kenotic-kinetic is not a conscious choice. Instead it is an unconscious, spontaneous response to their genetic coding (manifest as inherent drives in pursuit of self-interests).

100 The spider may not be vulnerable to the fly directly, however. When this isolated case is placed within a larger context (i.e., food webs where spiders are vulnerable to their natural predators such as frogs or lizards) and understood at a larger scale (spider populations being dependent on, or vulnerable to, fly populations as a food source) then the vulnerability of the spider can be recognized.
emptying or giving over of one’s identity, self-interest, and (sometimes) one’s selfhood in the creative process of bringing forth newness in oneself, one’s community, and the cosmos.

Robert John Russell’s double-sided portrait of creation serves as a reminder to humanity of the cost or sacrifice inherent in the Earth’s creativity, which includes human flourishing. However, when a spider feeds on the fly trapped in its web; or wildebeests, penguins, or rabbits fall prey to their natural predators, there is an affective inclination in a human observer to describe and interpret (and judge) this relation via an anthropocentric lens. What humanity understands as receptivity, sacrifice, choice, and justice will become the measure for interpreting and judging the observed phenomenon. Thus, through an anthropocentric lens, the prey within this ancient, complex drama of sacrifice and fecundity can seem to be unjustly sacrificed and living a futile life devoid of purpose at the whim of the cruelty in an evolutionary world that is “red in tooth and claw.”101 The reality of violence and destruction in the cruciform world is not in dispute here; Earth literacy and an ETA allows humanity to appreciate the inherent and necessary dimensions of sacrifice in new ways; re-imagine our understandings of sacrifice, justice, purpose, and choice; and recognize the limits of our intellectual capacities. This novel context for understanding human experiences of sacrifice, however, does not negate or alleviate the suffering experienced by a rabbit in the jaws of the fox nor explain why this cruciform reality evolved instead of another more benign reality. Nevertheless, cosmic sacrifice as a manifestation of the kenotic-kinetic must be acknowledged realistically, and the depth of Earth’s barbarous destruction, suffering, and death recognized (and alleviated if possible). It is argued here that this new acuity of the sacrifice and creativity inherent to the kenotic-kinetic will contribute to “… our most

profound understanding of our human situation, even if it does not bring it within reach of our rational processes."102

This section asserts that when Earth, as a communion of compassionate subjects, becomes the primary referent for understanding suffering manifest as sacrifice (including the more barbarous form of sacrifice manifest in predator-prey relations), then the sacrifice as manifest in human ecologies can be understood in new ways and be connected to a broader cosmological context. This thesis maintains that predator-prey trophic relations representing cosmic sacrifice are unique expressions of the kenotic-kinetic, i.e., the holding in tension of the movement of self-actualization103 with the dynamic of self-sacrifice.104 By examining this complex feeding behaviour one can gain insight into what Thomas Berry calls the curvature of space and the “pervasive intimacy and compassionate quality in the very structure of the universe and of earth itself.”105 He claims that human compassion has emerged from the compassion (i.e., suffer-with) woven into the fabric of our continuously creative cosmos: “... the universe bends inwardly in a manner sufficiently open so that compassion does not confine, but fosters, the creative process.”106 He states, “the entire earth community is infolded in this compassionate curve” and “finds its first expression in the physical bonding of the universe and later in the living process of the earth finds its most intimate expression in human

102 Berry, The Dream of the Earth, 220. Berry affirms that our appreciation of ecosystemic suffering as the tensions between Earth’s creative course of expansion and emergence and destructive forces of disintegration (“the tenuous balance between collapse and explosion”) will allow for a fuller understanding of human suffering. Ibid.

103 This self-actualization is understood as the drive to fulfil an organism’s biological interests as a member of an ecosystem (living, growing, procreating) and is a unique expression of the cosmic constructive forces of attraction or bonding.

104 This self-sacrifice is a unique expression of the shadow side of the kenotic-kinetic animating cosmogenesis that includes the cosmic forces of repulsion, disintegration, or destruction.

105 Berry, The Dream of the Earth, 20.

106 Ibid.
thought and affection, as well as in our art, music, and dance.” Later, Berry couples the appreciation of the creativity of creation with the cruciformity inherent to creation, i.e., the second half of the creative-cruciform dynamic that facilitates the compassionate curvature of the universe. He declares that alongside the abundant creativity of the cosmos, the “universe, earth, life, and consciousness are all violent processes.” Cosmic creativity, he asserts, has always been “associated with a disequilibrium, a tension of forces...” and prior to humanity's acquisition of immense technological powers to destroy, “the violence of the natural world was essentially creative in the larger arc of its unfolding.” This precise yet dynamic and fluid relationship between bonding-building-developing-creative forces and repulsion-disintegration-destructive forces is the kenotic-kinetic animating cosmogenesis.

For religious communities, the exploration of cosmic sacrifice as a manifestation of suffering can offer insight into the wisdom offered by the gospel of John: “No one has greater love than this, to lay down one’s life for one’s friends.” (Jn 15:13) The dialectic of self-actualization (e.g., reception of the gift of the other, nourishment, and growth) and self-sacrifice (e.g., self-emptying, disintegration, death) is not uncoupled, reminding readers of John that one must first develop and cultivate a life (self-hood according to one's genetic and cultural coding) in order to sacrifice it for one’s friend. When sacrifice (as a human experience of suffering) is designated solely as self-abnegation, the movement of self-

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107 Ibid.

108 Ibid., 216.

109 Ibid., 217. Berry indicates that “this binding curve that draws all things together simultaneously produces with the inner forces of matter that expansive tension whereby the universe and the earth continue its creative emergence into the future.” Ibid., 220.

110 In a personal conversation with Gloria Schaab at the 2013 CTSA conference, she offered that perhaps the unbridled embrace of self-actualization and self-sacrifice of other-than-human subjects (i.e., the lack of “choice”) could be a model for Christians to strive for, namely an unfettered acceptance and participation in the kenotic-kinetic of creation that is also manifest uniquely in the life, death, and resurrection of Christ.
actualization is uncoupled from the dynamic of self-sacrifice and highlights sacrifice or loss of identity to the detriment of self-affirmation or genesis.\textsuperscript{111} Such an overemphasis diminishes the transformative power of humanity to strive to become who we are called to be, and when facing experiences of suffering, human sufferers lack the ability to endure, resist, and transform their suffering. For example, feminist theology critiques patriarchal understandings of kenotic self-emptying because they can become models for the self-destructive subordination of women to men. This way of envisioning self-sacrifice often justifies suffering that should be eradicated and diminishes a woman’s perceived capacity to resist suffering.\textsuperscript{112} The elevation or valorization of self-abnegation as a way of understanding sacrifice has become a model for depicting virtuous behaviour for women and has been internalized by society, including women, to colonize and control women.\textsuperscript{113} This vision of sacrifice intensifies the suffering of women and those deemed “other” by their race, creed, gender, or species; it promotes mute resignation or passive tolerance of suffering as the ethical norm for responding to suffering, and nullifies the innate drive of active resistance to suffering that is an inherent drive within cosmogenesis. The description of ecosystemic

\textsuperscript{111} There are many examples of this in Earth’s ecosystems. One such example is when rabbits were released into new ecosystems in Australia. Since rabbits lack natural predators in Australia their populations grew exponentially and subsequently, the rabbits destroyed indigenous vegetation and cash crops at a non-renewable pace, threatening the survival of the entire ecosystem (including the well-being of the rabbit species). Thus, when the sacrificial-creative dialectic is unbalanced, Earth’s ecosystems and human ecologies languish.

\textsuperscript{112} Ivone Gebara in Out of the Depths: Women’s Experience of Evil and Salvation indicates that Jesus’ suffering often serves as justification for the misery imposed on the poor and women, and that a woman’s submission to males is predicated upon Christ’s submission to the Father. Thus sacrifice as submission and self-abnegation is perceived to be more virtuous in this patriarchal matrix where disobeying the will of male (Father) deserves punishment. See: Gebara, Out of the Depths, 113. See, also: Starhawk, “Power, Authority, and Mystery,” in Reweaving the World: The Emergence of Ecofeminism, eds., Irene Diamond and Gloria Feman Orenstein (San Francisco, CA: Sierra Club Books, 1990), 79.

\textsuperscript{113} Carolyn Merchant depicts the valorization of self-abnegation and colonization of women and Earth with the rise of the Newtonian cosmology in her text The Death of Nature. Michelle A. Gonzalez shows how the \textit{imago Dei} (as described via the lens of patriarchy) has sanctioned social norms and patterns of thinking that denigrate the image of the divine as reflected in and by a woman. See: Michelle A. Gonzalez, Created in God’s Image: An Introduction to Feminist Theological Anthropology (Maryknoll, NY: Orbis Books, 2007), 146.
expressions of the kenotic-kinetic as sacrificial receptivity, or the labour to bring forth newness, does not uncouple creative forces from destructive ones and this can help affirm a connection between self-actualization and self-sacrifice — rather than merely promoting self-abnegation alone. Thus, sacrifice can have a self-affirming dimension (at the level of the individual, ecosystem, or planet) for it is a manifestation of the kenotic-kinetic that cannot be denied or negated. As seen with Audre Lorde and in the Book of Job, the act of lament or self-affirming resistance to that which compromises self-worth and well-being can be a prayerful, faithful response to the invitation to sacrifice and suffering, and promises a life transformed, even in the face of death.¹¹⁴

The universe narrative does not advocate that we, humans, must passively sacrifice our lives for the furthering of another form of life (e.g., HIV, shark, bear). Instead, cosmogenesis supports the creative acts of self-preservation; it teaches humanity that we (as participants in cosmogenesis) can vigorously seek our self-preservation (and the resources required to do so) and learn to respond to destructive evolutionary forces in innovative ways that contribute to the flourishing of Earth’s life systems and the emergence of newness from destruction and death. Understanding the kenotic-kinetic as the context for engaging sacrifice experienced by humans does not magically eradicate or comprehensibly explain all instances of suffering; nor does it alleviate the excruciating pain of knowing a loved one is suffering from a terminal illness. Nevertheless, understanding the kenotic-kinetic animating cosmogenesis can help human sufferers to be receptive to both genesis and cruciformity and, after their devastating diagnosis, be empowered to respond, as the cosmos does, to unavoidable suffering through

¹¹⁴ For an engagement with how kenosis can be understood as a special form of vulnerability that is not a negation of self but the place for transforming oneself, see Sarah Coakley, “Kenosis and Subversion: On the Repression of ‘Vulnerability’ in Christian Feminist Writing,” in Swallowing a Fishbone? Feminist Theologians Debate Christianity, ed., Hampson Daphne (London, UK: SPCK, 1996), 82-111
genesis and innovation in order to find peace. Earth literacy and an ETA awakens sufferers to the fact that even Christ’s life, ministry, sacrifice on the cross, and resurrection did not eradicate all suffering from the cosmos, nor provide satisfactory answers to the question of why Earth’s ecosystems are animated by this costly dynamic. This does not erode the redemptive efficacy of Christ. Instead, the sacred universe story, which is the context for understanding the life, death, and resurrection of Christ, can announce the costliness of creativity; sufferers can connect to Earth’s deeply transformative force that brings new life out of suffering and sacrifice. The kenotic dynamic of creativity and cruciformity present in Earth’s ecosystems needs to be incorporated into modern theological discourses concerning sacrifice so that the fierce pain generated in individual moments of sacrifice and suffering may not obscure our recognition of the unavoidable, necessary, and “good” suffering and sacrifice that contributes to the creative unfolding of our evolutionary world.

**New Horizons for Hope**

Our world today needs a new horizon of hope that encompasses the universe, i.e., a “universe-transforming eschatology” where “all creatures find hope and eternal life in God's new creation" and humans are “eschatological companion[s].” Earth literacy in science has offered ecotheologians new ways to describe and understand creation as a dynamic “cosmogenetic process,” rather than a static, human-centred solar system – a crucial step in the formation of a new horizon of hope. Humanity has begun to comprehend how our purpose, worth, and telos are derived from and contribute to, cosmogenesis. The affirmation

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115 In the section on human suffering, Audre Lorde reminds her readers that when human sufferers are able to connect with Earth’s transformative power they can realize in their minds, hearts, and bodies how sacrifice and self-giving are never separate from creativity and rebirth.


117 O’Hara, 9.

118 Lee, 77.
of creation’s transformative potential and the re-situation of humanity offer a new way to speak of Christian hope; a dynamic, evolutionary cosmology can enable transformation and new life to become, in unprecedented ways, the cornerstone of theological interpretations of human suffering.

A static, mechanical, and purely cyclical vision of the world affirms the current status quo – i.e., acquiescing to what is perceived as the way it has always been – and precludes spontaneity, ambiguity, and co-creativity. It also envisions the ultimate Source of all potentiality or novelty as external to the ordered world and either unable or unwilling to intervene. Both responses are incongruent with the understanding of theos offered by the ETA in Chapter Four and devastating to a sufferer in need of hope in transformation from suffering to well-being and death to new life.

Human sufferers need hope that the cruciformity of this world, as painfully manifest in extinction, violence, illness, and death, does not mean that created life is futile and the Creator of this world uncaring, distant, or punitive. Instead, sufferers can be empowered by the Good News revealed by the Book of Creation; the world is open-ended, unpredictable, and moving toward fulfilment, well-being, wholeness, and peace – the essence of the Hebraic term “shalom.” Earth literacy allows sufferers to understand how their suffering is interconnected with the cruciformity of our 13.8 billion-year family history, and how their redemption – “a taste of eternal fellowship with God and salvific grace” – is intertwined with the redemption of all of creation. Thus Christian hope can be inspired through the

\[\text{In Scripture shalom is used regarding the well-being of others (Gen. 43.27, Exodus 4.18), to treaties (I Kings 5.12), in prayer for the well-being of cities or nations (Ps. 122.6, Jer. 29.7), in relations of truth and justice (Ps. 85:10; Isa. 48:18; 22; 57:19-21), to wholeness and hope (Messianic hope in the Prince of Peace) (Isa. 9:6; Micah 5:4-5), and to the time of peace (Haggai 2:7-9; Isa. 2: 1-9; 11).}\]

\[\text{Conradie, 182.}\]
appreciation of the inherent and costly movement of creation toward abundant life via the
divine presence and activity in and through cosmogenesis. Human sufferers need not deny
the cruciformity of cosmogenesis but can learn to hold it in tension with the creative and
transformative character of the sacred universe story. They can believe once more that this
cosmic story is truly “going somewhere.”\(^{121}\)

However, an important facet of cosmogenesis is the reality of extinction and this
needs to be engaged in theological investigations of suffering. Extinction is not merely the
death of an individual organism; it is the permanent eradication of an entire species. How can
this be reconciled with God who is love and the modern understanding of redemption or
shalom? Today, scientific data offers a chilling vision of cosmic loss due to extinction. We
know that in the Permian mass extinction 248 million years ago, more than 90 percent of the
planet’s species were destroyed, and the trilobites, rugose and tabulate corals, acanthodians,
placoderms, and pelycosaurs also did not survive beyond the Permian boundary.\(^{122}\) The
Cretaceous–Paleogene extinction event nearly 65 million years ago saw more than half of the
Earth’s plant and animal species, including the last non-avian dinosaurs, go extinct.\(^{123}\)
However, the genetic and ecosystemic lacuna created by these great experiences of loss
enabled the proliferation of mammals – and eventually humans. Today, however, one species
(humanity) has an unprecedented capacity for destroying Earth’s life systems. The
International Union for Conservation of Nature (IUCN) has assessed 2.7 percent percent of
species catalogued by science and identified 16,928 species worldwide as being threatened

\(^{121}\) O’Hara, 201-202.

\(^{122}\) Hillel J. Hoffman, “The Permian Extinction—When Life Nearly Came to an End.” See also:
footnote 655.

\(^{123}\) Department of Paleobiology, Smithsonian National Museum of Natural History, “The Cretaceous.”
with extinction – roughly 38 percent of those assessed.\textsuperscript{124} This high rate of extinction – due to the actions of humanity\textsuperscript{125} – will not be the primary focus of this section; rather, natural rates and experiences of extinction inherent within cosmogenesis will be explored in light of Christian hope. Current scientific data suggests that extinction occurs more frequently than pre-modern theological scholarship had imagined, highlighting the inherent costliness of cosmogenesis, and this reality needs theological attention.

Humanity now comprehends, with unprecedented clarity, that “[t]he spontaneity and fecundity of the biological world is gained at the enormous price of universal death and of pain and suffering during life.”\textsuperscript{126} Considering our more robust Earth literacy, extinction must also be included in the costliness of cosmogenesis and systematically addressed. Radical contingency within cosmogenesis demands that modern theological scholarship engage and coherently reconcile the immense creaturely loss in the evolutionary process with the goodness of creation and its loving and just Creator. It is the future, eschatological orientation offered by cosmogenesis that will enable this reconciliation. Thus, a vital element of the doctrine of redemption is offering hope in the \textit{future} when all of creation, especially those denied life (such as victims of extinction) or personhood (such as African American

\textsuperscript{124} In its latest four-year endangered species assessment, the International Union for Conservation of Nature reports that the world will not meet the goal of reversing the extinction trend by 2010. This data was taken from the Press Release "Wildlife crisis worse than economic crisis" made July 2nd, 2009. \url{http://www.iucn.org/?3460/Wildlife-crisis-worse-than-economic-crisis--IUCN}. Accessed May 5, 2014.

\textsuperscript{125} The Center for Biological Diversity reports that "99 percent of currently threatened species are at risk from human activities, primarily those driving habitat loss, introduction of exotic species, and global warming." \url{http://www.biologicaldiversity.org/programs/biodiversity/elements_of_biodiversity/extinction_crisis/}. Accessed May 5, 2013. A recent report made by the UN Intergovernmental Panel for Climate Change (IPCC) (April 2014) indicates that one of the key risks associated with climate change is biodiversity loss and increased extinction rates. See: Section 19.3.2.1 \textit{Emergent Risks Arising from the Effects of Degradation of Ecosystem Services by Climate Change}. \url{http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap19_FGDall.pdf}. Accessed April 28, 2014. The authors claim with medium confidence that "approximately 20 to 30% of plant and animal species assessed so far (in an unbiased sample) are likely to be at increasingly high risk of extinction as global mean temperatures exceed a warming of 2 to 3°C above preindustrial levels." Ibid.

\textsuperscript{126} Peacocke, “Biological Evolution: A Positive Theological Appraisal,” 370.
slaves), can experience justice, wholeness, table fellowship, and right relationship, both now and at the end times. This vision of God and a new creation brings to life the wisdom of John 15, eloquently interpreted by Elizabeth Johnson: "You are now going out into the world, and the Spirit will be with you. I am in you and you are in me, and God will be in you, and we are one. We are all one. I am the vine, you are the branches." An Earth literate worldview can evoke hope, even in the face of species extinction. It provokes new ways to imagine loss and death that a mechanistic, static understanding of the world and God cannot. Earth and all created life can be seen as developing or evolving toward the fullness of life, relative to the situation at hand, and ultimately will be re-membered and achieve fullness or completeness in God via the process of theosis: the movement towards union with God and the transformation or divinizing effect of the Spirit. Thus, cosmogenesis, as the sacred story of an unfinished world beckoned toward wholeness, fecundity, and shalom by God’s transformative grace, can contain the experience of a Mauritius Dodo, hunted to extinction, and that of a human cancer sufferer facing diminishment and death, in ways that inspire hope for redemption and fullness of life (defined by the parameters unique to each being).

However, how can this hope in a fullness of life be articulated to sufferers today? Denis Edwards argues that since all of creation, including sparrows, is intrinsically loved by the Creator and communicates Godself, although not completely, then the Spirit of God is

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127 James H. Cone in his article “God and Black Suffering” indicates that the theme of justice cannot be extricated from the concept of hope despite the painfulness of this commitment. “Black hope was not an easy hope. The idea of heaven was the means by which slaves affirmed their humanity in a world that did not recognize them as human beings. It was their way of saying that they were made for freedom not slavery.” See: James H. Cone, “God and Black Suffering,” Anglican Theological Review 90, no. 4 (Fall 2008): 703.


129 McDaniel indicates that for many sufferers, death itself is not the root of their suffering; rather, it is incompleteness or the absence of wholeness that leads us to hope that “at least for the myriad of beings who die in incompleteness,” death is not the final chapter in our own or the cosmic sacred story. McDaniel, 141.
present in love to each creature here, now, and at end times. Thus, each creature can find respite, healing, and ultimate redemption in Christ.\textsuperscript{130} The cruciformity of creation is not the entire story of creation, and theology can respond to pain with great hope: "In light of the cross, we can begin to speak of God's identification with the struggling emerging life of a creaturely world."\textsuperscript{131} Edwards uses the term redemption in a more expansive sense by including nonhuman members of creation, addressing the inherent pain of cosmic emergence, and speaking to the forgiveness of anthropogenic suffering caused by human sin. Thus, redemption is liberation from injustice, suffering, and death for all of God's creatures as Paul's letter to the Ephesians suggests: “With all wisdom and insight he has made known to us the mystery of his will, according to his good pleasure that he set forth in Christ, as a plan for the fullness of time, to gather up all things in him, things in heaven and things on earth” (Eph. 1: 9-10). Via Arthur Peacocke's understanding of panentheism, Holmes Rolston III's realistic portrayal of creation's cruciformity, and Karl Rahner's trinitarian theology, Edwards argues for a dynamic, relational, and eschatological life of God with and in creation. For Edwards, all victims of cosmogenesis permanently abide and are treasured within “the everlasting compassionate love of the Three” and are celebrated and honoured in the communion of saints.\textsuperscript{132} This is a provocative statement of faith. This vision of divinization also allows a re-imagination of the term atonement: a theological concept deeply intertwined with traditional Christian visions of suffering as expiation and punishment for sin. Earth literacy and an ETA enables atonement to be understood as an “at-one-ness” that connotes both the intermediate and ultimate transition of our world and ourselves from a

\textsuperscript{130} Edwards, “Every Sparrow That Falls to the Ground,” 104.
\textsuperscript{131} Ibid., 108.
\textsuperscript{132} Ibid., 120.
state of incompleteness, brokenness, cruciformity, and injustice to fulfilment, *shalom*, and divinization in God initiated by God’s movement toward creation in love.  

Thus all creatures are inscribed and *re-membered* (i.e., both recollected as memories and recomposed materially) in the divine life: even the fallen sparrows, the victims of extinction, and human sufferers.  

Looking out the window to appreciate ecosystemic suffering offers no ultimately satisfying answer to the mystery of human suffering, nor to the question of why this suffering world exists as it does. Nevertheless, appreciating the cruciformity inherent to creation does sharpen human acuity to the reality of suffering — including human suffering. Looking out the window also invites humanity to question human expectations of what *human* suffering entails; this questioning will challenge some distorted perceptions that we can find ultimate “solutions” to the puzzle of suffering and live a life devoid of all suffering via technological innovations or human constructions. The sacred story of the cosmos can speak to a vision of redemption for the pelican chick or the extinct Dodo as divine harmony within which the chick’s and the Dodo’s experiences are interconnected with everything else (past and future) in the universe in ways that transcend the brokenness of creation and loss of physical existence. A hope in a radically abundant life can offer solace and inspiration, and dispel the feelings of futility, worthlessness, and powerlessness a sufferer may experience. Appreciation of the kenotic-kinetic and suffering that is expressed in various forms within Earth’s ecosystems can also cultivate a life-ethic in which diminishment, frustration, and death become fruitful parts of human lives and affect the way humans live and love as fellow

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134 McDaniel, 118. Also see: Ernst Conradie’s articulation of material inscription in Conradie, 166ff.
135 McDaniel, 43.
sojourners in this sacred, costly journey. Thus, looking out the window at our cruciformly creative world characterized by sacrifice, loss, growth, and transformation, can empower human sufferers to immerse themselves in an ancient, meaningful, sacred immanent Wellspring of healing, comfort, and transformative power; we can come to believe, as Martha did, Christ’s consolation: “I am the resurrection and the life. The one who believes in me will live, even though they die; and whoever lives by believing in me will never die. Do you believe this?”

The Map: Divine Suffering

As previously stated, this thesis’s contribution to theological discourse concerning the mystery of human suffering will be “on the ground” and “of the ground;” but there is also a third requirement: it must be rooted in the suffering, compassionate heart of God. The coherence and fruitfulness of any modern theological interpretation of suffering must be appraised by both the experience of radical suffering and the belief in God who is Love. Today, our knowledge of the magnitude and diversity of human experiences of radical suffering calls into question classic articulations of divine impassibility, immutability, and omnipotence. We require theological discourses on suffering to appreciate the wisdom of Dietrich Bonhoeffer and others who proclaim that in the face of immense suffering, “only a suffering God helps.”

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137 Hans Jonas insists that “[w]e should not say anything about God that we would not be willing to repeat in the presence of the children of Auschwitz.” See: Hans Jonas as quoted in Southgate, “God and Evolutionary Evil,” 810.

138 Some examples of radical suffering include the Great Plagues, World Wars, Auschwitz, Vietnam War, El Salvador’s civil war, the dropping of atomic bombs on Hiroshima and Nagasaki, racial genocide, threats of nuclear war, hurricane Katrina, AIDS, and bioterrorism.

This section roots its investigation in the suffering, compassionate heart of God and holds itself accountable to those who have, and are, experiencing immense, radical suffering. Similar to the other sections, an opening narrative will orient the exploration, and in this instance, is offered by Elie Wiesel and François Mauriac. The former is a man who lived through the experience of the radical darkness that was Auschwitz. “Behind me, I heard the same man asking: ‘For God’s sake, where is God?’ And from within me, I heard a voice answer: ‘Where He is? This is where – hanging here from this gallows....’ That night, the soup tasted like corpses.” The latter is a Catholic novelist who allowed the experience of radical suffering to inform his understanding of God and motivate his descriptions, interpretations, and responses to suffering.

And I, who believe that God is love, what answer was there to give my young interlocutor whose dark eyes still held the reflection of the angelic sadness that had appeared one day on the face of a hanged child? What did I say to him? Did I speak to him of that other Jew, this crucified brother who perhaps resembled him and whose cross conquered the world? Did I explain to him that what had been a stumbling block for his faith had become a cornerstone of mine? And that the connection between the cross and human suffering remains, in my view, the key to the unfathomable mystery in which the faith of his childhood was lost? And yet, Zion has risen up again out of the crematoria and the slaughterhouses. The Jewish nation has

140 Readers are reminded of the connectivity of this chapter with the categories offered in Chapter One. In this section the vision of radical suffering witnessed in the post Shoah period informs this exploration of divine suffering. Where this former category is augmented is in how the lived experiences of suffering and disintegration over 13.8 billion years – human, other-than-human, and divine – are the primary sources for theological reflection. This thesis has committed to being in solidarity with those who suffer, including humans experiencing radical suffering, and this requires a remembering of the suffering for “otherwise memory is not dangerous and vision does not hold emancipatory potential.” See: Tracey J. Trothen, “Canadian Women’s Religious Issues,” in Encyclopedia of Women and Religion in North America, eds., Rosemary Skinner Keller and Rosemary Radford Ruether (Bloomington, IN: Indiana University Press, 2006), 1290.


142 François Mauriac (1885-1970) was a French Catholic novelist, essayist, poet, playwright, journalist, and Nobel Prize winner for Literature (1952). He examined the dark realities of sin and suffering in the light of God’s grace, redemption, and eternal salvation. Many of his tense, complex psychological novels and plays – e.g., Le Désert de l’amour (1925; The Desert of Love), Dieu et Mammon (1929; God and Mammon, 1936), Le Noeud de vîpères (1932; Viper’ Tangle), La Pharisienne (1941; A Woman of the Pharisees), Asmodée (a play performed in 1937) – involved religious souls wrestling with the evil of human nature and the salvation offered by God. Mauriac was also a prominent polemical writer who denounced fascism and aided the writers of the Resistance in World War II.
been resurrected from among its thousands of dead. It is they who have given it new life. We do not know the worth of one single drop of blood, one single tear. All is grace. If the Almighty is the Almighty, the last word for each of us belongs to Him. That is what I should have said to the Jewish child. But all I could do was embrace him and weep.  

In *Night*, which details his experiences during the Holocaust, Wiesel rejects the false idol of a distant, impassive God, and in doing so, he is empowered to resist and overcome suffering. Mauriac, as someone who did not experience what Wiesel did, offers a path of solidarity and compassion for those companioning sufferers, and this solidarity is achieved via a deep receptivity to suffering. Receptivity, he argues, awakens Christians to the insufficiency of a vision of a distant, impersonal God in the face of such radical suffering. God who is compassion – one who suffers with – inspires companionship and advocates a tireless labouring to uncover and dismantle oppressive social, political, and economic structures and ideologies that inflict suffering. This dual approach of empowering individual sufferers and the communion of compassionate subjects within which the sufferer dwells guides this thesis’s last dimension of a contemporary interpretation of human suffering, i.e., divine suffering as compassion.

The guiding question for this last section is the following: in a society entranced with both necrophilia and necrophobia, what sacred sources can guide and sustain more adequate, faithful, and liberative interpretations of human suffering?  

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143 Wiesel and Wiesel, xxi.

144 A useful understanding of this is offered by Beverly Wilding Harrison: Solidarity is “continuous relationship, fidelity to relationship, and mutual accountability.” Harrison, 231.

145 Dorothee Sölle uses the term necrophilia to describe the loving and glorifying of inanimate “dead” objects such as money. Necrophobia she used to describe humanity’s fear of death. Dorothee Sölle indicates that humanity’s necrophobia inspires the embrace of “banal optimism” – i.e., the elimination of anything that speaks of finitude, disability, limitation, suffering or mortality. Sölle, *Suffering*, 38.
theological conversations concerning human suffering and help sufferers today, viz.: i.)
compassion as the creative suffering of a Triune God; ii.) Incarnation as emergent
compassion; and iii.) the cosmic cross as a symbol of unconditional compassionate love.\textsuperscript{146} It
is proposed that by adopting cosmogenesis as a new functional cosmology, new life can be
breathed into core Christian constructs and theological visions of God as distant and
impassive, and human suffering as punishment for sin, can be challenged. Cosmogenesis can
also offer new ways for sufferers to name, interpret, and respond to suffering and new hope
for abundant life in an evolutionary world.

\textit{God Who Suffers}

Theological explorations of God have always stretched theological imaginations,
thinking patterns, and language. Today, considering our emerging Earth literacy and ETA,
descriptions of God have been re-imagined, and divine suffering, a previously rejected
characteristic of God, has been reaffirmed.

Research indicates that there is scriptural precedent for understanding that God does
suffer. Robin Ryan, in \textit{God and The Mystery of Human Suffering}, outlines five predominant
interpretations of suffering in Scripture offered by Daniel Simundson and Daniel Harrington
– and to this list he adds a sixth: the suffering of God.\textsuperscript{147} The God described in scripture is
dynamic, passionate, and involved in the world, but these characteristics were obscured when

\textsuperscript{146} There are more dimensions of divine suffering that cannot be addressed here. One important area
that ought to be explored at a future date is the divine suffering of the Holy Spirit. For this the work of Mark
Wallace, Elizabeth Johnson, Denis Edwards, and Gordon Kaufmann could be critically engaged. See: Mark I.
310-331; Elizabeth Johnson, \textit{Women, Earth, and Creator Spirit}, 41-60); Denis Edwards, “Ecology and the Holy
Spirit: The 'Already' and the 'Not yet' of the Spirit in Creation,” \textit{Pacifica} 13 (June 2000): 142-159; Gordon
Kaufman’s conception of God as “serendipitous creativity” in “Re-conceiving God and Humanity in Light of

\textsuperscript{147} Ryan, 20. Ryan’s inclusion of divine suffering was derived from the work of scripture scholars
Erhard Gerstenberger and Wolfgang Schrage. See: Erhard Gerstenberger and Wolfgang Schrage, \textit{Suffering},
Christian thinkers embraced Hellenistic philosophical categories, which emphasized transcendence, eternity and immutability.\textsuperscript{148} Scriptural scholars Erhard Gerstenberger, Wolfgang Schrage, and Terence Freheim also show how Scripture portrayed God as One who suffers so that humanity could know how near God is and the depths to which God loves creation.\textsuperscript{149} These theologians indicate that God shares the pain and suffering of humanity in many ways as a suffering “comrade,”\textsuperscript{150} not a sympathetic and powerless bystander,\textsuperscript{151} and that divine “suffering with” is not a deficiency in God.

Contextual theologies, such as feminist theologies, also contribute to our understanding of divine suffering. Elizabeth Johnson, in \textit{She Who Is}, offers four ways that suffering can be understood, derived from the experiences of women. These ways further elaborate biblical understandings of divine suffering, viz.: i.) the pains of childbirth to bring new life into world (Isa. 42:14); ii.) the creative travail of bringing forth justice as a painful birth process (Judg. 2:18; Ex3:7-8; Wis 10:15-19; Prvb 1:23-27); iii.) injustice and violence against women affects God with great suffering (Isa. 16:9; Jer 48:31; 36);\textsuperscript{152} and, iv.) the degradation and abuse experienced by women around the world as analogous to the cross of

\textsuperscript{148} Ryan, 46.


\textsuperscript{150} Fretheim offers three dimensions of divine suffering: God suffers \textit{because} of humanity’s rebellion (cf. chap. seven), God suffers \textit{with} people who are suffering (cf. chap. eight), and God suffers \textit{for} the people (cf. chap. nine). Ibid., 107-148.

\textsuperscript{151} Gerstenberger indicates that God’s pain “is never the wailing sympathy of an uninvolved onlooker, but the genuine pain of one who is directly affected, the suffering of a comrade, who takes upon himself a part of the burden.” Gerstenberger and Schrage, 99.

\textsuperscript{152} This unjust suffering is articulated in Scripture through the vehicle of God’s righteous anger against all that inflicts harm on the innocent. Johnson indicates that this grief is not unlike the deep pain and grief experienced by women over the loss of their loved ones. The experience of a woman’s deep pain and loss discloses something of God’s grief and compassion.
Christ.\textsuperscript{153} Johnson’s work highlights the need to include the experiences of women in any comprehensive understanding of divine suffering.

Much has been asserted concerning the nature of divine suffering: God suffers because of people’s rejection; God empathizes with the people who suffer; God suffers for the people; God suffers via costly creative processes; God’s suffering is not overwhelming, nor is God embittered by or powerless to suffering; and God as mature, divine, suffering Love is infinitely open to all that is “other” (rejoicing when joyful and grieving when sorrowful).\textsuperscript{154} When engaging with the concept of divine suffering, two aspects must be held in tension. First, in the midst of divine suffering, “God remains God” and does not sacrifice transcendence to foster this intimate communion with creation.\textsuperscript{155} Second, God’s suffering “belongs to the real order” of creation (it is not theoretical or metaphorical), but it is always shrouded in the Mystery that is God. Thus, divine suffering is also always on a different order than creaturely suffering but is still intimately connected to it.\textsuperscript{156} Nevertheless, “the great objective” of the Gospels is to reveal a God who suffers and not to glorify suffering and death. Ultimately, this God who suffers is the same God who has the power of life over death.\textsuperscript{157} God is not mired in suffering, but exhibits powerfulness in and through the vulnerability and suffering of Christ that contradicts certain assumptions about God’s ability to suffer and critiques certain understandings of power. This suffering God of scripture can

\textsuperscript{153} Johnson, \textit{She Who Is}, 254-264. In her later work she connects the suffering of Christ with the suffering of Earth more explicitly, and thus God suffers with the “groaning of creation” (Rom 8:22) as well as with the agonies experienced by women. She indicates that an “Earthy Hope” and an “ecological Christology interprets the cross, revered as the tree of life, as a sign that divine compassion encompasses the natural world, bearing the cross of new life throughout the endless millennia of dying entailed by evolution.” Johnson, “An Earthy Christology: ‘For God So Loved the Cosmos’,” 28.

\textsuperscript{154} Johnson, \textit{She Who Is}, 266.

\textsuperscript{155} Ryan, 47.

\textsuperscript{156} Ibid., 49.

\textsuperscript{157} Hall, \textit{The Cross in Our Context}, 147.
seem "very peculiar and very ungodlike to us" but must be embraced to challenge our destructive misunderstanding of power as "power over," which silences true power, i.e., mutual empowerment expressed in and through vulnerability.

Modern ecotheological scholarship has also contributed to the understanding of divine suffering. When describing God, modern ecotheological scholarship emphasizes divine connectedness, not distance; companionship, not separation; empathy, not apathy; intimacy, not absence. This emphasis will affect conversations concerning divine suffering by challenging classical understandings of God as eternal, immutable, changeless, and wholly Other. Jay McDaniel offers the following biocentric portrait of God's immanence and cooperation as a cornerstone from which he engages with the suffering of the "back-up" pelican chick:

...God is aware of, and empathetically identified with, each and every event in the divine body; be it a pulsation of energy in the depths of a star, a moment of sentience in the life of a bacterium, a moment of pleasure in the life of a deer, or an occasion of joy in an exchange between friends. Indeed, the world is immanent within, and present to, God, even as God is immanent within, and present to, the world.

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159 There is much theological debate concerning divine suffering. A vocal critic of the idea of divine suffering is Thomas Weinandy. See: Thomas Weinandy, *Does God Suffer?* (Notre Dame, IN: University of Notre Dame, 2000) and Thomas Weinandy, “Does God Suffer?” *First Things* 117 (November 2001): 35-41. Weinandy’s main argument is that since God is immutable and impassible, then God does not suffer. He claims that “a suffering God is not only philosophically and theologically untenable, but also religiously devastating.” Ibid. 35-41. Stanley Hauerwas, in his footnote concerning the work of Douglas John Hall in *Naming the Silences*, also states that he is not convinced that any “appeals to “God suffering” can or should comfort” those in distress. Hauerwas, 58. Those who offer detailed rebuttals to those who deny divine suffering include John Haught, Arthur Peacocke, John Polkinghorne, Elizabeth Johnson, Ilia Delio, Jon Sobrino, Jürgen Moltmann, and Dietrich Bonhoeffer.

160 The female white pelican lays two eggs, two days apart. This behaviour has emerged so that if the first chick dies, there would be a second, “back up” chick. This behaviour has ensured this species’ survival for almost 30 million years. However, in most cases the first pelican is usually stronger and can out compete the second chick and frequently the “back-up” chick is pushed from the nest, often resulting in its death.

161 McDaniel, 28.
John Haught indicates that the real stumbling block to reconciling our understanding of the evolutionary universe with our theological conceptions of God is “not the dangerous features of evolution but the scandalous image of God’s humility latent in the Christian sources themselves.” 162 Within the sacred story of cosmogenesis, one can discern “a momentous story” of God’s self-sacrificing love and “divine self-giving to the universe.” 163 This demands that theological language incorporates and imaginations understand the power and effectiveness of God in terms of “the revelatory image of divine vulnerability and infinite depths of divine compassion.” 164 Arthur Peacocke maintains that the only “morally acceptable and coherent” proposal put forward by an ecocentric view of suffering would be to admit that God as Creator “suffers in, with, and under the creative processes of the world in their costly unfolding in time.” 165 This shatters the idol of a god that is distant and changeless and offers instead a description of an infinitely compassionate, triune God. Ilia Delio develops this understanding in *The Humility of God* wherein she offers an exquisite portrait of a suffering God as abundant Love. God is not unmoved or radically separate from the cruciformity of creation; instead, God is present to this suffering out of an abundant love for creation. Delio’s perspective invites humanity to embrace our personal participation as compassionate subjects in cosmogenesis and to love abundantly. “We are called to let go and enter into the storm, to love as passionately, extravagantly and wastefully as God has loved...”

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163 Ibid., 404.

164 Ibid.

Her description of divine suffering is moulded by the wisdom of St. Francis who, like Hosea, “experienced the God of hesed, a God of such compassionate love that He bends low to press us to his cheek.” She is emphatic that the God of Francis is “not the God of intellectuals but a God who is so involved with his creation that it is impossible to speculate about the suffering God apart from the suffering of creatures.” Thus the God of evolution suffers due to an excess of compassion or love (ex abundantia) rather than a privation (ex carentia). She also warns that God is not who we often desire (i.e., a God who exhibits divine power by taking the cup of suffering away from our lips). She argues our humble God, powerful in powerlessness, bends low in “foolish nearness” and allows all of creation the freedom and integrity to respond to Love with love. Thus, understanding divine suffering as compassion can inspire human persons to humbly describe their own suffering as a sharing in the “violent and creative, destructive and cooperative” cost of “becoming” and address the denial of suffering and delusions of mastery that are rampant in contemporary human consciousness.

However, how does divine suffering as compassion or suffering "with" help a human sufferer? Several authors have attempted to answer this. Lutheran minister Paul Ehrman Scherer offers his understanding of how divine suffering leaves a mark on all other suffering.

I know the things that happen: the loss and the loneliness and the pain.... But there’s a mark on it now: as if Someone who knew that way Himself, because He had travelled

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168 Ibid.

169 Ibid., 95-96.

170 Ibid., 99.

171 O’Hara, 172.
it, had gone on before and left His sign; and all of it begins to make a little sense at last gathered up, laughter and tears, into the life of God, with his arms around it!^{172}

Cynthia Crysdale indicates that divine love, grounded in God suffering within creation, can empower sufferers to cooperate with God in their healing and redemption. She argues that, within the embrace of divine compassion, “we have the courage to embrace travail.”^{173} These authors offer an adequate but general sense of how a divine compassionate God could help human sufferers but it is Gloria Schaab who was able to construct a trinitarian model of the creative suffering of God that offered a detailed and pluralistic understanding of how a suffering, compassionate God helps.

**Compassion: The Creative Suffering of a Triune God**

In *The Creative Suffering of the Triune God*, Gloria Schaab affirms that the shift towards a planetary context for theology is necessary to adequately minister to those who suffer. Schaab argues that Christ’s cry of dereliction on the cross can be described as an expression of the suffering of a triune, relational God in creation. She does so leveraging the following: her model of the world and its evolutionary processes as God's incarnate body; Arthur Peacocke's language of God's suffering in, with, and under the creative processes of the universe; and Earth-centred principles (intrinsic worth, immanence of God in creation, and creation as a communion of subjects). The Christ event dramatically discloses the creative and kenotic-kinetic of divine compassion and the overflowing love of God for creation (despite the costs of such love, e.g., vulnerability, risk). God’s love does not diminish due to the suffering and death of Christ, nor does God punish humanity via the

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existence of suffering in the created world when we fail to respond to God’s invitation to love. The cost of cosmic creativity bears witness to the fidelity of divine love because experiences of cosmic death is transformed into new life — in a way that is impossible to fully comprehend by humanity. Thus, God suffers in, with, and under the costly evolutionary process of creation and this triune suffering becomes “concretely and transparently” manifest in Christ. Christ’s resurrection was not an isolated case of the transformative potential of divine suffering love; the evolutionary process reflects, albeit more dimly, creative Love and the divine compassion of the resurrection.

Schaab’s innovative work integrates the following concepts: a Trinitarian understanding of God; Arthur Peacocke’s panentheistic model of God’s relationship with creation as “in, with and under the cosmos;”; three female images for God drawn from theological, mystical, and biblical traditions of Judaism and Christianity; and a procreative model of divine travail to describe divine suffering. As a result Schaab envisions God’s presence in the world and experience of the world (including pain, suffering, and death) in a

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174 Schaab, *The Creative Suffering of the Triune God*, 136. Ilia Delio indicates that divine love “perseveres even through the storms, it waits patiently for the beloved, never giving up, always reaching out, making space for something new to happen.” See: Ilia Delio, *The Unbearable Wholeness of Being: God, Evolution and the Power of Love* (Maryknoll, NY: Orbis Books, 2013), 89. She also asserts that “[a]s divine love empties itself into the other, it empowers the other by withdrawing its own power and allowing the other to flourish as other.” Ibid., 80. Thus within an evolutionary world, the costly price of creativity bears witness to the fidelity of divine love because every cosmic death is, in some way that is impossible to fully comprehend by humanity, transformed into new life. Ibid., 85.

175 Ibid., 136.

176 Ibid., 166. Schaab indicated that Peacocke’s own relational distinctions, the Incarnate, Transcendent, and Immanent God “may be said to suffer in, with, and under the suffering of the cosmos and its creatures.” Ibid.

provocative manner: “Like a mother with the child of her womb, God in this model envelops, enfleshes, and permeates the very being of the cosmos.”\footnote{179} Schaab’s female panentheistic, procreative, triune model of the creative suffering of God allows her to delineate a differentiated model of divine suffering:\footnote{180} transcendent sympathy (divine suffering \textit{with} the cosmos), incarnate empathy (divine suffering \textit{in} the cosmos) and immanent protopathy\footnote{181} (divine suffering \textit{under} cosmogenesis).\footnote{182}

God, transcendent Mother, compassionately and eternally remembers the child in her own womb, a space made within Godself for creation, and in doing so suffers sympathetically or \textit{with} Her creation.\footnote{183} “The transcendent Mother of the universe therefore inherently senses and intimately suffers the least bit of distress that afflicts the growing life within her. Moreover, the transcendent Mother suffers her own travail in the eternal birthing

\footnote{179} Schaab, \textit{The Creative Suffering of the Triune God}, 166.

\footnote{180} Schaab affirms Peacocke’s argument, based on the Nicene Creed, that “if members of the Trinity are distinguishable in terms of their modes of creativity, they are also distinguishable in terms of their modes of suffering.” Ibid., 187.

\footnote{181} Schaab defines protopathy as “a primary suffering that is immediately produced, one that is not consequent or produced by another’s suffering. Ibid., 190.

\footnote{182} Ibid., 171-178. She writes “...God-Incarnate in Jesus the Christ must surely be regarded as suffering \textit{in} the world. Moreover, with regard to Moltmann’s crucified God, the Father could be said to suffer \textit{with} the Son in suffering death on the cross. Finally, in the Pauling reference to the travail of creation, the Spirit could be regarded as the groaning \textit{under} the birthing of creation toward full flourishing and liberation.” Ibid., 187. It is important to note that within her exploration of female images of God offered by Christianity and Judaism, the prepositions “in” “with” and “under” are often used interchangeably which causes some confusion. For example, Schaab indicates by her exploration of Elizabeth Johnson’s description of God as “She Who Is,” that “God in Transcendence” can be described as “Divine Suffering \textit{With} the Cosmos.” See: Ibid., 171. (Italics mine.) Subsequently she outlines that “the Transcendent Mother certainly suffers protopathetically \textit{under} the pangs of labour.” See: Ibid., 188. This is not a contradiction; rather, it is an affirmation that God is One in relationship to the cosmos, and the distinctive types of suffering (described by the prepositions in-with-under) “are experienced by each and all Persons of the Trinity in relation to the cosmos.” See: Ibid. This also exemplifies the limited scope that any human construct or model has to adequately describe God. The interchangeable use of prepositions does not have an impact on the efficacy of her argument. Ultimately she argues that the best description for divine suffering is that our transcendent Mother experiences sympathetic suffering (suffering “\textit{with}”), the incarnation undergoes empathetic suffering (suffering “\textit{in}”), and the immanent Spirit suffers protopathetically (suffering “\textit{under}”). See: Ibid., 187.

\footnote{183} Ibid., 132. Schaab offers a definition of sympathy: "Quality or state of Being...affected by the suffering or sorrow of another; feeling of compassion or commiseration." Ibid., 188.
process." Thus, God as transcendent Creator suffers sympathetically with the cosmos: "She is sickened morning and evening by the violence, oppression, and exploitation that ravages the developing life within her, the offspring of her love." This perspective undermines prevalent visions of God as a deity inflicting suffering as punishment from His external position or an impassible God unmoved by the personal suffering of a human being. This model of divine compassion is helpful for some sufferers who experience alienation, loneliness, and feelings of unworthiness, and who take solace from, and derive strength from, God who suffers sympathetically in their experience of suffering.

Incarnate Shekhinah, like Jesus, suffers empathetically in the developing universe and oppressed of the cosmos. Thus the suffering, rejected, despised servant of God experiences first-hand, without explicit and exhaustive communication, "the ubiquity of pain, suffering and death in the cosmos." As a result, liberation for sufferers comes "from the realization that they can identify their suffering with that of another and that another identifies with them in their pain." In some way, God knows and feels their pain. This vision of Christ suffering both the inherent suffering associated with His participation in the cosmic kenotic-kinetic and anthropogenic suffering – i.e., his passion and crucifixion – enables sufferers to know that they are not alone in their struggles. God chose to be with creation – in all the joyfulness and suffering this entails – as an "other"; and through Christ, human sufferers know God has intimate and affective knowledge of their suffering and is therefore

184 Ibid., 172.
185 Ibid.
186 Schaah offers a description of empathy: "Understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts and experiences of another...[past or present] without having the feelings, thoughts and experiences fully communicated in an objectively explicit manner." Ibid., 189.
187 Ibid.
188 Ibid.
empathetic to the suffering they are enduring. This vision of divine love as empathetic compassion can also inspire sufferers to be empowered to labour with God to find healing and transformation, even in the midst of their pain. The model of divine empathetic suffering can awaken sufferers to the healing power lying hidden in their relationships with family members, friends, school, work and the Church community, which today are often overlooked or disregarded in the pursuit of a purely technological fix for suffering. The narrative of the passion of Christ not only showed Christ's own power in vulnerability, but it also spoke of a God who trusts Godself to an "other." Another dimension is the response elicited by Christ's suffering. Both at the foot of the cross and at the hiatus of the Cross and burial, women were courageously present and prophetically resisting suffering by companioning God's suffering servant at great cost to themselves. They remained present and their compassionate companionship said to the darkness of sin and suffering that in ways beyond our comprehension, the power of love can prevail despite their utter powerlessness to alleviate the unjust suffering Jesus was enduring.189 Human sufferers can embrace and endure the physical reality of suffering and find the power to heal within the communities of compassionate companions when individuals and community's model their lives and interactions on the sacrificial dynamic and empathetic self-giving of the Trinity. This is a radical challenge to the denial and hiding (via institutionalization) of suffering in modern society. Thus, for sufferers who experience oppression and marginalization, the Incarnate One who suffers empathetically can empower both sufferers, and the communities who care for them, to be empowered in and through vulnerability.

189 This interpretation of the actions of these women stems from the inscription offered at the beginning of Mary Jo Leddy’s book Say to the Darkness, We Beg to Differ (Toronto, ON: Lester & Orpen Dennys Ltd., 1990). The inscription is the graffiti on a Queen St West wall and reads: “When we light a candle at midnight we say to the darkness we beg to differ.”
The third component of Schaab’s vision of divine suffering is immanent protopathy, which describes the experience of the Spirit who suffers under the immediate travail of the costly cosmic creativity. This mode of suffering “is not a suffering with another or a suffering in union with another. It is a primal and immediate suffering that wells up under and through the passions of those who yearn and strive for the full flourishing of human and cosmic being whenever that full flourishing is at risk of frustration or demise.” Schaab argues that it is Sophia who experiences, “with unparalleled immediacy,” that which frustrates creation’s movement toward completion and wholeness in God including that which obstructs creativity or abundant life (e.g., violent and destructive evolutionary processes, exploitation, violence, injustice, and despair). This mode of divine suffering can empower sufferers with new images of the Spirit that will fuel their insurgent need to resist their illness, limitation, frustrations and disabilities and connect with other suffering companions. An example of what this imagery entails is offered by Elizabeth Johnson:

The Spirit...is the life of the life of all creatures; the way in which everything is penetrated with connectedness and relatedness; a burning fire who sparks, ignites, inflames, kindles hearts; a guide in the fog; a balm for wounds; a shining serenity; an overflowing fountain that spreads to all sides. The Spirit is life, movement, color, radiance, restorative stillness in the din, ...Her power makes dry twigs and withered souls green again with the juice of life.

Johnson’s attention to the cosmic transformation and interior divine empowerment counters purely anthropocentric and militaristic understandings of resistance and adds a new depth to theological discourses concerning resistance and human suffering. This form of divine

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190 Ibid.
192 Modern Western society offers many visions of militaristic combat to help sufferers (especially in health care) understand how to resist that which thwarts their well-being. A manifestation of this is the slogans offered by cancer institutes (e.g., “We Will Conquer Cancer in Our Lifetime” by Princess Margaret Hospital; “Fight hard, fight tough...Fight Like a Girl!” from Choose Hope Cancer Awareness Campaign; “No One Fights Alone” from Choose Hope Cancer Awareness Campaign). These images of resistance are necessary and
compassion helps sufferers to understand their active participation in both their own transformation and that of the communities they are a part of, and the powerful presence of Sophia-God who brings new life out of death and sustains creation’s movement towards wholeness and healing in God.

Gloria Schaab's exploration of the creative suffering of the Triune God within a panentheistic paradigm uses female imagery from theological, mystical, and biblical traditions. It offers a plurality of perspectives in which divine suffering can be adequately characterized and fruitfully applied in pastoral practice. Another key area for understanding how human suffering can be rooted in the heart of God is the exploration of emergent compassion in the Incarnation and risen Christ.

*The Incarnate and Risen Christ as Emergent Compassion*

Christ of Chalcedon affirms that the life, ministry, death, and resurrection of Jesus Christ cannot be uncoupled. This is the foundation of the argument this section makes; namely, that the experience of suffering of the incarnate Christ and the rebirth proclaimed by the Risen Christ, reveal the eternal and ongoing compassion of God. God so loved the world that God chose to experience the kenotic-kinetic animating cosmogenesis, although in a radically unique way (Jn 3:16); Jesus lovingly participated in the kenotic-kinetic and responded to Earth’s inherent cruciformity (and unjust inflicted anthropogenic suffering) with the ultimate form of genesis: new life as the Risen Christ. "In the succinct words of the Nicene Creed, 'he suffered under Pontius Pilate, was crucified, died, and was buried.' No exception to perhaps the only ironclad rule in all of nature, his life ended, and in his case

meaningful to many sufferers; however, in these battles there is no place for “failure” – either you win the battle against cancer or you lose to this more powerful, foreign entity (i.e., cancer). Schaab’s expression of immanent protopathy can add empower sufferers to resist that which thwarts their well-being without alienating their material bodies (or dysfunctional elements of their bodies) and participate more fully in their healing process. This allows for a fullness of life in spite of death, diminishment, or disability.
ended terribly, unjustly, bleeding out in a spasm of state violence.”

Our Earth literacy has taught us that every created subject participates in the kenotic-kinetic and that Jesus, the Son of God, shared in this inheritance and modelled perfectly how cruciformity and creativity is never uncoupled and mourning is transfigured into dancing (Ps. 30:11).

Coupling the incarnation and resurrection as events of God’s ongoing loving desire to be with us (i.e., com-passion), rather than purely as events associated with atonement for human sinfulness, requires a descriptor that helps capture the dynamic interconnectivity of creation’s 13.8 billion-year history, the Incarnation, and the Risen Christ. This is accomplished via the descriptor “emergent compassion,” i.e., the dynamic and eternal manifestation and sharing of divine, suffering love with creation through Christ. Ecotheology grounded by Earth literacy offers new images and metaphors for advancing our understanding of the Incarnation as emergence. James Nash, within his reflection on the “Incarnation as Cosmic Representation,” explores the deep material connectivity of the Incarnation and creation in new ways:

We are embodiments of biotic history on this planet, incorporating all simpler systems in evolution. ...We carry within ourselves “the signature of the supernovas and the geology and life history of the Earth.” ...Humans are representatives of the earth, interdependent parts of nature – and this totality is what God became immersed in through association with the Representative of Humanity in the Incarnation.

He argues that since cosmogenesis speaks of human existence as emerging from Earth’s creative processes, then Jesus the Cosmic Christ can be described as a unique manifestation

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193 Johnson, *Ask the Beasts*, 201.

194 Arlen Gray offers a poignant reflection on this: “I suddenly understood that in his final death scream Jesus gathered up all of the earth’s suffering throughout all time, bound it up and presented it before the heavenly throne, not in reams of words but in a sacred package encompassing the sorrows, the sufferings, the lost dreams of all creation, all peoples, all times, all conditions, and carried it directly to the pulsing, loving heart of the living Trinity, where it is now. Jesus screams, and he, full of grace and truth, thereby took his and all anguish and transfigured it into a means of touching God.” Privately published meditation, shared in personal correspondence with Elizabeth Johnson. Published in Ibid., 205-206.

or representation of the cosmos. Nash’s understanding of Christ’s deep connectivity with creation is likewise articulated by Norman Habel in his understanding of “deep incarnation.”

If we recognize Earth as a living organism, can we also say that God became ‘incarnate’ in Earth? Does Jesus the creature represent all creation? The answer I believe, is yes! Jesus is animated dust from the ground, is that piece of Earth where God’s presence is concentrated in the incarnation. God becomes flesh, clay, Earth.

Gloria Schaab develops the understanding of “deep incarnation” further by connecting the term “emergence” from evolutionary theory with the doctrine of the Incarnation. She argues that “the most suitable context through which to consider the Incarnation is through the dynamic of emergence.” She creatively integrates the principle of emergence from evolutionary theory with Karl Rahner’s belief that creation and the Incarnation are two interrelated aspects of God’s revelation to describe the Incarnation as both the present fulfillment of creation and the future promise for the unity and integrity of the cosmos. Since the Christ of Chalcedon is fully human and fully divine, then Christ symbolizes the fully actualized unity and wholeness of creation and Creator. However, the evolutionary

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196 Nash is clear that Jesus Christ as the cosmic Christ is the “Universal Representative.” Ibid., 108. He writes that “[t]he Representation of Humanity is simultaneously and interrelationally the Representative of the Cosmos, the Cosmic Christ.” Ibid., 110.

197 Norman Habel, “A Theology of Deep Incarnation and Reconciliation,” 3. Available at http://seasonofcreation.com/wp-content/uploads/2010/04/a-theology-of-deep-incarnation-and-reconciliation.pdf. Accessed May 16, 2012. This document outlines Habel’s liturgical vision of the season of creation (which extends for the four Sundays in September that precede the Feast of St. Francis of Assisi). In it, Habel describes five ideas that are inspired by broadening and deepening traditional visions of the incarnation and these, he indicates, are crucial for Christianity today. Ibid.

198 Schaab, “Incarnation as Emergence,” 631.

199 She defines this principle as “the reality that novel forms of life which develop from more elemental forms of life are not reducible or explainable solely in terms of the form that preceded them.” Ibid.

200 Schaab indicates that in the work of Rahner, “the Incarnation exists as a ‘relationship of mutual conditioning’ between the realities of God and the world that represent the ‘climax in the development of the world towards which the whole world is directed.’” She indicates that Rahner emphasizes the fact that the Incarnation not only represents God’s definitive self-communication to the cosmos, but also the definite acceptance of the self-communication by the cosmos in Jesus Christ. Thus, this movement of God towards the cosmos and of the cosmos towards God constitute a definitive, irrevocable unity. Ibid., 634.

201 Ibid.
world is continuously creative and unfinished, and as such it groans in the pains of the labour of bringing forth new life (Rom 8:19, 22) as it awaits completion.\textsuperscript{202} In the Incarnation, God as suffering Love is “forever woven into the fabric of matter and history and continues to share in the sufferings of creation ontologically and experientially.”\textsuperscript{203} As a result, the Incarnation can be described as divine compassionate love extending backwards from Bethlehem to the Great Flaring forth when God decided to freely endow matter with “diverse potentialities” and the creative processes that move it toward “emergent complexity,” while respecting its integrity and freedom; in an ongoing act of great suffering love, God lets creation be itself.\textsuperscript{204} Thus Jesus incarnate, as emerging from these creative processes, freely and unconditionally embraced the kenotic-kinetic, i.e., all the associated anxieties, limitations, and physical hardships embedded in truly biological existence. God’s loving desire to be unreservedly incarnate or “with us” began at the moment that the celestial furnace brought forth the matter that would eventually complexify into the materials, processes, and webs of cosmic life that facilitated Christ’s conception in the womb of Mary. The many manifestations of God’s compassion emerged as the cosmos complexified and was ultimately concentrated into the Word made flesh, Jesus Christ.\textsuperscript{205} This dynamic vision of emergent compassion liberates the Incarnation from being narrowly conceived as merely a reflection on a singular event (i.e., the crucifixion) or a further development of the doctrine of atonement (since Earth’s violent and creative processes were working far before the existence of human sin).\textsuperscript{206}

\textsuperscript{202} Ibid., 634-635.
\textsuperscript{203} Ibid., 638-639.
\textsuperscript{204} Barbour, \textit{When Science Meets Religion}, 113.
\textsuperscript{205} Schaab, “Incarnation as Emergence,” 639.
\textsuperscript{206} Hall, \textit{The Cross in Our Context}, 7.
However, this new cosmological horizon for understanding the Incarnation also draws theological attention to the necessity of embracing the idea of “deep resurrection.” The outpouring of divine compassion for creation emerged in new ways in the life and ministry of Christ and continued to unfold beyond the moment of his particular physical death in the Risen Christ. Thus, in addition to extending divine compassion backward from Bethlehem to the Great Flaring forth, the emergent compassion manifest by the Risen Christ extends God's compassion forward from Golgotha to ultimate fullness of life at the eschaton. This idea unites the Risen Jesus with the entire cosmos that has been, and still is, labouring under the kenotic-kinetic to bring forth newness out of disintegration and suffering. The risen Jesus is neither separate from the materiality of the evolutionary world, nor from cosmic history. Rather, in a way that we will never completely comprehend, “the risen Christ is to be found at the very heart of creation as the concrete and effective promise that creation is indeed going somewhere, that it is already always oriented toward an eschatological end that endows the whole of it with the future promise of a definitive and redemptive ‘yes’.”

Our Earth literacy allows for a “deep” appreciation of the resurrection that speaks anew of the creative power of divine love that triumphs “over the crucifying power of evil and the burying power of death.”

How does this “deep” synthetic and proleptic understanding of the Incarnation and Risen Christ as emergent compassion address the needs of those who suffer? Ilia Delio hints at the answer to this. “In the suffering and death of Jesus we find the power to love in the

207 Johnson, Ask the Beasts, 208.
midst of suffering because love is stronger than death."\textsuperscript{210} Gloria Schaab concurs, indicating that "...in his emergence in cosmic history, Jesus has revealed to us the divine plan for the fullness of time, the summation of all things in the Christ-mystery, the mystery of the nature of the cosmos which has God as its evolutionary goal and completion."\textsuperscript{211} Thus, appreciating the incarnation and resurrection as manifestations of emergent compassion inspires human sufferers to envision divine \textit{eros} as a magnetic force drawing human sufferers and all of creation toward a fullness of life – a "new creation" – in the sacred heart of the Risen Christ. Sufferers can awaken to the immanent, transformative power of divine suffering love – compassion – in the cosmos and the existence of human and cosmic life as "potential within the very life of God."\textsuperscript{212} The coupling of the Incarnation and resurrection can proclaim anew the transformative power laying hidden in vulnerability and suffering. This can empower people living with broken bodies, domestic abuse, or within the chaos of a fractured world to hope for future health, wholeness, and fullness in the Risen Christ through the saving \textit{presence} and \textit{power} of God within their immediate lives and labours.\textsuperscript{213} Sufferers today require powerful symbols to evoke the psychic and spiritual energies within themselves and the communion of compassionate subjects (from which they are a part) to embrace, resist, and transform their suffering and brokenness into new life in Christ. The next section will

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\item[\textsuperscript{210}] Delio, \textit{The Humility of God}, 98.
\item[\textsuperscript{211}] Schaab, "Incarnation as Emergence," 642.
\item[\textsuperscript{212}] Ibid.
\item[\textsuperscript{213}] Ibid., 639. Elizabeth Johnson indicates that our Easter \textit{Alleluias} are not proclaimed only because of the good fortune of Jesus as an individual, but they are due to our realization that the destiny of Jesus is not only meant for him but for all of creation: "[Christ's] destiny means that our hope does not merely clutch at a possibility but stands on an irrevocable ground of what has already transpired in him. Life in all fullness awaits. Unimaginable as it may be, this means that salvation is not the escape of the human spirit from an existence embedded in matter, but resurrection of the body, the whole body-person, dust and breath together." Johnson, \textit{Ask the Beasts}, 207.
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assert that Earth literacy and an ETA allows one of Christianity’s most powerful symbols, the Cross, to proclaim God’s eternal compassion in fresh ways.

The Cosmic Cross as a Symbol of Unconditional, Compassionate Love

Long before humans arrived, the way of nature was already a via dolorosa. In that sense, the aura of the cross is cast backward across the whole global story, and it forever outlines the future.\textsuperscript{214}

Leo J. Donovan wrote that “[s]ome images are so powerful that, if we take time for them, they can alter our lives. The spirit hovering over the waters, the Lord who is our shepherd, the mountain on which every tear will be wiped away are such images....”\textsuperscript{215} The cross as both a symbol and historical reality is another transformative image; however how are we to perceive and understand the presence of the cross in our evolutionary world today and how do the Christian community and human sufferers themselves translate that understanding into words and deeds to aid those who suffer? Pierre Teilhard de Chardin wrestled with these questions in his retreats, journals, letters, and texts. He believed that using an evolutionary model to express the mystery of the cross did not minimize or displace the place of the cross in theology, but rather, it amplified “the truth, the power, and the irresistible appeal of the Cross.”\textsuperscript{216} Contemporary ecotheologian Ilia Delio has further developed Teilhard’s perspective, stating that the cross reveals God’s unconditional love for the world manifest as “powerful, transforming energy that heals reconciles, unites and makes whole.”\textsuperscript{217} She argues that “[w]ith arms outstretched Christ crucified embraces a sinful world disrupted by human violence, disconnected, and incomplete — a God who is radically in love

\textsuperscript{214} Holmes Rolston III, “Kenesis and Nature,” 60.
\textsuperscript{216} Teilhard de Chardin, \textit{Toward the Future}, 53.
\textsuperscript{217} Delio, \textit{The Unbearable Wholeness of Being}, 85.
Our contemporary understanding of cosmogenesis promises to revitalize this powerful symbol, which will enable the following: empower sufferers to interpret their suffering as a manifestation of the same kenotic-kinetic that continually responds to violence, destruction, and death in unexpectedly creative ways in our planetary communion; and reawaken disciples of Christ to prevailing understandings of power that fuel distorted patterns of thinking, expectations, and ethics (the foundation for social, economic, political constructs) that inflict and intensify experiences of suffering. Such an awakening must then lead to action; namely, the eradication of anthropogenic suffering that can be alleviated.

The symbol of the cross has had many meanings associated with it. For example, the cross has been appropriated by imperial powers and sovereigns to justify the conquering of the “other” manifest as non-Christians, indigenous peoples, or the poor. It has also been appropriated by patriarchal cultures to justify submission and self-abnegation of women and by contemporary pop music culture to express various meanings (e.g., power, wealth, fame, spirituality). Despite many abusive and distorted interpretations, the symbol of the cross remains as a living symbol, one open to novel interpretations; thus, Earth literacy emerging from cosmogenesis offers a new horizons of meaning for the symbol of the cross. Teilhard de Chardin, spoke eloquently of the value of the cross in an evolutionary world:

Under our very eyes, and in our hearts, I am convinced Christ-the-Redeemer is fulfilling himself and unfolding himself in the figure of Christ-the-Evolver. Thereby, too, the meaning of the Cross is taking on greater breadth and dynamism for us: the Cross which is the symbol not merely of the dark retrogressive side of the universe in genesis, but also and, even more, of its triumphant and luminous side; the Cross which is the symbol of progress and victory won through mistakes, disappointments and hard work; the only Cross, in very truth, that we can honestly, proudly and

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218 Ibid., 86.

passionately offer for the worship of a world that has become conscious of what it was yesterday and what awaits it tomorrow. 220

Another dimension of meaning for the Christian cross was its role as a concrete, real, historical monument of God’s unconditional, suffering love for both humanity and the entirety of creation: past, present and future. Douglas John Hall argues that "God is as firmly committed to the life of this world as that cross was planted in the ground at Golgotha, that is, (symbolically) at the very center of death’s apparent sovereignty." 221 The cross as a historical event was not part of a divine plan to extort guilt nor should it be interpreted as a manifestation of God’s vindictiveness or coerciveness. To do so negates the positive dimension of the Cross, namely Christ’s labour of supporting “the weight of the world in evolution” and of reconciling and unifying the world with God. 222 The cross was part of a human act (crucifixion); but it became an opportunity for God to make present and real God’s unfathomable depth of love for the world and commitment to bring eternal life, unity, and peace out of death and destruction (Jn 3:16). It is our Earth literacy that will allow Christians to imagine God’s presence, love, and commitment in new ways without losing sight of how Christ suffers and bears the sins of the world.

Cosmogenesis can describe suffering as cruciformity, sacrificial labour, and kenotic-kinetic, and these descriptions pour new meaning into Christian theology’s interpretation of the symbol of the cross in the twenty-first century. An ETA offers a framework by which to comprehend God’s self-communication revealed in the sacred narrative of cosmogenesis and this revelation speaks of bringing new life from death and destruction with unprecedented clarity. As with the eruption of Mt. St. Helens in 1980, or as forest fires burning in coastal

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220 Teilhard de Chardin, Christianity and Evolution, 163.
221 Hall, The Cross in Our Context, 36.
222 Ibid.
British Columbia attest, new life does arise from the ashes of death. However, considering the immense devastation of vegetation, the displacement of organisms from their habitats, or destruction of animal and human life, it is hard to see how destruction can help a human sufferer to experience God's redeeming grace. Nevertheless, a scientific Earth literacy can offer concrete, albeit still partial, expressions of the hope and new life that God is offering all of creation.223

Creation continually brings forth new life from death in unexpected and immensely beautiful ways. These are vivid expressions of Earth’s kenotic-kinetic and speak boldly to the emergence of new life from suffering and death; there can be beauty inherent in moments of great sacrifice as well as immense destruction inherent in radical, tragic moments beyond our comprehension. Human theological imaginations need to be cultivated by a vibrant Earth literacy in order for us to be able to appreciate cosmic moments of sacrifice and grace. The formation of biospiritual theological imaginations can aid a person faced with suffering such that he or she will possess a deep appreciation of the breadth and depth of God’s compassionate presence, and hope in transformation and can cling to this in his or her hour of darkness. Earth literacy and an ETA can enable sufferers to envision Christ’s cross as the cosmic cross and understand vividly how the life, death, and resurrection of Christ is

223 For example, secondary succession describes how, as the organic material is reduced to ash, carbon-based components are freed to then be incorporated by others to sustain their growth. Another cyclic example of this occurs with deciduous trees. As the sunlight intensity and longevity diminishes and temperatures fall, biochemical preparations are made and leaves are eliminated by deciduous trees to enable them to withstand the encroachment of colder, harsh conditions. The colder, darker days of fall trigger biochemical reactions that eventually cause the leaf to separate from the tree, falling to the ground to decompose and re-integrate with Earth. Without the sacrifice of the leaves, the tree would die during the winter. However, in this process of eliminating the leaves, the tree exhibits great beauty. The biochemical reactions cause the production of chlorophyll (green pigment) in the leaf to decline and when the green colour of the leaf fades, other pigments previously hidden by the chlorophyll emerge. Thus, the carotene pigments in birch and hickory trees and the anthocyanins of red maples, red oaks and sumacs are unveiled causing the symphony of brilliant yellow, red, purple hues of the autumn landscape. Thus, there are many visible manifestations of cosmogenetic movements from death to new life and these “narratives” must be appreciated to invigorate theological imaginations.
inextricably intertwined with the cosmogenetic phenomena of innovation, fecundity, and new life emerging from destruction, suffering, and death.

Nevertheless, in what ways does the formation of biospiritual theological imaginations help human sufferers? First an understanding of the cosmic cross, informed by Earth literacy and guided by an ETA, can reconnect a sufferer to Earth as primary healer and source of the sacred transformative Spirit who is continually present and active in the world.\(^\text{224}\) Cosmogenesis brings into sharp focus the ways in which the cross is not merely limited to a singular, historical event, but also represents the presence of the divine in the laborious kenotic-kinetic and suffering that extends through 13.8 billion years. In engaging the mystery of human suffering as an extension of nature’s \textit{via dolorosa}, the only viable, theological approach is the realization that the way of nature is the way of the cross: \textit{via naturae est via crucis}.\(^\text{225}\) This is done by means of a theology of \textit{faith} (that affirms that God who gave life can again bring life out of death), \textit{hope} (that ultimately places our trust in the actions of serendipitous creativity),\(^\text{226}\) and \textit{love} (that speaks of the unfathomably deep, vulnerable, and compassionate heart of Jesus as the beating heart of the universe). For some sufferers held prisoner by their overwhelming experience of silence, pain, loneliness, or unworthiness, this theological approach pays serious theological attention to the actual, concrete experiences of suffering and a “dimension of trust” or receptivity to the transformative hope that is an integral part of the kenotic-kinetic. Holding creativity and

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\(^\text{224}\) Pierre Teilhard de Chardin wrote that “[o]nce we have fully grasped the meaning of the cross, we are no longer in danger of finding life sad and ugly. We shall simply have become more attentive to its barely comprehensible solemnity.” Teilhard de Chardin, \textit{The Divine Milieu}, 73.


\(^\text{226}\) See Footnote 354.
cruciformity in tension does not reduce a sufferer’s life to meaninglessness;\textsuperscript{227} rather it enables human persons who participate in, and are labouring in response to the cruciformity of creation and inflicted oppression, to know that the Holy Spirit can work in them and the world to evoke a response to suffering far greater than merely accepting life or death. The cosmic cross can foster an understanding of God whose unfathomable love of creation inspires God's presence and labouring in and through creation to transform death into new life. For human sufferers, this knowledge, intensified by Earth literacy, can evoke feelings of gratitude, peace, hope and meaningfulness that shatter apathy and paralysis and open individuals and our planetary communion to new ways of interpreting and responding to suffering.\textsuperscript{228}

At the start of his text, \textit{The Cross in Our Context},” Douglas John Hall asks his readers a poignant question: “Does it seem strange that a theology centered in the violent death of a man should be \textit{at base} a theology defiant of death and oriented to life ‘more abundantly’?\textsuperscript{229}” This thesis asserts that the cosmic cross can help sufferers by offering a new cosmological context for understanding this “strange” theological truth. Jesus on the cross is both the symbol and the reality of the immense labour of the centuries, i.e., the many manifestations of the kenotic-kinetic. The cross both hides from us and reveals to us the infinitely abundant love God has for our entire evolutionary universe and God’s deep desire to be with, sustain, and empower creation from the moment the cosmos was imagined and birthed through every

\textsuperscript{227} Hall, \textit{The Cross in Our Context}, 30.


\textsuperscript{229} Hall, \textit{The Cross in Our Context}, 6.
immensely creative and costly moment until the eschaton. The divine love symbolized by the cross is also evocative; God invites humanity (and all of creation) to respond to God's love with great love and to participate in the unfolding of the cosmos. Thus, the understanding of the cosmic cross symbolizes God's decision to embrace and be vulnerable to the long history of inherent suffering and the shorter history of anthropogenic suffering, as well as invites human sufferers to embrace and be empowered to transform in suffering. In an evolutionary world, the cross (without losing its expiatory or compensating function) can become "the symbol and the expression of 'evolution' in its fullest sense" – i.e., Christ's transformation from death to new life allows the new life brought out of disintegration and death in Earth's evolutionary processes (i.e., the expressions of the kenotic-kinetic) to be an expression (albeit partial) of the transformation symbolized by the cross. "And so, without attenuating the christian tradition [sic], it becomes possible to present to today's world the cross, not only as a 'consolation' for the world's miseries but as a 'stimulant' (the most complete and the most dynamic stimulant that exists)...." This vision of the cosmic cross can enable sufferers to connect to a deep well of consolation and transformative power in both Earth and Christ.

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230 The hiddenness of God's revelation made by the cross is part of the apophatic Christian tradition; the comprehensibility of God's self-communication on the cross contributes to a kataphatic Christian tradition; and the cross as a symbol of God's "union with nature-as-community" is part of a relational understanding of Christianity. Robert John Russell argues that Christian spiritualities born from an "immediacy with nature" that mediates the divine include a kataphatic spirituality. This he claims is "the numinous encounter with the Holy in and through nature." He argues that an apophatic spirituality is the mediation of the divine through "a mystical union with the divine source of nature" and a relational spirituality is the mediation of the divine via a "union with nature-as-community." Russell, "Natural Sciences," 326. Thus with the symbol of the cross, a mediation of the divine through this specific experience of creation involves all three: hiding, revealing, and relating. All three are valid ways for understanding how God reveals Godself in our lives.


232 Ibid.
A third way in which the cosmic cross aids sufferers is in its critique of modern understandings of the kind of power used to incite domination. The cross, inextricably intertwined with resurrection and new life, is a symbol of great power residing in vulnerability and brokenness. A holistic, “cosmic” understanding of the cross (as Lynn Margulis reveals in symbiotic tendencies inherent in evolutionary processes or as Jean Vanier reveals in the power of smallness to build communion\(^{233}\)) only adds depth to our human understanding of how God loves and empowers through vulnerability and weakness. The scandalous message of divine power in powerlessness is necessary to evaluate contemporary understandings of power as oppressive, coercive, and colonizing. The latter understanding of power only inspires apathy, fosters narrow, self-satisfying expectations, and breeds intolerance of any form of suffering and of sufferers themselves. Hall indicates that “[w]hen an entire culture is held in the grip of a worldview in which death is allowed no voice, death’s power over life is immensely increased.”\(^{234}\) At Golgotha, the cross was the place of crucifixion and was an act resulting from the dominating power expressed by both religious and political systems. Nevertheless, God still responded powerfully: “The power of God is the powerlessness of God’s unconditional love shown to us in the cross.”\(^{235}\) God’s true transforming power was power in relation – *compassion* – and laid hidden in vulnerability and suffering. The cosmic cross can offer human sufferers hope via God’s eternal love as compassion, even in the midst of modern political, cultural, and medical structures and

\(^{233}\) In an interview given in the video *Belonging: The Search for Acceptance* (produced by Karen Pascal of Windborne Productions, 2009), Jean Vanier states that “Power and strength can separate people; whereas weakness and recognition of weakness and the cry for help brings people together. When you are weak, you need people. It’s very easy. When you are strong you don’t need people, you can do everything on your own. So, somewhere the weak person calls people together. And when the weak call forth the strong, what happens is they awaken what is most beautiful in a human person – compassion, goodness, openness to another and so on. Our weakness brings people together.”


patterns of thinking (based on a dysfunctional cosmology) that disembody and disconnect. Earth literacy offers language, imagery, and metaphors affiliated with power in vulnerability (interconnectivity, interdependence, mutual empowerment) that are very different from the central images affiliated with the matrix of domination (e.g., the conquest of all suffering; military and patriarchal domination of vulnerability). These new images can arise from an adequately formed Earth literacy and ETA, and will feed human biospiritual theological imaginations. In turn, humanity can imagine more just and loving relations within our planetary communion of compassionate subjects and build appropriate theological and social constructs to sustain our world. This new way of living and loving will in turn awaken both sufferers and the communities of their compassionate companions to the many dimensions of alienation, devaluing, and marginalization that accompany human suffering. It is to be hoped that this new context for understanding suffering will evoke different, unexpected responses to suffering, vulnerability, limitation, and death. Faith in the incarnate, crucified, and risen Christ constantly reminds humanity of how vulnerability and finitude are a part of genesis and abundant life. This is the depth of faith being asked of us by belief in God of evolution. However, "such faith is brought about ... when the divine Spirit takes us by the hand, so to speak, and puts us in the company of the crucified one, where we are caused to face, finally, our utter vulnerability, mortality, and impermanence but in the company therefore of one

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236 For example, some distorted religious ideas of power manifest in conjoined retributive interpretations of suffering (e.g., suffering as punishment for sin) and exclusive visions of salvation (e.g., salvation as obedience to Church hierarchy). Distorted cultural understandings of power manifest in the idea that the poor cause their own suffering and “salvation” comes from developing according to Western consumer standards. Distorted visions of medical power manifest in Western healthcare practices that place healing solely in the hands of industrial, technocratic interventions rather than communal and personal visions of holistic patient-centered care models. These intertwining distortions in how power and salvation are understood form an interdependent “matrix of domination.” See: Tracy E. Ore, The Social Construction of Difference and Inequality: Race, Class, Gender, and Sexuality (Mountain View, CA: Mayfield Publishing Company, 2000), 18.
who befriends us and shows us that the end is really the beginning, that this death is the entrance into the newness of life.”

## Conclusion: Chapter Five

**Nine Dimensions to the Promise of a New Cosmological Horizon of Meaning Within a Critical Inquiry of Human Suffering and the Cross**

Cosmogenesis, as the context for engaging human suffering, does not present an exhaustive “answer” to the problem of human suffering. Instead, it offers innovative ways of appreciating the necessary and “good” suffering inherent within an evolutionary world distinct from anthropogenic suffering. When this new appreciation is properly grounded by the precedent offered in the first three categories, three novel ways to describe suffering emerged. This fourth category was able to uncouple certain experiences of suffering from the classical understandings of suffering as retribution or atonement for sin. This uncoupling enabled a distinction to be made between inherent, necessary suffering and that which can and must be eradicated. The interpretation of human suffering, ecosystemic suffering, and divine suffering made via the metaphors of mirror, window, and map, revealed numerous aspects of the promise held by adopting cosmogenesis and committing to Earth as a primary source of divine revelation. Diagram A (below) is a synthesis of the nine dimensions of promise that comes from adopting cosmogenesis as the context for engaging the mystery of human suffering.

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### Diagram A: Nine Dimensions of Promise

<table>
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<th>Dimension</th>
<th>Promise Description</th>
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| 1         | **Human Sufferers Can Appreciate the Cosmos as a Communion of Compassionate Subjects Instead of an Alienated, Voiceless Collection of Autonomous Objects**  
When human sufferers feel invisible, abandoned, and worthless, cosmogenesis articulates powerful story of cosmic connectivity and remembrance on both a biological and spiritual level. The cosmic solidarity, deep acknowledgement of suffering, and evocative understanding of remembrance offered by cosmogenesis liberates sufferers from Western society’s tendency to avoid meaningful engagement with suffering without overwhelming sufferers or inspiring paralysis. This awakens human sufferers to their membership within an ancient cosmic family of compassionate sufferers where not even an individual sparrow is forgotten or unloved by God. (Mt 10:29; Lk 12:6) |
| 2         | **Human Sufferers Can Construct a Courageous Model of Solidarity and Resistance to Suffering that Encourages Both Self-affirmation and Sacrifice**  
Cosmogenesis reminds sufferers how disintegration and death is an integral part of growth, innovation and new life. This narrative also reminds us that trust and risk, order and chaos, growth and diminishment, frustration and achievement are intimately coupled in our evolutionary universe. This allows sufferers to re-imagine resistance to suffering as an individual, communal, and cosmic practise rather than as a purely anthropocentric model of combat where death only signals defeat. |
| 3         | **Human Sufferers Can Address Powerlessness in the Face of Suffering**  
The sacred universe story teaches that the power demonstrated by the God of evolution is not “power-over” but “power-with.” Thus human sufferers can awaken to how they and their planetary community of fellow sufferers embody the creativity, sacrifice, compassion, and power that characterizes God’s activity in the sacred universe story. This connection to the immense power in communion can address the powerlessness felt by sufferers; they can be empowered to participate in their own healing and transformation as members of Earth’s communion of compassionate subjects and see how their limitation, frustration, diminishment and even death can be part of their journey to intimacy with God. |
| 4         | **Human Sufferers Can Recognize that They Are Never Alone in Their Pain**  
Cosmogenesis addresses the myopia of humanity that has generated a distorted sense of individuality. This vision of radical autonomy feeds the loneliness many sufferers experience and has disconnected many sufferers from their own communities and families, and from Earth as a sacred source of healing. Strengthening humanity’s acuity to the suffering of Earth’s other-than-human subjects can awaken humanity to our participation in the cruciformity of life – but we are not solitary sojourners who bear this burden alone. This acuity will stimulate a new appreciation of the moments of grace inherent to diminishment, limitation and death when it is an extension of an abundant life (Jn. 10:10). |
### Diagram A: Nine Dimensions of Promise

| 5 | Human Sufferers Can Re-imagine What Compassion, Sacrifice, and Witness Means in Our Planetary Community |
|   | The sacred universe story relieves sufferers from the modern delusion that a life free of sacrifice, vulnerability, mutuality, or suffering is possible. This illusion prevents our human communities from being compassionate (i.e., people who suffer with one another) and compounds suffering by both blaming sufferers for their own suffering and using a distorted vision of “survival of the fittest” to sanction the suffering of those deemed less worthy. Cosmogenesis stimulates a new, positive appreciation of the cosmic sacrificial/affirmation dynamic that grounds and animates all created life and can re-invigorate biblical and classical descriptions of suffering as compassion, sacrifice, and witness. This will relieve some sufferers from the burden of passively submitting to suffering and self-abnegation. |
| 6 | Human Sufferers Can Testify Anew to Our Vocation as “Easter People” |
|   | Cosmogenesis testifies to the intrinsic worth of creation and the hope laying in the irreversible, ongoing, and unpredictably creative evolutionary processes. This addresses the fears of many sufferers that their lives are/were meaningless and they are worthless. Thus cosmogenesis speaks to our vocation as “Easter people” in new ways that can inspire hope rather than despair. |
| 7 | Human Sufferers Can Appreciate God as Immanuel in New Ways |
|   | The sacred universe story illustrates how the creative suffering of the triune God can be interpreted and experienced by all of creation in a diversity of ways: sympathetically, empathetically and protopathetically. This multiform way of understanding how our infinitely transcendent and immanent God can be present to humans in their suffering – each according to what they need – brings sufferers hope that God will be also present to them in their unique moments of suffering. This brings new depth of meaning to the words offered by the prophet Isaiah: “So do not fear, for I am with you.” (Isa 41:10) |
| 8 | Human Sufferers Can Understand the Incarnation and Risen Christ in New Ways |
|   | When our theological understanding of the Incarnation and resurrection is expanded backward from Bethlehem to the Great Flaring forth and forward from Golgotha to ultimate fullness of life at the eschaton, sufferers have a new horizon to appreciate the infinite love God has for all of creation and the magnetic force luring all of creation towards fullness of life in God. This allows all of creation to know that no creature dies “godforsaken.” Human sufferers are invited to see how their pain and suffering is not the ultimate end of their personal, communal, or cosmic story of becoming; rather, it is a part of a bigger 13.8 billion year journey of transformation and love modelled on the incarnate and risen Christ. |
Diagram A: Nine Dimensions of Promise

Human Sufferers Can Witness to the Power of the Cosmic Cross

The cross can hold great symbolic power for sufferers today when seen via the lens of cosmogenesis; the cross at Golgotha represents (albeit uniquely) the presence of divine compassionate love throughout the universe’s journey of unfolding, including the sacrificial gift of the first stars, the many extinction spasms, the rise of predation, the single mother struggling to provide for her children, the old man curled up on a hospital bed, those fighting for justice and peace in El Salvador, or the young girl, desperate for release, who takes her own life. Cosmogenesis allows human sufferers to appreciate how “[t]he cross of Christ concentrates the suffering of God into a point of intensity and transparency that reveals this to be characteristic of God’s perennial relation to creation.” (Johnson, Ask the Beasts, 205.) This perspective can allow sufferers, and those courageously companioning them, to see how they are being invited to become witnesses to the power of the evolving God-in-relation, and the Incarnate and Risen Christ lying hidden in suffering that continually calls forth new life from death in unexpected ways.

These are nine dimensions of the promise offered to sufferers and those companioning them when they face the mystery of human suffering. These are not ultimate solutions to the problem of suffering. This conclusion desires to offer sufferers hope for abundant life in spite of suffering and death. These various dimensions speak to how the embracing of cosmogenesis can reawaken human sufferers to “God’s bottomless enthusiasm for the wet and wild” and to the powerful presence of the numinous in creation, continually labouring to transform suffering within our planetary communion of subjectivity.238 As with Hildegard’s intertwining vision of viriditas and ariditas, prolific creativity and abundant life is inextricably intertwined with pathos;239 our 13.8 billion-year universe story testifies to this. Those who choose to courageously follow God of the cosmic cross – those who travel beyond traditional understandings of human suffering as retribution and atonement – can

239 This thesis makes use of Hildegard’s metaphors viriditas and ariditas to highlight how the words green and darkness (used in the title of this thesis) are deeply intertwined and cannot be uncoupled.
become witnesses to the “most noble Greenness” that grows in the darkness that is never overcome.\textsuperscript{240} And perhaps, as Richard Rohr attests, “the whole creation cannot be lying.”\textsuperscript{241}

\textsuperscript{240} This phrase is used by Hildegard in her hymn \textit{Item De Virginitibus} in Hildegard, \textit{Book of Divine Works}, 374-375.

\textsuperscript{241} The passage this quote is taken from reads as follows: “I, like many of you, am only a disciple of the poor man from Nazareth. He has made me content with mystery. He has made me less afraid of the chaos. He has told me that control is not my task. He, like the cosmos itself, is about two things: \textit{diversity and communion}. The whole creation cannot be lying.” Richard Rohr, OFM, “Where the Gospel Leads Us,” in \textit{Homosexuality and Christian Faith: Questions of Conscience for the Church}, ed. Walter Wink (Minneapolis, MN: Augsburg Fortress, 1999), 88.
Conclusion

Midway through the twentieth century, Pierre Teilhard de Chardin wrote of the shift in worldview that was occurring and the accompanying discomfort this transformation was causing to established cultural constructs, including the Christian Church.¹ Elizabeth Johnson echoes Teilhard’s intuition but within a new context: “The theory of evolution today ratchets up what the sea and the earth can do. The theological challenge is to seek an understanding of faith that renders fair account of the intense creative activity of both Creator and creation.”² Both theologians sense that the direction that God is calling Christianity is one that deepens the connection between authentic Christian faith and our knowledge of our evolutionary world. It is from an Earth-centred approach that a new cosmological story, cosmogenesis, has emerged and has enabled the judicious coupling of the empirical data offered by modern science with the sacred wisdom encapsulated within faith traditions. This is the wisdom that emerged from this project’s constructive, chronological-historical methodology that is cosmological in orientation.

An essential feature of cosmogenesis is the interconnectivity of the “forces of death and forces of life inside the loving universe.”³ Cosmogenesis and our new understanding of its inherently violent, creative processes invites a renewal of Christian theological engagements with human suffering. This invitation is a call to expand our theological horizons beyond the parameters of purely expiatory and anthropocentric interpretations of suffering. This thesis

¹ “There can be no denying that at first the Church watched with anxiety the development of the irresistible change in perspective which since the eighteenth century (since the Renaissance, even) has continually been replacing for us the sharply circumscribed, clearly centered and well-balanced cosmos of the ancient world, by a universe which knows no limits and is in full genesis, in space, time, and number.” Teilhard de Chardin, Christianity and Evolution, 154.
² Johnson, Ask the Beasts, 187.
³ Teilhard included this statement in a larger comment of Christianity’s necessary appreciation of the cosmos. Teilhard de Chardin, Christianity and Evolution, 150.
project attempts to engage the tensions between violence and creativity, sacrifice and surprise, and disintegration and evolution in the cosmos in order to begin the construction of new ways to comprehend human suffering. This project adds substance to ongoing theological conversations concerning human suffering, and recasts classical descriptions and interpretations in a new light. Cosmogenesis offers humanity many stories of great transformations and sacrificial moments that span our vast cosmic history or universe story from the galactic to microbial to quantum levels of life. Through this new “cosmic” lens, these events can also be seen as moments of grace that speak to purpose and meaning, namely "to a story and a life that is going somewhere." A key phrase to help envision suffering in a new light is the nomenclature “kenotic-kinetic.” This phrase offers a way to articulate, and engage with, the forces of death and life, cruciformity and creativity that animate our sacred evolutionary universe.

This thesis endeavours to take up the torch thrown by the Psalmists, Irenaeus, Augustine, Aquinas, Hildegard, Teilhard de Chardin, and many others by recognizing and engaging with the divine revelation offered in the Book of Creation and the Book of Scripture. The intent throughout has consistently been historical and narrative, rather than systematic and prescriptive, in order to cultivate an appreciation for the ways both books of revelation can contribute to the formation of distinctly biospiritual theological imaginations. For some human sufferers, this way of encountering the world and God’s saving presence can be invaluable when they are confronted with their own dark night. A robust Earth literacy discerned via a non-exhaustive consensus among many diverse authors, enables the construction an ETA and this framework can then become a guide for those exploring human

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4 O'Hara, 201-202.
5 Some examples are Ps. 8:3-4; 23; 19:1-3; 139:7-14; 148:7-14.
suffering in light of cosmogenesis. Our evolutive world reveals, albeit partially, the *invisibilia* of the triune God; without appropriate language, metaphors, images and anthropological frameworks, humanity will remain illiterate to the depth of meaningfulness in our many encounters within Earth’s communion of compassionate subjects. When one awakens and cultivates a vibrant Earth literacy, new ways of describing God and creation can emerge.\(^6\) Thus in the twenty-first century, faith in the evolutive world and faith in Christ can reciprocally nourish and augment human theological imaginations, and, as Teilhard and others suggest, this synthesis can allow Christianity to break through into a new spheres of meaning. It is this new horizon of meaning that can aid those who are suffering and all of creation who are called to companion them.

The primary task of this thesis was to engage with the mystery of human suffering in a twenty-first century evolutionary world perfused with incalculable levels of suffering, violence, and death spanning 13.8 billion years of cosmic history. It is hoped that in the heart of the dark night of suffering, individuals will be able to recognize and immerse themselves in the ancient, powerful, sacred creative forces animating cosmogenesis that “lead us away from despair and into the light.”\(^7\) To do so, a large proportion of this thesis needed to be dedicated to stoking the reader’s biospiritual, theological imagination via a historical portrait of the emergence of Earth literacy in science and theology and the construction of an ETA. Only after appropriate formation and tooling (i.e., the acquisition of more adequate and

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\(^6\) For example, Elizabeth Johnson offers an innovative description of our evolutionary world and the Creator of our reality in her recent text: “Infinite mystery of self-giving love, the Creator Spirit calls the world into being, gifts it with dynamism, and accompanies it through the by-ways of evolution, all the while attracting it forward toward a multitude of ‘endless forms most beautiful.’ We glimpse here bounteous personal love that pours itself out in empowerment of a creation that is transient and vulnerable yet resilient and generative, a creation that without this love would be literally nothing at all.” Johnson, *Ask the Beasts*, 187-188. In this citation Johnson makes use of a quote from Charles Darwin’s *Origin of Species*.

\(^7\) Dreyer, 144.
coherent language, metaphors, images, and relational constructs) can new descriptions and novel interpretations of suffering be appreciated and new responses to the experience of suffering be inspired. It is the cosmological orientation and narrative - constructive methodology that allows Chapter One's summary of traditional theological descriptions and interpretations of human suffering to connect with Chapter Five's descriptions and interpretations of disintegration and suffering inherent within our evolutionary universe. This thesis desires to show that if one chooses to traverse a path of biospiritual formation, numerous dimensions of promise can be revealed and this may aid some sufferers and inspire solidarity within our planetary communion of compassionate subjects.

The primary question that occupies the attention of this thesis project is how adopting cosmogenesis as a new cosmological framework for understanding suffering can help human sufferers today. Earth-literate artisans of science and theology have offered new ways of appreciating intrinsic worth, purpose, subjectivity, and connectivity inherent to our universe and have revealed a kenotic-kinetic that interconnects the cosmos in time and space, animating the costly, creative cosmic processes. This has broadened how the term suffering can be employed, enabled new ways of understanding the interconnectedness of our planetary communion, and deepened how theology can articulate God's presence, transforming power and compassionate love for our world today. Reawakening to our participation in the kenotic-kinetic pulsating in and through the cosmos will be painful for many because we have spent centuries denying our rootedness in and of Earth. It will be a practice in humility; the kenotic-kinetic decentralizes humanity's experience of suffering as the primary ground of meaning and value and repositions human suffering within the larger cosmological context. In return, however, this new awareness could strengthen humanity's
acuity to the suffering of sentient beings as well as the unique manifestations of the kenotic-kinetic in non-sentient beings around us. In turn, humanity could be awakened to moments of great transformation and hope; the sacred universe story unceasingly supplies humanity with moments of transformation and grace that emerge from sacrifice and death if we are able to attune ourself to this sacrificial-creative cadence. Thus, it is asserted that the kenotic-kinetic could allow humanity the ability to acknowledge and embrace in our moments of suffering both the darkness before first light and the future promise of luminosity gifted by the approaching dawn.

In the last chapter of this thesis, a great fear that sufferers experience is named: the fear of being abandoned, godforsaken, and unlovable in our brokenness. As sufferers bear the “marks” of embodied diminishment, limitation, and ultimately death, and their world contracts “...to a single room and ultimately to a casket,” a sense of powerlessness, abandonment, and worthlessness heightens. This experience of suffering can be compounded when the theological framework the sufferer employs to interpret his or her experience indicates that a sufferer is being punished for sins. Many manifestations of the kenotic-kinetic, including many experiences of human suffering, do not fit into the classic interpretive framework of retributive or expiatory suffering. Traditional categories for

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8 Elizabeth Johnson attests to this: “Without pain, no further exploration of life’s potential forms; without death, no new life. These afflictions arose as essential elements in a tremendously powerful process that created and continues to create the magnificent community of life on this planet.” See: Johnson, *Ask the Beasts*, 185.

9 Humanity’s fear of abandonment echoes in Christ’s lament from the cross when he cried out “Eli, Eli, lama sabachthani?” that is “My God, My God, why have you forsaken me?” (Matt. 27:46). Jean Vanier writes of our deep fear of being unlovable. “The cry for love that flows from the heart of people in need is mixed with pain, anguish and sometimes agony. They are so fearful of not being lovable. If this call for love awakens compassion in the hearts of those around them, their fears and anguish and inner pain can also awaken fears and inner pain in those who hear the cry. That is why it is so hard and so frightening to meet people who are inwardly broken. Their anguish seems to awaken anguish and pain in those around them.” Vanier, *Community and Growth*, 98.

suffering, such as expiation or retribution for sin, cannot adequately describe or interpret the cruciformity inherent to our evolutionary world. This thesis strives to begin to re-adjust the over-emphasis in Christian theology of retributive and expiatory interpretations of suffering. This is accomplished by forming Earth literate theological imaginations that envision and interpret suffering differently. Looking deeply at the cruciformity of our world does not reveal God's absence nor apathetic tendencies, nor the worthlessness of human sufferers; rather, it can affirm that God takes human and other-than-human suffering “seriously and personally,” entering into it, transforming it from within, and moving all of creation towards healing, wholeness, and peace.\textsuperscript{11} It is proposed that when our understanding of the incarnation is re-imagined from within an evolutionary context, a better balance can be restored and the Christian overemphasis on suffering as punishment for personal sin prevalent since the Middle Ages re-situated. When this occurs, then the cross can become an even more profound symbol of transformation and new life made via the hard labour or “evolutive effort” of our adventurous cosmos.\textsuperscript{12}

There are several areas that could not be addressed in this thesis project but can be explored in future endeavours. These include exploring how the reality of suffering is experienced and interpreted within Christian and secular cultures; engaging with wisdom offered by religious traditions outside of Christianity concerning suffering; tracing the proliferation of ecotheology in the 1990s; augmenting the scholastic depth of the myriad references used in this constructive project (e.g., exploring the potential contradictions within the work of any single author or offering an in-depth critique of specific topics or authors identified in this thesis); exploring the suffering of the Holy Spirit and the implications for

\textsuperscript{11} Dreyer, 143.

\textsuperscript{12} Faricy, “Teilhard De Chardin's Theology of the Cross,” 19.
understanding human suffering; addressing (directly) the ecological crisis we are currently experiencing; and re-imagining pastoral and liturgical practice in light of an ETA. Although cosmogenesis speaks boldly to the presence and necessity of violence and destruction within the continuously unfolding and meaningful universe story,\(^{13}\) it will also enable humanity to better delineate inherent suffering from anthropogenic suffering. This is imperative if the latter is to be seriously engaged and mitigated. The tools offered by this thesis could better facilitate this process of eradicating injustice and address the social ennui and paralysis humans are exhibiting in the face of suffering that can, and should, be alleviated.

Appreciating the sacrificial-creative cadence of the kenotic-kinetic can augment theology’s engagement with, and responses to, inflicted, unjust suffering in our world — but how this can be achieved is beyond the purview of this thesis. Nevertheless, the new appreciation of Earth as our primary “ethical touchstone,”\(^ {14}\) as well as the depth of vulnerable love God has for the continuously creative and inherently violent processes that characterize our universe, is beginning to re-invigorate and re-direct current social justice praxis.\(^ {15}\)

Cosmogenesis affects the way theology describes God and creation by repositioning humanity within the planetary and cosmic community. This repositioning can inspire a profound *metanoia* that will awaken human sufferers to the ancient dynamism intertwining fecundity and cruciformity that echoes, although faintly, the kenotic cadence of the Trinity. This conversion to Earth as a primary context for divine revelation can enable human

\(^{13}\) For an outline of what is meant by “necessity,” see footnote 40 in the Introduction of this thesis.


\(^{15}\) See: Paul Hawken, *Blessed Unrest*. 
sufferers to understand – and courageously respond to – the sacred, transformative force animating our evolutionary world that habitually brings new life out of death. However, any engagement with suffering and the cross, including this project, is an engagement with a mystery that resists being fully explained. There are no easy answers, nor complete theological systems to derive satisfying answers to the mystery of human suffering. No one thesis, theologian, or generation will dictate completely the meaning of suffering or the cross. This is why many voices needed to be heard. However every generation needs to seriously attend to the urgency of their own historical moment to authentically experience and interpret the meaning of the crucified and risen Christ.\textsuperscript{16} Yet, as with the experience at Golgotha, the tomb of Christ, and Pentecost, when we go about this interpretive task we will be constantly reminded – and possibly surprised – at how suffering and death can be transformed in ways beyond all comprehension. Today’s generation of theologians are being invited to encounter the incarnated, crucified, and risen Christ in an evolutionary world and attend theologically to the inherent and anthropogenic suffering present in our world. Each of Earth’s suffering subjects contributes to the universe story and must offer his or her voice to the way we understand distinctly human suffering in an evolutionary world.\textsuperscript{17} Humanity ought to listen to the stories of suffering and transformation in the Book of Creation and in doing we are

\textsuperscript{16} Elizabeth Dreyer writes that “in each culture the cross will heal, defend, save, protect, free, forgive, give refuge, and life in distinctive ways.” Dreyer, 144.

\textsuperscript{17} John Feehan speaks eloquently to the irreducibility of Earth’s diverse voices in our planetary communion. “The song of each human life is different, as the song of each species of bird is different. We are not called upon to write books of philosophy. All we have to do is sing the song we are capable of. Some of us can only sing a few notes, maybe the same not over and over, but my melody is unique to me. And there are some among us whose song is so complex the rest of us cannot follow it, though we are awed by its beauty. The library of such songs is vast; it includes the symphonies of Beethoven, Darwin’s book on the pollination of orchids, Thomas Aquinas’ \textit{Summa Theologica}, the Hubble Telescope, the Large Hadron Collidor at CERN. I take great encouragement from Bernard Lonergan’s admission of the many years he spent ‘reaching up to the mind of Aquinas.’ What a lot of climbing that would mean for the rest of us! But we don’t need to be discouraged by this at all; those songs are not ours to compose, though we may get to sing them too; but, at the same time, it is one of the measures of human capacity that nurtures in us the virtue of humility.” Feehan, 179.
promised the courage, sustenance, and compassion to face the darkness in ourselves and in our world. As Easter people, we are invited to awaken to the green lying hidden in the darkness and understand in new ways how this divine presence is eternally and lovingly moving us toward new life in the incarnate and risen Christ.
Appendices

Appendix A: The Wesleyan “Sphere”
Appendix B: The Rise of Technology

Information Age
- 1989 CERN scientist Tim Berners-Lee writes proposal for information system for Laboratory
- 1995 First demonstration of the World Wide Web at CERN

Web Age
- 1994 First World Wide Web conference held at CERN
- 10,000 servers of which 2,000 commercial, and 10 million users

Grid Age
- 1992 Computing infrastructure designed as a data grid which works globally in real time to manage and store data

Cloud Age
- 2002 Invention of ‘Apps’ including the most important contribution to cloud computing has been the ‘killer apps’ from technology giants such as Google and Microsoft
- 2009 Cloud computing hosts consumer and commercial IT infrastructure in a secure, reliable space on the nebulous network
- Consumers access virtual property at any time (PC, TV, iPhone, etc.)
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