

**GRACE AND EMERGENCE:
TOWARDS AN ECOLOGICAL
AND EVOLUTIONARY
FOUNDATION FOR THEOLOGY**

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Taking as its mandate the expansive vision suggested by the integral ecology of *Laudato Si'*, in conjunction with the insights of contemporary ecological and evolutionary theologians, this dissertation proposes a framework for an integral, planetary, and cosmic theology of grace.

It draws from and builds upon many of the insights of the leading Catholic contributors to ecological and evolutionary theologies, including especially John Haught, Elizabeth Johnson, Denis Edwards, and Celia Deane-Drummond. Through their various approaches, each emphasizes the created, cosmic effects of both the universal invisible mission of Holy Spirit and the visible mission of Christ's Incarnation, intended from all eternity and culminating in his passion death and resurrection. Noting the strong resonances with traditional accounts of the economy of grace in human redemption, this dissertation seeks to provide a unitive account of God's healing and elevation of all of creation through a creative and redemptive economy of grace.

This project is also carried out in intentional dialogue with both with traditional understandings of grace, especially as articulated in the speculative and systematic synthesis of St. Thomas Aquinas, and with contemporary scientific understandings of world process. To facilitate this larger conversation, this dissertation also explores Bernard Lonergan's transposition of grace, nature, and sin from the Medieval theoretical framework into a framework based on interiority, and it relies especially on Lonergan's

explanatory account of the dynamic orientation of nature as “upwardly but indeterminately directed,” as laid out in his generalized emergent probability. However, as Lonergan and his students have only attended to grace in relation to human contexts, the constructive part of this dissertation lays out an understanding of grace as “God’s created relationship of transformative love and care for all creatures that opens them up to ever deeper relationships with God and with each other.”

This broad definition makes possible the identification of God’s grace throughout all of creation: humans, other animals, plants, and even “inanimate” matter are caught up in the networks of grace that bring them to greater perfection along three axes: According to their absolute finality, all creation may be observed as existing in a state of ontological praise of its Creator and Redeemer and in a state of eschatological expectation.

According to their horizontal finality, each creature is empowered to realize its particular, fleshly excellences in line with its dynamically conceived nature, the account of which nature is described by the vast array of modern sciences. According to their vertical finality, each creature exists in networks of interconnection that undergird the possibility and, sometimes, the reality of surprising and irreducible inbreaking of renewal and emergence. At the same time, this framework also recognizes the elevation of human beings to not only these forms of relative supernaturality, but also to the absolute supernaturality of sanctifying grace and the habit of charity in which we are adopted into the intra-trinitarian life of friendship.

By situating this theology of grace in relation to Lonergan’s transposition of nature in the form of his account of generalized emergent probability, the specifically theological character of this account of world process is both distinguished from and

related to the other explanatory accounts offered by the whole range of the human, social, and natural sciences. To clarify these relationships and the particular role of theology in dialogue with these other sciences, the final chapters explore the hermeneutical and heuristic value of this theology of grace in relation to the larger conversations around emergence, convergence, and cooperation in evolutionary theory.

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1. CHAPTER ONE: INTRODUCTION AND METHOD

In this dissertation, we will suggest how Catholic theology may begin to develop a broader theology of grace to describe the transformative power of God's relationship with all of creation. While much of the theological tradition in the Christian West has reserved the language of grace for describing the ways in which God heals and elevates human persons into communion with the Trinitarian God, we will argue that this context is too restrictive to account for the new creaturely story emerging alongside evolutionary science and ecology. Over the last few centuries, this story has been revealed as inextricably tied both to the deep interconnections between creatures on earth and to the larger, cosmic narrative. The Catholic Church's magisterial position on evolution and cosmogenesis has itself evolved from one hovering between suspicion and condemnation at Vatican I, to a somewhat timid coexistence in *Humani Generis*, and finally to Pope John Paul II's oft-quoted affirmation that evolution represents "more than an hypothesis."¹ As acceptance and support for the scientific conclusions of the modern evolutionary synthesis has slowly coalesced, genuinely new questions have emerged about the way in which we understand our own story and the story of God's action in history. The significance of these questions has come to a point in additional ways in

¹ For the last of these, see Pope John Paul II, "Message Aux Participants à l'Assemblée Plénière de l'Académie Pontificale Des Sciences," October 22, 1996, https://w2.vatican.va/content/john-paul-ii/fr/messages/pont_messages/1996/documents/hf_jp-ii_mes_19961022_evoluzione.html. For a more complete history of the Christian reception of evolutionary theories, see Celia Deane-Drummond, "In Adam All Die? Questions at the Boundary of Niche Construction, Community Evolution, and Original Sin," in *Evolution and the Fall*, ed. William T. Cavanaugh and James K. A. Smith (Grand Rapids, Michigan: Eerdmans, 2017), 23–47, especially 23–29. Her account is built in part on a critical reading of John Mahoney, *Christianity in Evolution: An Exploration* (Washington, D.C.: Georgetown University Press, 2011). NB: The frequent abstraction of Pope John Paul II's quote from both its context and from the larger whole of Catholic teaching on evolution, as criticized by Christoph Cardinal Schönborn and others, will be treated in the pages that follow.

recent years, as the multiplying and expanding ecological crises of our time reveal the relationship between humans and the rest of creation to be of pressing and undeniably vital importance.

1.1 *Laudato Si'* and Its Magisterial Context

It is in recognition of this new horizon for humanity that Pope Francis promulgated the encyclical *Laudato si'*.² Though not the first papal document to address the growing environmental and ecological crises of our times, *Laudato si'* describes a new and integrative vision for Catholic social teaching and suggests new vistas for the theological tradition that undergirds it. The foundations for *Laudato si'* were laid in part by Popes John Paul II and Benedict XVI, both of whom wrote and spoke significantly on ecological concerns in their own pontificates.³ However, their efforts to unite the concerns of what they both termed “natural ecology” with the broader, Catholic concern for “human ecology”—which includes issues like traditional family dynamics, abortion, contraception, end of life issues, etc.—expressed an unresolved tension in church teaching between the place of humanity and that of the rest of the created world.

Consider, for instance, this excerpt from John Paul II’s *Centesimus Annus*:

In addition to the irrational destruction of the natural environment, we must also mention the more serious destruction of the *human environment*, something which is by no means receiving the attention it deserves. Although people are rightly

² Pope Francis, “*Laudato Si'* (ON CARE FOR OUR COMMON HOME),” May 24, 2015, http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html.

³ My own understanding of these issues is shaped by their comprehensive treatment in Lucas Briola, *Worship and Care in Our Common Home: Perspectives from Bernard Lonergan* (forthcoming).

worried—though much less than they should be—about preserving the natural habitats of the various animal species threatened with extinction, because they realize that each of these species makes its particular contribution to the balance of nature in general, too little effort is made to *safeguard the moral conditions for an authentic “human ecology”*.⁴

Although John Paul II rightly recognized the deep links between these issues, his remarks here and elsewhere contributed to a sense of competition rather than cooperation between them that came to be reflected, for instance, in the ongoing U.S. Catholic reception of “human” versus “natural” ecological concerns. Benedict XVI sought to address this tension by suggesting how both sets of concerns are united in what Lucas Briola has described as “the doxological and Eucharistic character of creation as well as the cosmic quality of worship.”⁵ However, in part because of his retention of the already fraught categories he inherited from John Paul II, Benedict XVI’s efforts proved largely unsuccessful both in the eyes of his critics and in the realities of broader Catholic discourse on social and ecological issues.

As its opening line suggests, Francis’s ecological encyclical is deeply grounded in doxology: ‘LAUDATO SI’, mi’ Signore’ – ‘Praise be to you, my Lord.’”⁶ Francis recognizes a doxological union between humans the rest of creation as they are ordered together in a relationship of praise towards the one Creator God. While Francis’s vision retains several insights and formulations from his predecessors, *Laudato si’* represents a significant reorientation of the Catholic understanding of our responsibilities toward and

⁴ Pope John Paul II, “Centesimus Annus,” September 1, 1991, http://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html. §38. Emphasis original.

⁵ Briola, *Worship and Care in Our Common Home: Perspectives from Bernard Lonergan*.

⁶ Pope Francis, “Laudato Si’ (ON CARE FOR OUR COMMON HOME).” §1

relationships with the rest of creation. At the center of this new vision lies his concept of an “integral ecology.” Pope Francis first mentions this phrase in connection with the spirituality of his own papal namesake, Francis of Assisi:

I believe that Saint Francis is the example par excellence of care for the vulnerable and of an integral ecology lived out joyfully and authentically... He loved, and was deeply loved for his joy, his generous self-giving, his openheartedness. He was a mystic and a pilgrim who lived in simplicity and in wonderful harmony with God, with others, with nature and with himself. He shows us just how inseparable the bond is between concern for nature, justice for the poor, commitment to society, and interior peace. Francis helps us to see that an integral ecology calls for openness to categories which transcend the language of mathematics and biology, and take us to the heart of what it is to be human.... His response to the world around him was so much more than intellectual appreciation or economic calculus, for to him each and every creature was a sister united to him by bonds of affection... Such a conviction cannot be written off as naive romanticism, for it affects the choices which determine our behaviour. If we approach nature and the environment without this openness to awe and wonder, if we no longer speak the language of fraternity and beauty in our relationship with the world, our attitude will be that of masters, consumers, ruthless exploiters, unable to set limits on their immediate needs... The poverty and austerity of Saint Francis were no mere veneer of asceticism, but something much more radical: a refusal to turn reality into an object simply to be used and controlled.⁷

⁷ Pope Francis. §10-11

Tying integral ecology to St. Francis, the Pope suggests that, more than only an objective category, integral ecology refers to a conversion of the whole person as subject towards the God whom we encounter in both nature and history. It calls for a spirituality of wonder, respect, and love for the created world in its entirety.

Despite the obvious importance of integral ecology to Francis's vision, however, the meaning of term itself remains somewhat unclear. Briola characterizes the term as "what Ladislaus Orsy calls a 'seminal locution,' a magisterial term that expresses truth without defining it precisely."⁸ In a similar vein, Daniel Castillo remarks that, "for all the attention that *Laudato si'* gives to the concept of integral ecology, the encyclical neither straightforwardly defines the concept nor clearly delineates its structure and dynamism."⁹ *Laudato Si'* calls for a response to the ecological crisis that integrates all aspects of human life in response to what it labels as the "human roots of the ecological crisis," namely, "the dominant technocratic paradigm and the place of human beings and of human action in the world."¹⁰ In contrast to technocratic solutions—which propose to treat the effects of the ecological crisis through large-scale human interventions—Francis advocates for a broad reorientation of human life and living in concert with a greater attention to the rhythms and regularities of the world around us. This requires a change not only in social structures, but in the cultural, personal, and religious values that shape and regulate those structures as well, for "if we are truly concerned to develop an ecology

⁸ Briola, *Worship and Care in Our Common Home: Perspectives from Bernard Lonergan*. Citing Ladislaus Orsy, *The Church: Learning and Teaching* (Wilmington, DE: Michael Glazier, 1987), 85-86.

⁹ Briola. Citing Daniel P. Castillo, *An Ecological Theology of Liberation: Salvation and Political Ecology* (Maryknoll, NY: Orbis Books, 2019), 39.

¹⁰ Pope Francis, "Laudato Si' (ON CARE FOR OUR COMMON HOME)." §101

capable of remedying the damage we have done, no branch of the sciences and no form of wisdom can be left out, and that includes religion and the language particular to it.”¹¹

Regarding the Catholic tradition in particular, Francis recalls that, throughout the tradition, Catholic responses to social and cultural issues have always sought to “dialogue with philosophical thought... [and] produce various syntheses between faith and reason” as we are “enriched by taking up new challenges.”¹² He suggests a number of sources within the tradition that may empower a new theological response: a renewed attention to the place of creatures in both the Hebrew Bible and the New Testament; an emphasis on theology of creation over against a mechanic understanding of nature; a greater stress on the value of each creature in the harmony of all creation; and a recognition of the universal communion in which “all of us are linked by unseen bonds and together form a kind of universal family, a sublime communion which fills us with a sacred, affectionate and humble respect.”¹³ In the final sections of the document, Francis suggests how these sources might be foster new insights around several theological loci, including sacramental, Trinitarian, Mariological, and eschatological theologies.

¹¹ Pope Francis. §63

¹² Pope Francis. §63. While there sometimes persists a (not wholly baseless) view of tension between the Catholic Church and certain scientists or scientific positions, this narrative fails to capture the much longer history of support and patronage of the sciences in Church history or the reality of ongoing patronage today through such institutions as the Vatican Observatory, the Pontifical Academy of the Sciences, etc. Stemming largely from the “conflict thesis” forwarded by 19th century historians John William Draper and Andrew Dickson White and fueled by the ongoing conflicts between certain strands of evangelical Christianity and evolutionary theory, this view remains prevalent in North Atlantic culture today. For a few, helpful analyses of this history, see Ronald L. Numbers, *Galileo Goes to Jail: And Other Myths about Science and Religion* (Cambridge, Mass.: Harvard University Press, 2009); Nancy Marie Brown, *The Abacus and the Cross: The Story of the Pope Who Brought the Light of Science to the Dark Ages* (New York: Basic Books, 2010); Christopher Baglow, “A Catholic History of the Fake Conflict Between Science and Religion,” *Church Life Journal*, accessed September 19, 2020, <https://churchlifejournal.nd.edu/articles/a-catholic-history-of-the-conflict-between-religion-and-science/>.

¹³ Pope Francis, “Laudato Si’ (ON CARE FOR OUR COMMON HOME).” §89

1.2 *Laudato Si'*: Critical Reflection

Overall, the reception of *Laudato Si'* among theologians has been predominantly positive, especially regarding the greater attention it has drawn to the world's mounting ecological crises and their disproportionate impact on the poor. This is not to say that it has passed entirely without critique, however. There have, of course, been a number of perhaps unsurprising challenges from those who deem Pope Francis to be too political—oftentimes implying or accusing that he is aligned too closely with political or social liberalism in the United States and Europe or even that he is a radical socialist or Marxist.¹⁴ However, there have also been several critiques raised by some of the most active, Catholic eco-theologians. At the heart of many of these critiques lies the relative disconnect between the vision elaborated in *Laudato si'* and the dominant currents in the work of ecological theology as it has developed over the last several decades.¹⁵ Some critics have argued that *Laudato si'* relies almost exclusively on Creation theologies to frame its theological insights, to the relative neglect of both Christology and redemption.

¹⁴ See, for instance, Ross Douthat, "Opinion | Pope Francis' Call to Action Goes Beyond the Environment," *The New York Times*, June 20, 2015, sec. Opinion, <https://www.nytimes.com/2015/06/21/opinion/sunday/ross-douthat-pope-francis-call-to-action-goes-beyond-the-environment.html>; "Four Things to Remember About the Pope's Environment Letter | Robert P. George," *First Things*, accessed August 31, 2020, <https://www.firstthings.com/blogs/firstthoughts/2015/01/four-things-to-remember-about-the-popes-environment-letter>; Paul Gosar, "Why I Am Boycotting Pope Francis's Address to Congress," *Time*, accessed August 31, 2020, <https://time.com/4040743/paul-gosar-pope-francis-congress/>; Rush Limbaugh, "The Pope's Leaked Marxist Climate Rant," *The Rush Limbaugh Show*, accessed August 31, 2020, https://www.rushlimbaugh.com/daily/2015/06/16/the_pope_s_leaked_marxist_climate_rant/; Stephen Moore, "Vatican's Turn To The Left Will Make The Poor Poorer," *Forbes*, accessed August 31, 2020, <https://www.forbes.com/sites/stevemoore/2015/01/05/vaticans-turn-to-the-left-will-make-the-poor-poorer/>; and George F. Will, "Pope Francis's Fact-Free Flamboyance," *Washington Post*, September 18, 2015, sec. Opinions, https://www.washingtonpost.com/opinions/pope-franciss-fact-free-flamboyance/2015/09/18/7d711750-5d6a-11e5-8e9e-dce8a2a2a679_story.html.

¹⁵ See also our brief discussion of these critiques in Benjamin J Hohman, "The Glory to Be Revealed: Grace and Emergence in an Ecological Eschatology," in *Everything Is Interconnected. Towards a Globalization with a Human Face and an Integral Ecology*, ed. Joseph Ogbonnaya and Lucas Briola, First edition (Milwaukee: Marquette Univ Pr, 2019), 179–98, from which the following two paragraphs are drawn.

Denis Edwards likens this imbalance to that found in many of the earliest ecotheologies, which countered the opposite tendency of some theologies to virtually omit nature and creation within salvation history.¹⁶ By contrast, more recent ecotheologies—particularly those belonging to the “Deep Incarnationalism” for which Edwards advocates—have worked to unite both aspects in a more comprehensive account.

A second line of critique notes that *Laudato si'* fails to substantively engage evolutionary science, thereby failing to model the broad, unitive, and interdisciplinary approach it suggests in its integral ecology. Celia Deane-Drummond submits that the document remains “tantalizingly unclear” on precisely how God acts in the emergence of humanity—both collectively and as individual persons—and that it “fails to take into account more broadly...the necessity of situating ecological science in the context of evolutionary accounts, and vice versa.”¹⁷ Edwards similarly argues that *Laudato si'* would benefit from a clearer acknowledgement of the evolutionary interplay of contingency and necessity in the unfolding of the world. In particular, he adverts to the need for a theological reckoning with the messiness and suffering of evolution and, therein, with “the dark side of nature...[and] the theology of the cross.”¹⁸ These critiques speak to more than mere academic interest as well, as the task of appropriating the full import of evolutionary history with respect to our own self-understanding within the larger compass of God’s good creation remains largely unfinished today. These unresolved tensions may be observed in the real or perceived conflicts even between

¹⁶ Denis Edwards, “‘Sublime Communion’: The Theology of the Natural World in *Laudato Si'*,” *Theological Studies* 77, no. 2 (2016): 377–91. 378–379.

¹⁷ Celia Deane Drummond, “*Laudato Si'* and the Natural Sciences: An Assessment of Possibilities and Limits,” *Theological Studies* 77, no. 2 (2016): 392–415, at 398 and 394.

¹⁸ Edwards, “‘Sublime Communion’: The Theology of the Natural World in *Laudato Si'*.” 380

magisterial statements on evolution, for instance, in relation to Christoph Cardinal Schönborn's criticisms of the growing role of scientific accounts of evolution in Catholic theology.¹⁹ Thus, while *Laudato Si'* convincingly argues for an ecological conversion both in individuals and cultures, it leaves a great deal of this work undone with respect to its own theological foundations, especially as they relate to the genuine newness stemming from an evolutionary worldview.

While most U.S. Catholics accept some version of evolutionary theory and would likely endorse the claim that "God creates through evolution," the implications represented in this shift in understanding of world history and process have in many cases been only nominally appropriated.²⁰ To give some perspective on how significant the shift towards a more evolutionarily oriented theology might be, consider the portrayal of evolutionary history contained in the "Cosmic Calendar," first popularized in Carl

¹⁹ In a 2005 op-ed, Cardinal Schönborn pushed back on what he viewed as "the widespread abuse of John Paul's 1996 letter on evolution," noting that the phrase "more than a hypothesis" is often abstracted from the larger whole of Catholic teaching, which "[proclaims] that the immanent design evident in nature is real." While the Cardinal rightly criticizes those who would press John Paul II's remarks into service against traditional teachings on divine providence in human and cosmic history, his comments do suggest that God's existence and intelligent design are articles of reason and not faith and, moreover, that this reason is correlated with the study of the natural world in the sciences, which suggestion is rooted on an inadequate understanding of the method and limits of modern sciences. In both the Cardinal's writings and in those he criticizes, the difficulty seems to be a lack of adequate differentiation between different kinds of knowing, coupled with an inadequate account of how the affirmation of God by human reason does not obviate the need for God's grace even in reasonable affirmations. For the Cardinal's original essay, a sampling of the criticism, and his later response in defense, see Christoph Cardinal Schönborn, "Opinion | Finding Design in Nature," *The New York Times*, July 7, 2005, sec. Opinion, <https://www.nytimes.com/2005/07/07/opinion/finding-design-in-nature.html>; Cornelia Dean and Laurie Goodstein, "Leading Cardinal Redefines Church's View on Evolution," *The New York Times*, July 9, 2005, sec. U.S., <https://www.nytimes.com/2005/07/09/science/leading-cardinal-redefines-churchs-view-on-evolution.html>; Christoph Cardinal Schönborn, "The Designs of Science," *First Things*, January 2006, <https://www.firstthings.com/article/2006/01/the-designs-of-science>.

²⁰ In a 2009 study conducted by the Pew Research Center's Forum on Religion & Public Life, 58% of Catholics agreed that "evolution is the best explanation for the origins of life on earth." While this number registers lower than Buddhists, Hindus, Jews, and religiously unaffiliated persons (81%, 80%, 77%, and 72%, respectively), it is higher than any other Christian denomination and 10% higher than the median rate of 48%. See Pew Research Center's Forum on Religion & Public Life, "Religious Differences on the Question of Evolution," February 4, 2009, <https://www.pewforum.org/2009/02/04/religious-differences-on-the-question-of-evolution/>.

Sagan's book, *The Dragons of Eden*.²¹ Developed as a teaching device to help students comprehend the otherwise unimaginable spans of time that make up evolutionary history, this calendar plots out the events from the big bang (January 1st at 12:00 am, approximately 13.8 billion years ago) to the present day over the course of one calendar year. For instance, the Milky Way first began to emerge on March 16th (11 billion years ago), the oldest rocks on Earth formed on September 6th (4.4 billion years ago), and the earliest signs of life emerged around September 14th (4.1 billion years ago). It is not until December 7th (670 million years ago) that the simplest of animals would begin to emerge and December 20th (450 million years ago) for the first land-based plants. Primitive humans—beginning with *Homo habilis*—don't show up until December 31st at 10:24 pm (2.5 million years ago), still an hour and 28 minutes before anatomically modern humans of the species *Homo sapiens* show up at 11:52 pm. Jesus's birth occurs at approximately 11:59:56 PM, just in time for the ball to drop.

All of this is not to suggest that Christian dogma is irrelevant or passé, but rather that the health and relevance of received doctrines today depends on their being reformulated and extended in the light of this new horizon in ways that allow for critical, new understandings to emerge. Indeed, some important theological work on the appropriation of evolution has already begun. Scholars and church leaders have worked to challenge historical readings of passages like Genesis 1:28 (“God blessed them, and God said to them, ‘Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth.’”) that have been used to justify wanton and wasteful abuse of

²¹ Carl Sagan, *The Dragons of Eden: Speculations on the Evolution of Human Intelligence*, 1st ed. (New York: Random House, 1977). See especially pages 8-11.

the earth and its creatures.²² Others have challenged readings of the apocalyptic books of the Bible that have contributed to a sense of disregard for the enduring health and wellbeing of the created world.²³ Some historical and systematic theologians have worked to reread thinkers like Irenaeus, Athanasius, Bonaventure, Aquinas, and others for new insights into the relationship between humanity and the rest of creation.²⁴ These efforts have helped to stimulate thought about how theology might contribute to the ecological conversation by rethinking our relationship with other creatures through our common evolutionary history.

As noted above, there has also been an increasing push in systematic reflections on ecology, evolution, and the environment to move away from the earliest reflections centered on creation theology in an effort also to rethink Christology, soteriology, and eschatology. Perhaps the most influential of these strands in Catholic thought is the idea of “Deep Incarnation,” which builds on the work of Lutheran theologian Niels Gregersen, who first extended Luther’s theology of the cross to the rest of creation.²⁵ Deep Incarnation reflects on the way that all of reality is shaped by the entry of God into history in the Incarnation, in which “the Word became flesh (*sarx*) and lived among us” (John 1:14). Reflecting on this fleshly entry in light of the common, fleshly origins of all

²² See, for instance, Pope John Paul II, “Centesimus Annus,” § 31; Michael J. Beers et al., “The Catholic Church and Stewardship of Creation,” Acton Institute, April 17, 2000, <https://www.acton.org/public-policy/environmental-stewardship/theology-c/catholic-church-and-stewardship-creation>; Joseph A. Tetlow, S.J., “Statement: An Ecological Spirituality,” USCCB, 2014, <https://www.usccb.org/resources/ecological-spirituality>; Pope Francis, “Laudato Si’ (ON CARE FOR OUR COMMON HOME).” § 65-75, 116-117.

²³ Micah D. Kiel, *Apocalyptic Ecology: The Book of Revelation, the Earth, and the Future* (Collegeville, Minnesota: Michael Glazier, 2017).

²⁴ For only a few examples see Ilia Delio, *Simply Bonaventure: An Introduction to His Life, Thought, and Writings* (Hyde Park, N.Y., Hyde Park, NY: New City Press, 2001). Denis Edwards, *Deep Incarnation: God’s Redemptive Suffering with Creatures*, Duffy Lectures in Global Christianity (Orbis Books, 2019); Zachary Hayes, *The Gift of Being: A Theology of Creation*, New Theology Studies ; v. 10 (Collegeville, Minn.: Liturgical Press, 2001).

²⁵ Niels Henrik Gregersen, “The Cross of Christ in an Evolutionary World,” *Dialog: A Journal of Theology* 40 (2001): 192–207.

creatures through evolution, Deep Incarnation considers how God's saving action in the mission of the Son through his life, passion, death, and resurrection might extend to all creatures in evolutionary history.

Perhaps surprisingly, though, few Catholic theologians have extended their ecological and evolutionary reflections through a specific engagement with systematic and constructive theologies of grace. While their discussions of the Creator Spirit, Deep Incarnation and Resurrection, sacramental encounters with creation, and other descriptions of God's activity in and through evolution implicitly connect with traditional language and understandings regarding God's grace, rarely do they explicitly connect their statements with traditional, Catholic theologies of grace built on the thought of Augustine, Aquinas, and others.

One explanation for this relative silence may trace back to one of the earliest and most influential critiques of Christianity in relation to the natural world, namely, Lynn White's 1967 article, "The Historical Roots of Our Ecological Crisis."²⁶ In this brief article, White argues that the roots of the modern ecological crisis trace back to the Christian West's subdual of pagan nature religions and elevation of human beings to a form of Godly transcendence over the world. He dubs this transformation "the greatest psychic revolution in the history of our culture," and argues that it is so pervasive even in those movements influenced by it—including Islam, communism, and scientific atheism—that it cannot be addressed with anything less than a new religious solution. Willis Jenkins argues that White's argument entailed three critical assumptions about religious worldviews: "[That] they generate social practices, that they should be

²⁶ Lynn White, "The Historical Roots of Our Ecological Crisis," *Science* 155 (1967): 1203–7.

measured by the criteria of intrinsic value and anthropocentrism, and that salvation stories threaten environmentally benign worldviews.”²⁷ In Jenkins’s view, the significance of this third assumption has had an outsized impact on Christian theologians in the decades since: “Ever alive to White’s critique, the response from Christian environmental theologies has been garbled. They tend to downplay talk about salvation even when they follow patterns of grace or reach for symbols of redemption.”²⁸ While Jenkins’s analysis seems to obscure some of the more nuanced character of White’s original critique, it remains that many Catholic thinkers have indeed been more hesitant to address how their ecological and evolutionary commitments might impact systematic accounts of nature, sin, and grace.²⁹

1.3 Grace in Another Grammar: *Ecologies of Grace*

Despite their reticence regarding theologies of grace, Catholic theologians have continued to develop ecological and evolutionary theologies that make strong claims about redemption and eschatology both in and beyond human contexts. These proposals and their implicit connections to a changing understanding of nature, sin, and grace have been helpfully charted in Willis Jenkins’ influential book, *Ecologies of Grace*. While some theologians and ethicists have been rather coy about casting their accounts in the

²⁷ Willis Jenkins, *Ecologies of Grace: Environmental Ethics and Christian Theology* (Oxford ; New York, Oxford: Oxford University Press, 2008). 11

²⁸ Jenkins. 12

²⁹ In fact, White treats the role of Christian salvation narratives in only one brief paragraph of the article, and he limits his critique to late, voluntarist Western theologies. Moreover, White also suggests that there are some notable and influential exceptions in Western Christianity, including especially St. Francis of Assisi. Still, as will become clear in the following pages, White’s preference for Greek theologies of nature and of salvation are broadly reflected among contemporary Catholic ecotheologians, whether or not this correlation traces directly back to White’s article.

language of grace, Jenkins notes that this framework has nevertheless been operative in the background of nearly all influential accounts across denominational lines.

At first glance, soteriology appears an unlikely starting place, for it seems to focus on the human, the spiritual, the interior, the otherworldly—quite the opposite of environmental concerns. Indeed, some compelling critiques blame the human-centered, spiritualized ambitions of salvation stories for generating the bad worldviews that underlie environmental problems. For better worldviews, therefore, Christian environmental ethics often begins from the doctrine of creation, reconsidering the moral dimensions of religious cosmology. Yet, as we will see, ethicists still rely on the tropes and concepts of grace to make those cosmological reformulations come to life within Christian experience. Even while talking about other things, Christian environmental ethics tends to draw on background stories of salvation at the moments it wants to make environmental issues matter for Christian life.³⁰

Though the “grammars of narration” employed by different Christian thinkers may sometimes avoid the specific language, Jenkins effectively argues that their discourse nevertheless remains marked by the logics of grace and salvation.

Building on the work of the sociologist Laurel Kearns, Jenkins examines three ideal types to which most Christian eco-theologies (at least in the United States) adhere: Ecojustice, Christian Stewardship, and Creation Spirituality, which, broadly speaking,

³⁰ Jenkins, *Ecologies of Grace*. 4

map to the Roman Catholic, Protestant, and Eastern Orthodox traditions, respectively.³¹

Jenkins describes their main features as follows:

Ecojustice theologies tend to rely on a view of sanctification in which grace illuminates creation's integrity. Stewardship theologies rely on tropes of redemption, where encounter with God creates vocational responsibilities to care for creation. What I call "ecological spiritualities" appropriate themes of deification, by which personal creativity brings all creation into the gift of union with God. Each strategy brings environmental issues within Christian moral experience according to a background pattern of grace.³²

Given the range of these applications, it is clear that Jenkins definition of grace enjoys a greater breadth than the term is often accorded in the work of many academic theologians. Besides acknowledging that each usage approximates something like "a divinely initiated relationship of God and creation," Jenkins is content to allow for this play within its semantic range in the face of a broader environmental pluralism, describing his own general approach as being sympathetic to environmental pragmatism.³³

In line with his pragmatic concern for promoting environmental action, Jenkins also loosely maps these three theological types to three different practical strategies. He likens the ecojustice appeal to an argument on the basis of "nature's standing," in that it

³¹ Jenkins. 18. Jenkins cites Laurel Kearns, "Saving the Creation: Christian Environmentalism in the United States," *Sociology of Religion* 57, no. 1 (1996): 55–70, <https://doi.org/10.2307/3712004>; Laurel Kearns, "Saving the Creation: Religious Environmentalism" (Dissertation, Emory University, 1994). See also pages 19–20, where Jenkins suggests that Protestants might be divided between the first two models, with mainline Protestants tending towards the more Catholic, Ecojustice model while Evangelical Protestants are more drawn to the model of Christian Stewardship.

³² Jenkins, *Ecologies of Grace*. 18

³³ Jenkins. 20, 34–42.

argues that we owe particular creatures their due respect and care because of the kind of creature they are. As Jenkins notes, this requires a relatively positive view of epistemology, since “adequately describing nature becomes a central task for environmental ethics, for insofar as the moral order of nature structures practical reason, we must be able to refer to compelling and authoritative accounts of nature.”³⁴ The first major challenge that attends the “nature’s standing” strategy is determining how to weigh the relative value of theoretically distinct entities: “of individual creatures (three individual colobus monkeys fated for research)... of a species (habitat loss for the red colobus)... of standing between species (mountain lions and mountain goats, or wild and domesticated creatures)... [or] of holisms like ecosystems, bioregions, or even a global climate pattern.”³⁵ Furthermore, there remains the problem of moving persons from the intellectual grasp of the particular standing of an entity and its natural standing and the move towards personal, moral agency.

However, when this strategy is reinforced through a connection with theologies of eco-justice, “its moral response [may be incorporated] into the distinctive patterns of sanctification. For ecojustice advocates, becoming friends with earth restores humans to friendship with God. And both forms of friendship require solidarity with the human poor and participation in the whole community of God.”³⁶ Moreover, ecojustice approaches supplement the weaknesses of the nature’s standing strategy by buttressing the often-contentious scientific account with spiritual or theological discernment of fact or value as they attend to the distinct and enduring relationship between all creatures and their

³⁴ Jenkins. 44

³⁵ Jenkins. 44-45

³⁶ Jenkins. 64

Creator. The theological framework thereby provides the internal motivation for moving from the fact of recognition to concrete human action as an integral part of the life of holiness. However, Jenkins notes that the theological framework introduces a new and challenging question to theology: Do aspects of the darker side of creation—predation, death, and extinction—pertain to nature’s integrity or its degeneracy?³⁷ The success of any theologies of ecojustice and the specifics of their environmental goals rests in part on their answer to these questions.

Jenkins likens the second theological model, Christian Stewardship, to the practical strategy of “moral agency,” which operates as a form of ongoing critique of the nature’s standing model for its “onerous descriptive requirements and tendentious epistemological claims,” favoring instead an emphasis on the “locus of the problem: bad human practices.”³⁸ Having a considerably lower estimation of the human capacity to know nature—especially given the complicity of human nature in constructing the problematic structures in the first place—this approach assails the “discriminatory qualifiers between nature and culture (‘wild,’ ‘domestic,’ ‘artificial’).”³⁹ Eschewing these descriptive tasks that, in their view, unnecessarily preoccupy the value theorists of the first strategy, this model moves more quickly to the work of politics through the work of deconstruction in order to “open space for constructing better sorts of social practices” by freeing the imagination from the strictures of a discussion erected by purportedly disinterested scientists.⁴⁰ Still, Jenkins acknowledges that this model has its own dangers,

³⁷ Jenkins. 70-71. Jenkins points in particular to the critiques of ecojustice theologies by Lisa Sideris in *Environmental Ethics, Ecological Theology, and Natural Selection*. New York: Columbia University Press, 2003.

³⁸ Jenkins. 46

³⁹ Jenkins. 48

⁴⁰ Jenkins. 49

in that it “may reduce environments to social processes, too easily washing out significant features of our environmental experience (real kinds, living creatures, and actual relations to which we respond)” and, furthermore, that “without intrinsic resistance from the nonhuman world, environmental theory relegates itself to the politics of alternative imagination—at best a marginal dissent and perhaps accessory to the defoliative powers underwriting exploitative notions of nature.”⁴¹

Nevertheless, the support offered to the moral agency strategy by its association with theologies of Christian stewardship can mitigate these potential weaknesses, as it “configures the moral significance of nature within God’s redemptive actions. Grace constructs nature as the environment of God’s love for the world, which good stewards inhabit responsibly.”⁴² Christian stewardship therefore sharpens the dialectical distinction between creature and Creator and mandates human care for the earth out of obedience to divine commands. Nevertheless, while it helps to provide a more positive and constructive function to the strategy of moral agency by moving Christians to “cultivate, govern, and/or improve the earth ‘on behalf of God,’” critics of the stewardship model challenge that it remains too anthropocentric and dominating.⁴³ Other critics have also noted that, in their emphasis on humans participating in God’s redemptive work of all of creation as marred by sin, adherents to the Christian stewardship model may face the same dilemmas as eco-justice advocates in discerning right action with respect to the moral status of predation, death, and extinction in relation to the vision of the peaceable kingdom.⁴⁴

⁴¹ Jenkins. 51-52

⁴² Jenkins. 77

⁴³ Jenkins. 80

⁴⁴ Jenkins. 88-91

Finally, turning to the third approach of ecological spiritualities, Jenkins draws a parallel between ecological spiritualities and the practical strategy of “ecological subjectivity,” which “assumes agents and environments are already reflexively related. Inverting the constructivist criticism of the second strategy, and carrying out the moral standing implications of the first strategy, these theorists insist on ‘recognizing nature as an active participant in the production of self, society, and our ethical values.’”⁴⁵ Jenkins groups a number of different movements under this heading, noting that they are all united in their common tendency to ground their ethical proposals on the basis of the deep interrelations between personhood and the larger environment in which it emerges and exists.⁴⁶ However, at least some forms of this strategy, such as Arne Næss’s deep ecology, end up “resolving persons into their ecological relations... [thereby undermining] their meaningful distinction.”⁴⁷ The result of this can be a diminished ability to adjudicate between competing value claims, perhaps especially in instances where environmental action may imply significant human suffering or even death.

Nevertheless, the strategy of ecological subjectivity—especially when correlated with ecological spiritualities—has much to recommend it, and, though he declines to directly express preference for any of the three approaches, Jenkins certainly seems exceptionally positive on the potential of these models.⁴⁸ Indeed, the strength and

⁴⁵ Jenkins. 54, quoting Mick Smith, *An Ethics of Place*. Albany: State University of New York Press, 2001. 212

⁴⁶ Jenkins. 54. Jenkins specifically mentions “coevolutionary anthropologies, most renderings of deep ecology, most ecofeminisms, environmental psychology, and ecophenomenology, as well as (perhaps surprisingly) most analyses from environmental economics and environmental justice.”

⁴⁷ Jenkins. 56

⁴⁸ Jenkins. 227: “In the course of researching and writing this book I have sometimes been asked which ecology of grace works best. Which strategy should environmentalists use? Which rendition of nature and grace should pastors preach? At other times I have been asked how theologies might need revision for an environmental age. Are these ecologies of grace really sustainable? How might we reconstruct a comprehensive environmental theology? I have consistently demurred, for this has remained an exercise in

expansiveness of these models more broadly makes for some strange bedfellows both in the more secular, political work of ecological subjectivity and the more explicitly theological work of ecological spiritualities. Thus, while Jenkins follows Kearns in associating this model with Eastern Orthodox approaches, he also associates this model with many other diverse and controversial thinkers. For instance, quoting the former-Dominican and founder of Institute of Culture and Creation Spirituality and the University of Creation Spirituality, Matthew Fox, Jenkins suggests that “Creation spirituality sometimes presents itself as a ‘liberation theology for the so-called ‘First-World’ peoples.’”⁴⁹ Jenkins notes in particular how creation spiritualities have been employed in relation to ecofeminism, critiques of environmental racism, and other progressive forms of social liberation. Many of the most important voices from the Catholic tradition are also variously discussed under this model: Pierre Teilhard de Chardin, Denis Edwards, John Haught, Celia Deane-Drummond, Thomas Berry, and Kevin Irwin, to name only a few. Given this inclusion of many important Catholic voices, it is unsurprising, then, when Jenkins includes “Sacramental Ecologies” and their paideutic focus on creaturely worship and praise as instructive formation for ecological spiritualities.⁵⁰ With respect to the processes of evolutionary emergence and to the developmental life of prayer and divinization, what emerges is a cosmos rooted in patterns of creaturely becoming.

ecumenical understanding rather than a comparative evaluation or a reconstructive proposal. But the exercise does have its implications. By mapping the theological patterns that make environmental problems urgent and intelligible to Christian communities, it points toward ways of using those background sources more openly and usefully. Moreover, insofar as ecologies of grace illuminate how environmental problems matter for Christian life, this book shows why ecology makes a claim on Christian identity, and how environmental crises could pressure change in the way churches tell their salvation stories.”

⁴⁹ Jenkins. 96

⁵⁰ Jenkins. 99-100

Here, Jenkins highlights two central questions that any ecological spirituality must answer: “What is creation doing? And what is God doing with/in creation?”⁵¹ The answers to these questions have centered around renewed efforts to explicate theologies of the divine missions, both through a greater attention to the work of the Creator Spirit and to the work of Divine Wisdom (Sophia) at work in the world. Conformed to the missions, human economic, political, and technological activities may come to model creaturely cooperation with God’s cosmic plan, yielding various forms of what has been called “ethics of creativity.”⁵² While Jenkins admits that some expressions of this approach have been criticized for their anthropocentric humanizing of the cosmos and their elision of critical differences between humanity and other creatures, it is clear that, at least from the perspective of many western Christians, the insights gained from this model have been particularly formative in recent years.

Following this overview of various ethical strategies, Jenkins devotes the rest of the book to “theological investigations,” in which he addresses the challenges raised against each model by a return to the most archetypal figures within each tradition. For the Catholic eco-justice approach, he offers a “novel” reading of St. Thomas in pursuit of the “soteriological conditions for ecojustice” in order to answer “why conforming ourselves to creation could be part of becoming friends with God, [and] why life with God might make us more at home on earth.”⁵³ He turns to Karl Barth to “show how

⁵¹ Jenkins. 103

⁵² Jenkins. 104

⁵³ Jenkins. 115-116. In her review, Celia Deane-Drummond notes that, “In as much as theologies of grace have received rather less attention than they deserve, [Jenkins’s] book offers an important corrective... [and] has the advantage of fostering a greater interest in ecological concerns among those (incorrectly) bent on interpreting [the authors treated] in narrowly anthropocentric terms.” However, she takes issue with the adequacy of his interpretations of these thinkers, especially Aquinas: “Even though [Jenkins] took great trouble to try and understand the alternative positions with which he engaged, his treatment of other authors such as Thomas Aquinas was, by his own admission, somewhat idiosyncratic, at least according to scholars

God's action makes nature matter for faithful practices... since the strategy of stewardship appeals to the general pattern of grace Barth defended... [and] should also point stewardship theologies toward the most helpful resources within the pattern of redemptive grace."⁵⁴ Then, in the final sections, he draws from Maximus the Confessor—both directly and as mediated through first Dumitru Stăniloae and then, more favorably, Sergei Bulgakov—to address what many Orthodox theologians have described as the “western rupture of nature from salvation” and the “modernist alienations of nature from humanity” through a theology of deification, paying particular attention to their suggestions for addressing this approach’s “most serious problem—correlating divine grace and creaturely creativity.”⁵⁵

Jenkins’ work is especially instructive for this project. In developing these three models, Jenkins aims less at elevating one single model than at promoting understanding between various traditions and the activists who work with, in, and between them. As he suggests at numerous points, the strongest approaches often reflect an awareness of and dialogue with all three models, even if they tend to follow one or two of them more

occupied with the work of this theologian. While I share many of [Jenkins’s] insights, especially in his push towards eco-justice, the reader is at times left wondering where his particular interpretation parts company from standard Thomist texts.” See Celia Deane-Drummond, “Willis Jenkins, *Ecologies of Grace: Environmental Ethics and Christian Theology* (Oxford: Oxford University Press, 2008), Pp. 363. \$35.00,” *Scottish Journal of Theology* 64, no. 3 (2011): 364–66, <https://doi.org/10.1017/S0036930610000074>. While Deane-Drummond does not develop her own critiques in detail, we would note that at least one major oversight in Jenkins’s treatment lies in his overemphasis on individual sanctification in Thomas’s thought and his relative inattention to Thomas’s stress that, if the cross of Christ was God’s solution to evil by overcoming evil with good, God’s ultimate good is the order of the universe. Thus, while Aquinas’s account of grace does focus on transformation of human persons and on bringing us into friendly communion with the Trinitarian God, there are other aspects of Aquinas’s theology that are more concerned with the good each and of all. As will become clear in later parts of this chapter and dissertation, this supposition is the basis of the theology of grace that we develop here on the basis of Lonergan’s transposition of Aquinas.

⁵⁴ Jenkins, *Ecologies of Grace*. 153

⁵⁵ Jenkins. 189-190

strongly.⁵⁶ Moreover, he demonstrates that, while Catholic theology has often drawn heavily from Aquinas to elaborate an approach to environmental ethics rooted in sanctifying grace, the habit of charity, and human friendship with the Trinitarian God, nearly all of the most prominent Anglophone Catholic theologians of the last several decades who have turned their attention to ecological and evolutionary concerns have drawn from resources outside the Catholic theological tradition. While these creative encounters have yielded much fruit, it is not always obvious how to reconcile Thomist accounts of grace as operative in human intellect and will with more typically Orthodox accounts of divinizing grace transforming and transfiguring all of creation.⁵⁷ Yet, for the insights of the ecological and evolutionary turn to meet up with the larger framework of Catholic thought in the way envisioned in *Laudato si*'s integral ecology, nothing less than such a reconciliation is required. It is worth noting, here, that Jenkins book was first published in 2008, nearly seven years before the promulgation of *Laudato si*'. While *Laudato si*' certainly draws from the ecojustice model in some ways, it seems more strongly still to draw from the tradition of ecological spirituality, nowhere more clearly

⁵⁶ For instance, speaking about Holmes Rolston III, Jenkins notes that he “deploys aspects of all three strategies even as he roundly defends the main outlines of one. While Rolston argues for nature’s standing by way of intrinsic value, he carefully attends to objections which accuse that strategy of discounting the role of human practices. Recognizing resources for a more adequate practical rationality, Rolston adopts an aspect of the strategy of moral agency by specifying the kinds of experience and practices required for correctly describing nature’s value. And he adopts an aspect of the strategy of ecological subjectivity when he describes valuing as an ecological practice that realizes the human role within a coevolutionary narrative. Human identity connects with nature’s self-projecting status at the key juncture in his account of nature’s standing. There should be questions about how coherently Rolston’s assimilations hang with his dominant strategic mode, but the very fact that he attempts to assimilate the strengths of all three strategies points to the functional significance each bears, and perhaps to a broader notion of practical adequacy intelligible across major approaches to the field.” Jenkins. 58

⁵⁷ There is, of course, a strong account of human divinization in grace in Thomas’s theology as well, as will be explored in detail in Chapter Three. However, unlike many Orthodox Christian theologies, Thomas does not extend divinization beyond the human species.

than in its emphasis on an integral ecology.⁵⁸ It seems, then, that Catholic theology following *Laudato si'* stands in need of a more integral and more integrated theological framework that is capable both of preserving the lasting and (perhaps permanently) valid achievements of Thomas Aquinas's theological approach while, at the same time, finding a way to express the new theological insights that have emerged from changes in the scientific, theological, and ecumenical horizons in recent years.

1.4 A “Catholic” Account of Grace, Drawing from Thomas Aquinas

Before suggesting the contours of this new framework for thinking about grace in the larger creation, though, it is important to briefly elaborate some of the key marks of broadly Catholic theologies of grace, particularly as influenced by Thomas Aquinas's synthesis and its enduring influence and importance. While we do not intend to suggest some kind of Thomist purity test for measuring the orthodoxy of contemporary theologies, Aquinas has exerted a decisive impact on Catholic thought through his remarkably broad and coherent synthesis of earlier Christian thinkers within a philosophical framework that draws from both an Aristotelian metaphysics and Platonic participatory metaphysics. Even those contemporary Catholic theologians who do not intentionally draw from Aquinas's works are often dependent on theologians who do, as the influence of Aquinas is evident in the theologies of Rahner, von Balthasar, Congar, Chenu, Lonergan, and others. Thus, by framing this project in relation to the tradition of Thomist theologies of grace, we are more readily able to clarify the connections between

⁵⁸ In fact, it is worth noting that Kevin Irwin, whom Jenkins cites in relation to sacramental ecology according to the model of ecological spiritualities, was one of the major drafters of *Laudato si'*.

the ecological and evolutionary horizon and the work of systematic theology more broadly conceived.

1.4.1 Nature and the Theorem of the Supernatural

The first enduring aspect of Thomas’s theological synthesis is the influence of what has been termed, “the theorem of the supernatural.”⁵⁹ First elaborated by Phillip the Chancellor and later taken up by Thomas Aquinas, this theorem marked a major theological breakthrough, not only for the ways in which it describes the gratuity and disproportion of God’s gracious action among humans, but also for its emphasis on the enduring goodness of the natural order. In earlier Christian theology—and perhaps especially in the received interpretations of the most influential Christian thinker in western Christianity, Saint Augustine—accounts of God’s grace had centered more narrowly on the healing function of grace in relation to a fallen and sinful humanity.⁶⁰ The theorem of the supernatural affirmed the particular dignity and goodness of the order of nature even after the Fall and emphasized a corresponding understanding of grace as both healing (*sanans*) and perfecting and elevating (*elevans*) human nature. Therein, we are brought to a disproportionate excellence realized in the indwelling of the Holy Spirit and our adoption into the life of friendship with the Trinitarian God. This theorem has proved to be decisive for Catholic thought, especially as it came to resist portrayals of human nature as fallen to the point of “total depravity” in some Reformation thinkers.

⁵⁹ This theorem will be treated at greater length in Chapter Three, especially as it pertains to both Thomas Aquinas and the appropriation of his thought by Bernard Lonergan.

⁶⁰ While Augustine lacked the advantages of the theorem of the supernatural for affirming the goodness of nature itself, he does emphasize the gratuity of creation against the Pelagians, as comes out when in his sermons he refers to natural beings as “sacraments”—say, the sunrise and the of the cocks’ greeting it—and nature generally as a symbol of the divine, so he puts a positive ‘spin’ on nature, yet still puts down the virtues of the pagans.

The central place given to the theorem of the supernatural in this dissertation may raise concern among some readers for several reasons. First, one of the most important advances in theology in the twentieth century was the movement away from what has been critically described as a “two-tiered universe” or “layer cake” theory of grace. This critique, most famously raised in Henri de Lubac’s *Surnaturel*, took aim at the mistaken understanding of “pure nature” as the prevailing state of human nature after the Fall and prior to encountering grace in the sacraments.⁶¹ In this view, grace represented an intervening order into a world otherwise left to its own devices. The result of such a view was both, on the one hand, to increase the distance between God and creation after the Fall in such a way as to deepen the caesura already partially-established in the post-Enlightenment emancipation of science from religion and, on the other, to suggest a commodified and quantifiable view of grace as doled out by the Church. As will hopefully become clear in the course of subsequent chapters, while we seek to maintain the nature/supernature distinction and its positive regard for the goodness and intelligibility of nature, we are convinced that the critical task in the present historical moment lies in emphasizing the unity of the orders of nature and grace in the world and in our experience of it.

⁶¹ Henri de Lubac, *Surnaturel: Études Historiques* (Paris: Aubier, 1946). See also de Lubac’s later publication, Henri de Lubac, *The Mystery of the Supernatural*, Milestones in Catholic Theology (New York: Crossroad Pub, 1998), in which he expanded and clarified the argument in *Surnaturel*, especially with respect to the criticisms raised against him by many contemporaries and (implicitly) in Pope Pius XII, “*Humani Generis*,” August 12, 1950, http://w2.vatican.va/content/pius-xii/en/encyclicals/documents/hf_p-xii_enc_12081950_humani-generis.html. De Lubac’s challenges to the idea of human persons lacking grace from birth was also heavily influenced by Maurice Blondel, *Action: Essay on a Critique of Life and a Science of Practice* (Notre Dame, Ind.: University of Notre Dame, 1984), in which, though he never mentions “grace” explicitly, Blondel argues that all human action and especially the will of any ends must be instances of co-action empowered by something beyond themselves.

A second aspect to theologizing grace in relation to the theorem of the supernatural pertains to its pairing with the term “nature,” which has itself come under greater scrutiny in recent years. One reason for its greater contestation has to do with the ambiguity that attends the term both within and across disciplines, as Christina Zenner summarizes:

In ecological theology and environmental ethics, the terms “nature” and “creation” are often used as interchangeable descriptions. They refer to the environment as a global, created, material totality, including flora and fauna. In philosophical theology and ethics, the invocation of nature tends towards the metaphysical. It can, for example, refer to the descriptive features and proper powers of particular kinds of beings (as suggested by terms like “human nature”) and to the order of relationships (such as those between God and humans, God and creation, and so forth).⁶²

Following Thomas, this dissertation primarily invokes the more Aristotelian, philosophical meaning of nature, in which the immanent nature of creatures refers to “a principle and a cause of motion or rest in that to which it belongs primarily” (192b21-22).

However, beyond the task of disambiguation, there are further challenges raised against the concept of nature on epistemological and ethical grounds: “Aquinas’s optimism regarding what could be discerned about ultimate realities and morality through the powers of reason operating on the substance of the natural, created world has not been roundly endorsed.”⁶³ In later chapters, we will see how Bernard Lonergan’s retrieval of the concept of nature grounded in a critical, heuristic metaphysics addresses some of the

⁶² Christiana Z. Peppard, “Denaturing Nature,” *Union Seminary Quarterly Review*, 2010, 97–120. 99.

⁶³ Peppard. 98

most serious critiques leveled against this account, including but not limited to charges of intellectual hubris, static essentialism, and the weaponizing of the concept of the “natural” through some approaches to natural law.⁶⁴ Moreover, we will attempt to exorcize what Zenner describes as the view of nature in following the Enlightenment as “a disordered, non-purposive, seemingly infinite cache of raw materials, subject to empirical analysis, and mobilized towards productive human use in ways that eventually gave rise to the industrialized, technological, consumerist society of the present day.”⁶⁵ In what follows, then, we will attempt to use the term nature to both draw on its importance in theological discourse while, at the same time, accounting for its polysemy and resisting its cooptation towards repressive ends in normative, ethical discourse.

1.4.2 The Role of a (Chastened) Metaphysics in Relation to Nature and Grace

This clarification of the term nature also pertains to the second feature of Thomist theology taken up in this project, namely, the coordination of the term grace to nature through the articulation of a grounded and chastened critical metaphysics. This point is sure to raise concern among some readers, as critiques of Thomist metaphysics have multiplied throughout the Twentieth Century and into the present. It is true that various decadent forms of Scholasticism have proved destructive in the history of theology: through reductive assertions of a false naturalism, sweeping and unjustified

⁶⁴ In addition to transposing Thomas’s metaphysics in ways that more clearly avoid these potential problems, Lonergan’s earlier works also clarified how many of these critiques may be more justly leveled at certain of Thomas’s interpreters than of his work itself. In Chapter Three, we will examine the meaning of nature as retrieved and developed in Bernard Lonergan’s critical metaphysics as laid out in Bernard J. F. Lonergan, *Insight: A Study of Human Understanding*, 5th ed., rev. aug., Lonergan, Bernard J. F. Works. 1992 3 (Toronto ; Buffalo: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 1992). Our treatment there will also draw from Patrick H. Byrne, “Insight and the Retrieval of Nature,” *Method: Journal of Lonergan Studies* 8 (1990): 1–59.

⁶⁵ Peppard, “Denaturing Nature.” 99

hierarchicalism, and static and monadic conceptualism. While any particular account of metaphysics guilty of these charges is to be resisted as counterpositional, however, the retention of an epistemically-chastened, critical metaphysics is essential to this project for several reasons. Any account of grace as divinizing or “elevating” presumes that the creature being elevated has some particular capacities, identity, and definite actions in the world that are transformed through grace. Metaphysics clarifies these potencies, forms, and acts both with regards to that creature and to the other creatures with whom it stands in various relations. In order for something to be raised to an excellence that is disproportionate or gratuitous to itself, there must be some coherent account of what sorts of excellences are in fact proper to that creature to begin with. Such a description must also transcend the limitations of local, commonsense descriptions, for some of the excellences realized in a creature through grace are naturally disproportionate not only in relation to some particular context, but they are disproportionate to creaturely finitude and limitation altogether. Therein, metaphysics makes two key contributions. First, it clarifies the differences between various creaturely perfections in line with their particularities such that the emergence of some new excellence is identifiable. Second, it clarifies that there are some excellences that are of a wholly different order and that surpass the nature of any possible creature as creature. In this way, metaphysics plays a critical role in maintaining the distinction between creatures and creation, on the one hand, and creatures and Creator, on the other.

1.4.3 Grace and Human Freedom

A third enduring feature of Thomas's thought is the emphasis on the freedom and agency of human beings as knowers, choosers, and lovers. One of the most important achievements in Thomas's theology was to work out an account of how human freedom—though diminished through the stain of sin—is still real and significant in our coming to embrace God. Moreover, Thomas argues this without diminishing the efficacy of divine action or the priority and utter gratuitousness of God's grace. By showing how human freedom and divine efficacy are in non-competition in relation to the conversion of human hearts, Aquinas laid the theoretical groundwork for an affirmation of both the goodness and integrity of nature and the absolute necessity of grace. While this achievement was obscured in the reception of Thomas's thought in some of the debates of the following centuries, its recovery has been at the heart of much of theological renewal begun in the Twentieth Century.

1.4.4 Natural Theology

Without presuming to have exhausted the richness of Thomas's thought, we would call attention to just one more critical feature here: the value and the possibility of natural theology. Natural theology refers to a form of theology that clarifies the openness of nature as distinct from the supernatural order. Sometimes referred to as treating "the book of nature," natural theology focuses on what is referred to as "general revelation," or the way in which God reveals Godself to all persons and places in ways that may be discerned through the mark or *vestigia* of the Creator on creation.⁶⁶ Special revelation is

⁶⁶ The term "book of nature" may trace back to Saint Augustine's Commentary on Psalm 45:4: "The pages of divine scripture are open for you to read, and the wide world is open for you to see. Only the literate can

temporarily bracketed for the sake of attending to nature on its own terms, allowing for greater dialogue with and learning from persons from other disciplines, fields, and faiths. The possibility of natural theology rests on a relative degree of confidence in the possibility of our knowing nature accurately, and so it necessitates a careful attention to the possibilities and actualities of that failure as well. Although often fraught by epistemological challenges, natural theology holds the potential to broaden and deepen our understanding of our relationship with God. This also includes the potential for natural theology to address our understanding and reception of special divine revelation, for the bracketing carried out in natural theological work represents a withdrawal for the sake of return, as a greater knowledge of the world of creation expands the horizon against which we understand what we have received in faith. While this project is not an attempt at natural theology *per se*, it proposes to learn from these investigations in the hopes of better understanding and applying our theology of grace in the world we inhabit.

By drawing from these enduring resources in Thomas's thought, we hope to develop a theology of grace that suggests a relevant answer to the questions being raised in ecological and evolutionary theologies while also clarifying the implications for the larger systematic whole of theology. Nevertheless, the move to extend the Catholic grammar of grace towards non-human creation strongly distinguishes this account from most theologies that might be generally described as Thomist.

read the books, but even the illiterate can read the book of the world" (*The Works of Saint Augustine, Part III Volume 16: Exposition of the Psalms*, 33-50, trans. and notes by Maria Boulding [Hyde Park, NY: New City Press, 2000], 315). Cited in Peppard. 98.

As an attempt to reframe the conversation around nature and grace, this project finds resonances with a great many other such attempts in recent years. As Frederick C. Bauerschmidt notes,

The general trend of Catholic theology in the twentieth century has been to seek a closer integration between nature and grace, rejecting the “dualist” approach in which nature is a self-enclosed structure upon which grace builds a kind of superstructure, and to propose instead that grace is the fulfillment of nature’s inner dynamism...However, having said this one has not said a whole lot, because the vast majority of theologians in the second half of the twentieth century would say that they reject the dualist approach, that they believe that grace and nature are integrally related, and that they believe that holiness is not the special prerogative of the vowed religious. What matters is how one integrates nature and grace.⁶⁷

As Bauerschmidt suggests, it is not enough to suggest a theology of grace to challenge dualisms and emphasize God’s intimate presence to all of creation without moving from more poetic and descriptive language to an explanatory, theoretical account, especially if the conclusions of such theological interpretations are to be taken seriously by persons working outside of the explicitly ecological and evolutionary context for theology. In order to help provide the control of meaning to ground a theology of grace concretely, we will draw on the thought of Bernard Lonergan.

⁶⁷ Frederick C. Bauerschmidt, “Confessions of an Evangelical Catholic: Five Theses Related to Theological Anthropology,” *Communio* 31 (Spring 2004): 67–84, 71. Quoted in Benjamin Peters, “John Hugo and an American Catholic Theology of Nature and Grace” (Dissertation, University of Dayton, 2011). 215.

1.5 Resources from Bernard Lonergan

To some, Lonergan may appear a surprising dialogue partner for a more ecologically and evolutionarily-attentive theology of grace. His theology is grounded largely on his analysis of human consciousness and subjectivity that is not easily extended even to other creatures of relatively high intelligence, to say nothing of the world beyond the animal kingdom. This limitation is compounded in part by his having written most of his explicitly theological works in the Scholastic language and style, leading some readers to presume that his ideas themselves are simply repetitions of Aquinas or of the Neo-Thomism that has become the *bête noire* of many contemporary theologians. In fact, these peculiarities of composition owe more to Lonergan's having written them in line with the established conventions—what Lonergan called the “impossible conditions”—of the seminary classrooms in which he most often taught.⁶⁸ Nevertheless, those stylistic barriers—combined with the complexity and originality of his later thought and its own unique idiom—have contributed to the shortage of “casual readers” of Lonergan's works. Thus, while Cynthia Crysdale, Neil Ormerod, Cristina Vanin, and others have applied and developed Lonergan's thought to ecological and evolutionary questions, the currently most prominent systematic contributions to this conversation have drawn from Karl Rahner (e.g. in Elizabeth Johnson and Denis Edwards) and Hans Urs von Balthasar (e.g. in Celia Deane-Drummond).⁶⁹ In this sense, a theology of grace developed on the

⁶⁸ Bernard J. F. Lonergan, *Philosophy of God, and Theology*, 1974. 15. See also “Chapter 2: Teaching Theology—‘Under Impossible Conditions,’” in Matthew C. Ogilvie, *Faith Seeking Understanding: The Functional Specialty “Systematics” in Bernard Lonergan's “Method in Theology,”* 2001. 21-28.

⁶⁹ For some prominent examples of Lonergan's thought as applied to ecological and evolutionary questions in theology, see Cynthia S. W. Crysdale and Neil Ormerod, *Creator God, Evolving World* (Minneapolis, MN, Minneapolis: Fortress Press, 2013); Joseph Ogbonnaya and Lucas Briola, eds., *Everything Is Interconnected. Towards a Globalization with a Human Face and an Integral Ecology*, First edition (Milwaukee: Marquette Univ Pr, 2019); Neil Ormerod, *A Public God: Natural Theology Reconsidered* (Minneapolis: Fortress Press, 2015); Neil Ormerod and Cristina Vanin, “Ecological Conversion: What

theologies of these other thinkers might more readily find dialogue partners and broader acceptance in the field. Nevertheless, Lonergan stands out from some of the other major figures in Catholic theology for his careful retrieval and development of Aquinas's organon for theology, his development for a framework of dialogue with contemporary sciences, and his foundation for transposing the theology of grace into the contemporary context.

1.5.1 Three Stages in Lonergan's Thought

I will not attempt to provide a full account of Lonergan's thought here. However, it will be helpful at the outset of this project both to describe the broad arc of Lonergan's thought and, subsequently, to focus on a few key concepts that will structure our investigations going forward. As we will see more fully in Chapter Three, one helpful way of understanding Lonergan's contributions to contemporary philosophy and theology is by attending to three distinct but related stages in his thought. The first of these consists of Lonergan's long apprenticeship to the thought of Thomas Aquinas and his clarification of some persistent misinterpretations in Thomas's interpreters and commentators. His dissertation focuses on accounting for the non-contradiction and non-competition between divine action through operative grace and the reality of human freedom without resorting to esoteric metaphysical speculation.⁷⁰ Following his

Does It Mean?," *Theological Studies* 77, no. 2 (2016): 328–52, <https://doi.org/10.1177/0040563916640694>. Along with John Haught, Johnson, Edwards, and Deane-Drummond are all treated in the next chapter, as is the influence of Rahner and Balthasar on their thought.

⁷⁰ For both the dissertation and the collection of articles which Lonergan published on the basis of that research, see Bernard J. F. Lonergan, *Grace and Freedom: Operative Grace in the Thought of St Thomas Aquinas*, ed. Frederick E. Crowe and Robert M. Doran, vol. 1, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2000). One example of the esoteric metaphysical speculation that Lonergan avoided may be found in the Báñezian notion of "promotion," which will be discussed in Chapter Three.

dissertation work, Lonergan moved on to clarify the real (if latent) epistemology undergirding Thomas's metaphysics by attending specifically to the often-neglected role of *intelligere*, which Lonergan translates as "understanding."⁷¹ In both of these works, Lonergan emphasizes the interplay of nature and grace as our interior lives are healed and elevated by God's grace, empowering our freedom specifically as knowing, choosing, and loving beings. This is also reflected in Lonergan's other writings from this period, which include explorations of humanity's natural desire to see God and of the orientation of all creatures towards God both in the present age and in the fullness of time.⁷² Throughout these early writings, Lonergan drew heavily from his diachronic reading of Aquinas's works to demonstrate Aquinas's paideutic economy as a writer and the shifting and developing viewpoint of his mind at work. Beyond their significant interpretive and historical value, these investigations prepared Lonergan to faithfully engage contemporary problems by drawing from the larger tradition:

To penetrate to the mind of a medieval thinker is to go beyond his words and phrases. It is to effect an advance in depth that is proportionate to the broadening influence of historical research.... After spending years reaching up to the mind of Aquinas, I came to a twofold conclusion. On the one hand, that reaching had changed me profoundly. On the other hand, that change was the essential benefit.

⁷¹ These were originally published between 1946-1949 as a series of articles in *Theological Studies*, later collected and published as Bernard J. F. Lonergan, *Verbum: Word and Idea in Aquinas*, ed. Frederick E. Crowe and Robert M. Doran, vol. 2, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 1997).

⁷² See Bernard J. F. Lonergan, "Finality, Love, Marriage," in *Collection*, 2nd ed., rev. aug., Lonergan, Bernard J. F. Works (Lonergan Research Institute) 4 (Toronto: Published by University of Toronto Press for Lonergan Research Institute of Regis College, 1988), 17–52; Bernard J. F. Lonergan, "The Natural Desire to See God," in *Collection*, ed. Frederick E. Crowe and Robert M. Doran, 2nd ed., rev. aug., Lonergan, Bernard J. F. Works (Lonergan Research Institute) 4 (Toronto: Published by University of Toronto Press for Lonergan Research Institute of Regis College, 1988), 81–91.

For not only did it make me capable of grasping what, in the light of my conclusions, the *vetera* really were, but also it opened challenging vistas on what the *nova* could be.... [Once Aquinas's mind] is reached, then it is difficult not to import his compelling genius to the problems of this later day.⁷³

In this sense, these formative years studying Aquinas remained foundational for Lonergan's later work as well.

The first fruits of this may be seen in Lonergan's *Insight*, first published in 1957, in which we mark the beginning of the second stage of Lonergan's career. In *Insight*, Lonergan makes explicit and available the epistemology that he discovered in Aquinas by grounding it in a phenomenologically verifiable cognitional theory. Therein, Lonergan hoped to provide a framework for a broad renewal of theology that could directly engage the philosophical turn to the subject, the advent of the modern sciences and their methods, and the foregrounding of human historicity. Through an "intentionality analysis" of the methods of inquiry in mathematics, the natural sciences, and more generally in "common sense" thinking, Lonergan identifies the shared pattern of operations that underlies every instance of genuine knowing.

Confronted with some object, we may wonder what it is and so attend to the sensory data presented in this initial stimulus. At the same time, our wonder leads us from attention to understanding as we turn the object over in our imagination. The expectation of some yet unknown intelligibility of the object generates a tension of inquiry that, though it can be ignored or suppressed, can only be released in the

⁷³ Lonergan, *Insight*, 1992. 769. Lonergan is referencing Pope Leo XIII, "Aeterni Patris," August 4, 1879, http://www.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_04081879_aeterni-patris.html, in which Pope Leo called for the renewal of Catholic philosophy in dialogue with Thomas Aquinas to "enlarge and perfect the old by means of the new" (*vetera novis augere et perficere*).

emergence of an insight, but that insight generates further questions, as we come to wonder whether the understanding we hold in our consciousness can be judged as corresponding with reality. These three steps—attentiveness, understanding, and judgment—are common to all acts of knowing across disciplines and cultures. Each successive step represents the “sublation” of the lower operations into the higher, thus liberating it beyond its own limitations: what was merely potentially intelligible in awareness takes shape as a concrete intelligibility in the understanding of insight; what was possibly relevant in the insight may be verified as true in judgment.⁷⁴

Lonergan names this basic pattern of operations the “transcendental method,” as it describes the ways in which human beings are oriented towards knowledge of all reality, at least potentially. This grounds Lonergan’s cognitional theory by providing an answer to the question, “What am I doing when I am knowing?” In the remainder of the book, then, Lonergan shows how the answer to this question grounds the possibility of answering two further questions: (1) “Why is doing that ‘knowing’?”, the answer to which entails an epistemology, and (2) “What do I now know in light of all this?”, the answer to which is “reality,” and which therefore forms the basis of a critical metaphysics. By making explicit the underlying cognitional theory and epistemology that undergird any critical metaphysics, Lonergan clarifies how the achievements of Aquinas and others may be effectively communicated into the genuinely different thought-world

⁷⁴ Lonergan explains his meaning of the term sublation as follows: “I would use this notion in Karl Rahner’s sense rather than Hegel’s to mean that what sublates goes beyond what is sublated, introduces something new and distinct, puts everything on a new basis, yet so far from interfering with the sublated or destroying it, on the contrary needs it, includes it, preserves all its proper features and properties, and carries them forward to a fuller realization within a richer context.” See Bernard J. F. Lonergan, *Method in Theology*, Second edition, revised and augmented, Lonergan, Bernard J. F. Works (Lonergan Research Institute) ; v. 14 (Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2017). 227.

of the present day. If any contemporary metaphysics would propose to organize the data of all the other sciences—natural, social, human, etc.—it must do so by explaining how each explanatory account contributes one critical aspect of the intelligibility of the whole, which stands in an isomorphic relation to the (only extrinsically limited) potential of human knowers.

The third stage of Lonergan's career is marked by what is often referred to as his "hermeneutic turn." In *Insight*, Lonergan retrieved and revitalized the metaphysical framework that had allowed for the remarkable clarity and explanatory scope of Aquinas's thought to demonstrate how it could survive and thrive in and after the modern "turn to the subject." What was less clearly emphasized, however, were the psychic and social dimensions of human cognition and the inseparability of human knowing from human identity and action. Lonergan was not previously unaware of these factors, as may be seen, for instance, in his treatment of the distortions of personal, group, dramatic, and general bias in *Insight*.⁷⁵ However, in this third stage of Lonergan's career, he came to emphasize these elements more centrally and clearly by attending to the different kinds of meaning that shape human life, the constitutive fact of human intersubjectivity, the role of feelings in the recognition and naming of human values, and the existential reality of human beings as active moral agents. During these years, Lonergan appended a fourth stage to his transcendental method—alternatively referred to as "decision" or "action"—to underscore that human beings are not disembodied knowers but are always shaped by their ethical context. He also made explicit the operative understanding of theological method and hermeneutics that had undergirded his own work over the years in the hopes

⁷⁵ See Chapters Six and Seven in Lonergan, *Insight*, 1992.

that these tools might help to frame the collaborative work of theological renewal in the years to come. For the purposes of our investigations into a new theology of grace in line with a more evolutionary and ecological worldview, we would call attention to three particular components of Lonergan's thought during this period: functional specialization, horizons and transpositions, and the transposition of his theology of grace.

1.5.2 Theological Method and Functional Specialties

Scaffolding his theological method onto the transcendental method identified in *Insight*, Lonergan defined method as the “normative pattern of recurrent and related operations yielding cumulative and progressive results.”⁷⁶ The role of a method is to offer an open-ended framework for collaboration, retrieval, revision, and exploration in a living field of study. Functional specialization refers to Lonergan's proposal for organizing and interrelating the researches of communities of theologians given the reality of specialization and what he perceived as an increased alienation between theological specialties. He distinguishes this approach from two other models, namely, field and subject specialization.⁷⁷ In these other approaches, the ever-expanding field of inquiry is parceled off into discrete areas that may more easily be mastered by a single scholar or department. The first approach, field specialization, subdivides the field according to its material parts or temporal periods; the second, subject specialization, divides the data along conceptual lines. For instance, “Where field specialization would divide the Old Testament into the Law, the Prophets, and the Writings, subject specialization would

⁷⁶ Lonergan, *Method in Theology*, 2017. 8, 9, 17, 22, 123 n 2, 345

⁷⁷ Bernard J. F. Lonergan, *Method in Theology* (New York: Herder and Herder, 1972). 125

distinguish Semitic Languages, Hebrew history, the religions of the ancient Near East, and Christian theology.”⁷⁸

Rather than divide the fields either along the lines of their materials (subject) or concepts (field), “functional specialization distinguishes and separates successive stages *in the process* from data to results.”⁷⁹ The advantage to this approach lies in its linking various specializations to one another since “the earlier are incomplete without the later... [and] the later presuppose the earlier and complement them.”⁸⁰ Organized around a constructive understanding of the whole theological task as “[mediating] between a cultural matrix and the significance and role of religion in that matrix,” each functional specialty is oriented towards both a concrete audience of one’s peers and coworkers across disciplinary lines, but also towards the eventual communication of all these researches to the publics of the society, the academy and the church.⁸¹

Lonergan describes eight functional specialties which are evenly divided among two phases of theological investigation. The first “mediating” phase is primarily concerned with getting things right according to the norms and practices of their disciplines—textual studies, history, etc. In this sense, the practitioners themselves need not be believers in the content of what they mediate as a precondition of their responsible and authentic practice; an atheist could be reasonably expected to study and organize the biblical texts in their contexts and to produce responsible translations as well as any Christian. Nothing prevents an agnostic from correctly detailing the rise of Scholastic

⁷⁸ Lonergan. 126

⁷⁹ Lonergan. 126 (emphasis added)

⁸⁰ Lonergan. 126

⁸¹ Lonergan. xi. The idea of these three publics in relation to theological communication is drawn from David Tracy, *The Analogical Imagination: Christian Theology and the Culture of Pluralism* (New York: Crossroad, 1981). 3-5, 22, 28-31.

theology in the High Middle Ages or from correctly apprehending and describing Thomas Aquinas's theology of grace. While it is true that the Christian faith of an interpreter or the historian might lead them to attend to critical points in the sources that might otherwise be overlooked, within the mediating phase, it is not an absolute requirement that one be a believer to do their job well.

This mediating phase is comprised four tasks: research, interpretation, history, and dialectics. Research determines the proper sources of theological investigation and assembles both the texts and the objects of material history for investigation.⁸² Interpretation aims at understanding what is meant in these texts within their particular cultural and historical contexts.⁸³ History has as its "substantial concern... the doctrinal history of Christian theology with its antecedents and consequents in the cultural and institutional histories of the Christian religion and the Christian churches and sects... [though] it cannot remain aloof from general history."⁸⁴ Finally, dialectics, "has to do with the concrete, the dynamic, and the contradictory.... It seeks some single base or some singlet set of related bases from which it can proceed to an understanding of the character, the oppositions, and the relations of the many viewpoints exhibited in conflicting Christian movements, their conflicting histories, and their conflicting interpretations."⁸⁵ As the last stage of the mediating phase, there is also a sense in which

⁸² Lonergan, *Method in Theology*, 1972. 127, 149-151. This brief, three-page chapter on research admits that, in a real sense, there seems to arise a problem in saying that this is primarily a mediating specialty, in the sense that it would that the much later and decidedly mediated sixth functional specialty of doctrines is required in order to select which are the proper sources of theological inquiry for any particular faith or tradition. However, Lonergan responds that (1) one cannot get to the later stage of doctrines without having selected some initial texts prior to doctrinal definitions and (2) that "method is not a one-way street," and thus the selection and preparation of texts at any time may well be informed by those subsequent choices, even if the work proper to the level of research itself remains in the mediating phase of theology.

⁸³ Lonergan. 127, 153-173.

⁸⁴ Lonergan. 128, 175-234

⁸⁵ Lonergan. 129, 235-266

dialectic begins to bridge towards the mediated phase more closely than its predecessors. Dialectics are not merely the multiplication of differences for the sake of chaos and discord, but rather may be understood as “a generalized apologetic conducted in an ecumenical spirit, aiming ultimately at a comprehensive viewpoint, and proceeding towards that goal by acknowledging differences, seeking their grounds, real and apparent, and eliminating superfluous oppositions.”⁸⁶

Unlike the mediating phase, the mediated phase of theology requires the theologian to take an explicit stand regarding the objects of religious faith:⁸⁷

[In] a second, mediated phase, theological reflection [takes] a much more personal stance. It [is] no longer to be content to narrate what others proposed, believe, did. It has to pronounce which doctrines were true, how they could be reconciled with one another and with the conclusions of science, philosophy, history, and how they could be communicated appropriately to the members of each class in every culture.⁸⁸

In the mediated specializations, the practitioner takes a personal stand on the credibility of that which they mediate, and a part of what they mediate depends profoundly on the way in which they themselves have been changed by their encounter with their teaching.

⁸⁶ Lonergan. 130

⁸⁷ We might add that, beyond simply taking a stand, there is a further sense in which theologians operating in the mediated phase of theology also have to move from a notional to a real assent. By this, we do not mean that they must grasp the truths of a given doctrine as a virtually unconditioned or that they have to be absolutely without error in order to be authentically engaging in mediated theology: who could claim this with certainty? Rather, we mean that that they must move from a broad affirmation of the doctrine towards risking some particular understanding of that judgment in concrete terms. For more on the distinction between notional and real assent, see John Henry Newman, *An Essay in Aid of a Grammar of Assent* (Assumption Press, 2013).

⁸⁸ Lonergan, *Method in Theology*, 1972. 267

The first specialization within the mediated phase, foundations, is concerned with the objectification of conversion, and so is a sort of requisite facilitator for the authentic move from mediating to mediated theology. While conversion itself is first personal and existential—which is not to deny its communal and historical elements—foundations is concerned with the objectification and thematization of conversion in the sense that it specifies the “horizons within which religious doctrines can or cannot be apprehended.”⁸⁹ These foundations then provide the criteria for selection in the next specialty, doctrines: “Doctrines express judgments of fact or value. They are concerned, then, with the affirmations and negations not only of dogmatic theology but also of moral, ascetical, mystical, pastoral, and any similar branch [of theology].”⁹⁰ As judgments of truth and value, doctrines suggest objects to be understood by ongoing inquiry as those judgments give rise to further questions. “[Systematics] is concerned to work out appropriate systems of conceptualization, to remove apparent inconsistencies, to move towards some grasp of spiritual matters both from their own inner coherence and from analogies offered by more familiar human experience.”⁹¹ Finally, in communications, theology reaches its ultimate and evangelical term as the understandings expressed at the level of systematics “find access into the minds and hearts of [persons] of all cultures and classes.”⁹² Taken as a whole, the various functional specialties may operate in a hermeneutic spiral, as the engagement with the various publics of society, the academy and the church at the level of communications generates new questions for theologians, thus starting the process anew. In this way, not only are theologians in different specialties connected to one

⁸⁹ Lonergan. 131, 267-293

⁹⁰ Lonergan. 132, 295-333

⁹¹ Lonergan. 132, 335-353

⁹² Lonergan. 133, 355-368

another, but theology itself is revealed as a vital and pastoral exercise in relation to the ongoing proclamation of the Gospel in the concrete particularity of the contemporary world.

1.5.3 Horizons and Transpositions

As Lonergan's method of functional specialization makes clear, he regards the ongoing work of theology as more than mere repetition of past understandings. Although theologians in all specialties must attend to the texts, councils, events, and persons in Christian history, the exigences of proclaiming the Good News today necessarily involve personal conversion and the struggle to articulate the faith in genuinely new horizons. What precisely this entails may be further clarified by our turning to our second point of emphasis in Lonergan's later thought: horizons and transpositions.

In the context of Lonergan's theological method, the term horizon refers to the limits of the field of inquiry of any investigator. It recognizes that all human judgments are conditioned by their historicity and subjectivity, and so, while they may make true judgments, the specific contents of any judgment always refer to objects within a particular constellation of terms and objects within one's purview. Horizons can, do, and must shift, however, as human knowers move through history, and so discussion of horizons occurs at the moment between dialectics and foundations at the lynchpin between the mediating and mediated phases of theology:

Inasmuch as conversion itself is made thematic and explicitly objectified, there emerges the fifth functional specialty, foundations. Such foundations differ from the old fundamental theology in two respects. First, fundamental theology was a

theological first; it did not follow on four other specialties named research, interpretation, history, and dialectic. Secondly, fundamental theology was a set of doctrines: *de vera religione, de legato divino, de ecclesia, de inspiratione scripturae, de locis theologicis*. In contrast, foundations present, not doctrines, but the horizon within which the meaning of doctrines can be apprehended. Just as in religious living ‘a man who is unspiritual refuses what belongs to the Spirit of God; it is folly to him; he cannot grasp it’ (1 Corinthians 2.14), so in theological reflection on religious living there have to be distinguished the horizons within which religious doctrines can or cannot be apprehended; and this distinction is foundational.⁹³

Transpositions refer to the “restatement of an earlier position in a new and broader context,” or in a new horizon. Lonergan likens transposition to both the shift in physics from Newton’s general gravitation to Einstein’s special relativity and to Thomas Kuhn’s famous description of a paradigm shift in his *Structures of Scientific Revolution*.⁹⁴ In theology, Lonergan identifies three “realms of meaning” both in history and in individual consciousness that require a transposition from one horizon to another.⁹⁵ The first realm

⁹³ Lonergan, *Method in Theology*, 2017. 126

⁹⁴ Bernard J.F. Lonergan, “Horizons and Transpositions,” in *Philosophical and Theological Papers, 1965-1980*, ed. Robert Croken and Robert M. Doran, 2nd ed. Edition, vol. 17, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2004), 409–32. 410. Lonergan makes this similarity to Kuhn explicit on 423.

⁹⁵ In Lonergan, *Method in Theology*, 2017, 81 Lonergan identifies “transcendence” as the fourth basic realm of meaning: “Finally, there is the transcendent exigence. There is to human inquiry an unrestricted demand for intelligibility. There is to human judgment a demand for the unconditioned. There is to human deliberation a criterion that criticizes every finite good. So it is—as we shall attempt to show in the next chapter—that man can reach basic fulfilment, peace, joy, only by moving beyond the realms of common sense, theory, and interiority and into the realm in which God is known and loved.” Later, at 254-259, indicates still further realms, including religion, art, and scholarship, though Lonergan notes that “Any realm becomes differentiated from the others when it develops its own language, its own distinct mode of apprehension, and its own cultural, social, or professional group speaking in that fashion and apprehending in that manner,” thereby leaving the door open for a significant multiplication of realms. For our purposes,

is that of “common sense,” which refers to “the realm of persons and things in their relations to us.”⁹⁶ This realm of meaning is populated “not by applying some scientific method, but by a self-correcting process of learning, in which insights gradually accumulate, coalesce, qualify and correct one another, until a point is reached where we are able to meet situations as they arise.”⁹⁷ It is of course true that there are as many different common senses as there are communities.⁹⁸ However, the move between these different communities and their particular viewpoint does not amount to a new realm of meaning in the sense Lonergan intends.

Rather, the second realm, that of theory, arises because through a “systematic exigence [that] not merely raises questions that common sense cannot answer but also demands a context for its answers, a context that common sense cannot supply or comprehend.”⁹⁹ When different communities with differing common senses collide, there arises a need to move towards a language or structure that allows for the common adjudication of disputed terms and questions. Thus, where common sense described objects in relation to individual and their community, theory seeks rather to explain objects “by their internal relations, their congruences and differences, the functions they fulfil in their interactions.”¹⁰⁰ Unlike the realm of common sense, the language of theory

we will be content to deal with the first three “basic realms of meaning,” which are the only ones discussed in the later article Lonergan, “Horizons and Transpositions.”

⁹⁶ Lonergan, *Method in Theology*, 2017. 79

⁹⁷ Lonergan. 79

⁹⁸ Lonergan, *Insight*, 1992. 203: “Far more than the sciences, common sense is divided into specialized departments. For every difference of geography, for every difference of occupation, for every difference of social arrangements, there is an appropriate variation of common sense. At a given place, in a given job, among a given group of people, a man [sic] can be at intelligent ease in every situation in which he is called upon to speak or act.... Put him among others in another place or at another job, and until they become familiar, until he has accumulated a fresh set of insights, he cannot avoid hesitancy and awkwardness. Once more he must learn his way about, catch on to the tricks of a new trade, discern in little signs the changing moods of those with whom he deals. Such, then, is the specialization of common sense.”

⁹⁹ Lonergan, *Method in Theology*, 2017. 79

¹⁰⁰ Lonergan. 79

is technical, specialized, and highly differentiated; while a person with theoretically differentiated consciousness may easily apprehend something expressed according to common sense, the same is not true in reverse.

While the move to common sense represents a genuine advance in both knowledge and the capacity to share and advance that knowledge among diverse communities, both realms remain important. However, problems may arise as theoreticians may view common sense as “primitive ignorance to be brushed aside with an acclaim to science as the dawn of intelligence and reason,” or when lay persons regard science as holding “merely pragmatic value, teaching us how to control nature, but failing to reveal what nature is.”¹⁰¹ The importance of both realms is revealed in the pattern of life: No matter how a specialist may view the world in the course of their research, they must release the narrower focus of their theoretically differentiated consciousness when they engage their larger community or else risk missing the greater breadth and richness that comprises the common life of that community. While the abstraction proper to any science may greatly enrich the life of that community, it cannot do so at the expense of the genuine knowledge of common sense.

Both common sense and theory are taken up into the third realm of meaning, interiority. Faced with these different, legitimate, but sometimes conflicting activities of knowing in the first two realms, we may begin to raise questions about knowing in general:

What am I doing when I am knowing? Why is doing that knowing? What do I know when I do it? With these questions one turns from the outer realms of

¹⁰¹ Lonergan. 80

common sense and theory to the appropriation of one's own interiority, one's subjectivity, one's operations, their structure, their norms, their potentialities. Such appropriation, in its technical expression, resembles theory. But in itself it is a heightening of intentional consciousness, an attending not merely to objects but also to the intending subject and his acts. And as this heightened consciousness constitutes the evidence for one's account of knowledge, such an account by the proximity of the evidence differs from all other expression.¹⁰²

In the realm of interiority, we come to recognize the complexity and richness of our own subjectivity and of the legitimacy and necessity of diverse kinds of knowing. We may also recognize the limitations of ourselves as inescapably historically conditioned knowers, but, through the appropriation of our own acts of knowing across different fields, we may also come to recognize the legitimacy of our knowing and through it our attainment of reality.

Not only may we recognize the emergence and functioning of these realms in our own consciousness, provided it is adequately differentiated, but we may also correlate these different realms of meaning with distinct, paradigmatic stages in the history of ideas.¹⁰³ In the history of Christian thought, Lonergan connects the realm of common sense meaning with the earliest expressions of Christianity in the Gospels. Early Christianity—or more accurately “early Christianities”—grew up around different communities of believers with different languages, cultures, and prior religious and philosophical commitments. This diversity of common senses may be identified in the

¹⁰² Lonergan. 80. Recall, these three questions suggest the connections between Lonergan's cognitional theory, epistemology, and critical metaphysics, respectively.

¹⁰³ Lonergan discusses the stages of meaning in relation to the larger history of ideas in what might broadly be termed the liberal arts in Lonergan. 82-95.

Gospels themselves, each of which presumes a different readership and deploys terms in relation to a particular community and its concerns. All of them center on the common task of proclaiming the good news of the Incarnation and the inauguration of the Kingdom of God in our midst, but each of them understands that task in different ways.

As conflicts between these different communities and their particular understandings arose (e.g. in relation to the identity of Jesus, the enduring connection between Judaism and Christianity, the doctrine of God, etc.), the need for a common understanding of the faith and for a common language in which to express it led to the rise of different theoretical accounts and theologies. Lonergan narrates one line of this theoretical emergence in his book, *The Way to Nicea*, which follows the development of Trinitarian reflections in the first three centuries of Christianity.¹⁰⁴ What emerged through these discussions and debates were the beginnings of a theoretical differentiation of consciousness with respect to the message of the Gospels and Epistles and the faith of the earliest Christians. Though we might note any number of high points in the years following Nicaea—in subsequent ecumenical councils or in the theology of Athanasius, the Cappadocian Fathers, Augustine, Gregory the Great, John Damascene, and others—Lonergan identifies the rise of Scholasticism as the highpoint of the theoretical differentiation of consciousness, at least in the Latin West. From its roots in the “speculative originality of Anselm, the positively grounded problems of Abelard, and the technical rule of Gilbert de la Porrée... added to the practice of the monastic schools of reading followed by reflection (*lectio* and *quaestio*),” through the *Books of Sentences* of Lombard and others, Scholasticism helped refine the theoretical differentiation of

¹⁰⁴ Bernard J. F. Lonergan, *The Way to Nicea* (London: Darton Longman and Todd, 1976).

consciousness through the development of a common theological method.¹⁰⁵ Finally, building on this method and structure, the theorem of the supernatural as enunciated by Phillip the Chancellor, and “the ever deepening penetration of Aristotelian categories into Christian theology,” this theoretical differentiation may be observed most clearly in the thought of Thomas Aquinas:

For over twenty years he wrote and rewrote. On some topics his opinion at the end was much the same as it had been at the beginning, but on others there can be discerned a series of stages. First on one aspect and then on another, the thought of his predecessors was clarified, adjusted, partially transformed. Eventually a whole set of interlocking issues would be so modified as to constitute a new position. In the end a coherent set of new positions was reached to constitute a new paradigm for inquiring minds.¹⁰⁶

However, the effect of Thomas’s powerful synthetic achievement was short lived, as the fall of Scholasticism was soon brought about by the decline of method and the replacement of Thomas’s wisdom (*sapientia*) theology with a stifling reliance on deductive logic and syllogistic reasoning patterned on what Lonergan identifies as a misreading of Aristotle’s *Posterior Analytics*.¹⁰⁷

¹⁰⁵ Lonergan, “Horizons and Transpositions.” 420

¹⁰⁶ Lonergan. 422-423

¹⁰⁷ Lonergan. 423-426. “[A] syllogism reveals a predicate to pertain necessarily to a subject when its premises are ‘true, primary, immediate, better known than and prior to the conclusion, which is further related to them as effect to cause.’ But how do we acquire knowledge of such premises? Aristotle met this issue only in the second book of the *Posterior Analytics* in the nineteenth chapter. His conclusion was that knowledge of the primary and immediate premises is ‘neither innate in a determinate form, nor developed from other higher states of knowledge, but from sense-perception. It is like a rout in battle stopped by first one man making a stand and then another, until the original formation has been restored. The soul is so constituted as to be capable of this process’^{3 8} and such constitution will be byway of intuition. However, the contemporary reader, familiar with the reformulation of Euclidean geometry (Hilbert) and with the invention of n-dimensional geometries of any curvatures (Riemann), will feel that in mathematics, as in the sciences, intuitions are just insights. They are not intrinsically certain, they may be revised, and they admit alternative views. Even Gödel’s argument that a formalized deductive system either admits further

What was present in Thomas but lacking in so many of his commentators was a developed sense of interiority that results from attending to the conditions of knowledge. In his earlier and more historical studies, Lonergan showed that Aquinas had done the hard work of attending to his own acts of understanding and judging and, moreover, Aquinas's theology presupposes that understanding.¹⁰⁸ However, Lonergan also recognized that what was implicit in Aquinas had to be made explicit and thematic in a contemporary theology if it would avoid the dangers of an undifferentiated commonsense approach to theology, on the one hand, and of the rigid conceptualism of the manualist tradition, on the other. As Lonergan elaborates, the contemporary theological horizon following Vatican II was marked by a number of challenges: the mixed bag of secularism in both society and the academy; the philosophical turn to the subject; the advent of modern science and its emphasis on statistical possibility over necessity; the rise of critical history; and the need for a renewed theological method that avoids the robotic machinations of the manualists without "[jettisoning] our doctrinal past."¹⁰⁹ In grounding

developments or else is inconsistent or incomplete has been thought to rest its final generalization on an insight. One should not, I think, leap to the conclusion that Aristotle's position precludes such a view. He distinguished conclusions as science, premises as principles grasped by intellect, intelligence (nous), but the truth of principles he reached by wisdom. Such is the position in the *Nicomachean Ethics*. But it is presented in an even more fundamental fashion in the *Metaphysics*, where the importance of wisdom becomes the ground of the importance of philosophy, the love of wisdom." See also Jeremy D. Wilkins, *Before Truth: Lonergan, Aquinas, and the Problem of Wisdom* (Washington, D.C: The Catholic University of America Press, 2018), 8: "In his retrieval of Aquinas's doctrine of wisdom, Lonergan drew attention to a duality in wisdom, an object- and a subject-pole: 'Principally, [wisdom] regards the objective order of reality; but in some fashion it also has to do with the transition from the order of thought to the order of reality.' The object of wisdom is the order of things; wisdom in this sense is 'the highest, architectonic science, a science of sciences.' Because Aquinas distinguished a twofold mode of truth, a natural and a supernatural order, he also distinguished a wisdom that is metaphysics from a wisdom subaltern to the mysteries held in faith, a *sacra doctrina*. Of itself, philosophic wisdom is incomplete. It is, as Lonergan puts it, 'only hypothetically wisdom, and the hypothesis is not verified. It is [not philosophical but] theological wisdom that judges all things in the actual order of the universe.' Besides wisdom's object, there is wisdom's subject, the wise person. Only one who is wise is qualified to select appropriate principles, order operations, and pass judgment on results. If wisdom as object is the science of sciences, wisdom as an aptitude in the subject is a capacity for every science."

¹⁰⁸ This study may be found in Lonergan, *Verbum*, 1997.

¹⁰⁹ Lonergan, "Horizons and Transpositions." 427-431

his own theology in an account interiority that transposes and sublates the theological insights from the realms of common sense and theory, Lonergan aimed to address these various challenges on their own terms while drawing from the resources of the Church's rich traditions.

1.5.4 Transposing the Theology of Grace: From Theory to Interiority

This brings us to the third component of Lonergan's later theology that helps to frame this project: the transposition of grace into interiority and a new horizon. In elaborating the functional specialty of foundations—which plays a key role in determining appropriate horizons for framing doctrines, systematics, and communications—Lonergan distinguished two tasks. The first of these was to clarify the general categories, which “regard objects that come within the purview of other disciplines as well as theology.”¹¹⁰ The general categories correspond to the transposition of Aquinas's theoretically differentiated metaphysics into a critical, heuristic metaphysics grounded in interiority. The second task was to clarify the special categories, which regard objects proper to theology alone. In large part, the special categories remaining to be transposed center on the theology of grace as it correlates to the nature as described in the general categories.

In *Method in Theology*, Lonergan began this transposition of grace. Because the Scholastic account of grace “presupposed a metaphysical psychology in terms of the essence of the soul, its potencies, habits, and acts,” it expressed grace according to two distinct aspects: (1) sanctifying grace as a “supernatural entitative habit... radicated not in the potencies but in the essence of the soul” and (2) as charity as “supernatural operative

¹¹⁰ Lonergan, *Method in Theology*, 2017. 264

habits (virtues).”¹¹¹ However, in a methodical theology that starts from intentionality analysis and the dynamism of human consciousness expressed in the transcendental method, Lonergan argued that this distinction appears as only a notional difference. Both sanctifying grace and the habit of charity are elided as “Being in love with God, as experienced, is being in love in an unrestricted fashion.”¹¹² Lonergan directs us towards St. Paul’s account of grace and justification in his *Letter to the Romans*: “God’s love has been poured into our hearts through the Holy Spirit that has been given to us” (Rom 5:5).¹¹³ Both here and in reflection on personal religious experience, the theoretical distinction between the two is no longer differentiable.

Accompanying this move, Lonergan notes the dissolution of certain challenging problems raised by and in the theoretical account, including notably the question of the priority of love or knowledge in our entering into friendship with God:

It used to be said, *Nihil amatum nisi praecognitum*, Knowledge precedes love. The truth of this tag is the fact that ordinarily operations on the fourth level of intentional consciousness presuppose and complement corresponding operations on the other three. There is a minor exception to this rule inasmuch as people do fall in love, and that falling in love is something disproportionate to its causes, conditions, occasions, antecedents.... But the major exception to the Latin tag is God’s gift of his love flooding our hearts. Then we are in the dynamic state of being in love.... So it is that in religious matters love precedes knowledge, and, as that love is God’s gift, the very beginning of faith is due to God’s grace.... Only God can give that

¹¹¹ Lonergan. 270

¹¹² Lonergan. 101

¹¹³ Lonergan. 101-120, especially 103-104 and 116-120.

gift, and the gift itself is self-justifying. People in love have not reasoned themselves into being in love.¹¹⁴

As this selection demonstrates, what appeared as a problem to be explained and addressed in the theoretical realm of meaning is resolved when we move into the horizon of interiority.

Much more could be said about Lonergan's theology of grace, but we will reserve further discussion for later in this dissertation. For now, what we want to emphasize is that the shift from the realm of theory to that of interiority represented the emergence of a genuinely new horizon into which Lonergan only just began the work of transposition. Following Lonergan's lead, his students have taken up this project, especially in the last thirty years. As Mary P. Utzerath summarizes,

The "problem" if you want to call it that (I prefer to think of it as a catalyst), is that Lonergan's transposition of sanctifying grace into interiority, while seminal, leaves a number of unanswered questions, including: How do we describe the conscious experience of being in love in an unrestricted manner? What is the nature of this experience on each level of consciousness? How is the transposition of grace into interiority informed by Lonergan's own scholastic theology? Does such a transposition preserve real distinctions in scholastic theology, such as that between sanctifying grace and the habit of charity? Broader questions include: How does grace affect human persons as individuals and as related? and, How does grace serve God's purpose for all of creation?¹¹⁵

¹¹⁴ Lonergan. 118

¹¹⁵ Mary P. Utzerath, "Enlarging the Horizon of Transposition: Grace Considered from the Perspective of Lonergan's Worldview" (Lonergan on the Edge, Marquette University, 2011).

Utzerath identifies Robert M. Doran's 1993 article, "Consciousness and Grace," as launching this larger discussion. The first phase of this conversation treated problems relating to the act of transposition, the enduring value of Lonergan's un-transposed theological contributions in the realm of theory, the phenomenological and experiential conjugates of grace in human consciousness, and Lonergan's (contentious) softening of the distinction between sanctifying grace and the habit of charity.¹¹⁶ The second phase of these discussions turned from the context of the individual towards the communities, cultures, and histories in which individual existence finds its direction and purpose. Again, as Utzerath summarizes,

This is especially apparent in Father Doran's proposed doctrine of social grace, in his unified field structure for systematic theology that integrates Lonergan's four-

¹¹⁶ These include but are not limited to Robert M. Doran, "Consciousness and Grace," *Method: Journal of Lonergan Studies* 11, no. 1 (1993): 51–75, <https://doi.org/10.5840/method199311110>; Michael Vertin, "Lonergan on Consciousness: Is There a Fifth Level?," *Method: Journal of Lonergan Studies* 12, no. 1 (1994): 1–36, <https://doi.org/10.5840/method199412113>; Patrick H. Byrne, "Consciousness: Levels, Sublations, and the Subject as Subject," *Method: Journal of Lonergan Studies* 13, no. 2 (1995): 131–50, <https://doi.org/10.5840/method19951322>; Robert M. Doran, "Revisiting 'Consciousness and Grace,'" *Method: Journal of Lonergan Studies* 13, no. 2 (1995): 151–59, <https://doi.org/10.5840/method19951323>; Tad Dunne, "Being in Love," *Method: Journal of Lonergan Studies* 13, no. 2 (1995): 161–75, <https://doi.org/10.5840/method19951324>; Michael Vertin, "Lonergan's Metaphysics of Value and Love," *Lonergan Workshop* 13 (1997): 189–219; Robert M. Doran, "The Starting Point of Systematic Theology," *Theological Studies (Baltimore)* 67, no. 4 (2006): 750–76, <https://doi.org/10.1177/004056390606700402>; Christiaan Jacobs-Vandegeer, "Sanctifying Grace in a 'Methodical Theology,'" *Theological Studies* 68, no. 1 (2007): 52–76, <https://doi.org/10.1177/004056390706800103>; Charles Hefling, "Quaestio Disputata on the (Economic) Trinity: An Argument in Conversation with Robert Doran," *Theological Studies* 68, no. 3 (2007): 642–60, <https://doi.org/10.1177/004056390706800308>; Neil J. Ormerod, "Two Points or Four?--Rahner and Lonergan on Trinity, Incarnation, Grace, and Beatific Vision.(QUAESTIO DISPUTATA)," *Theological Studies* 68, no. 3 (2007): 661–73, <https://doi.org/10.1177/004056390706800309>; David M. Coffey, "Quaestio Disputata Response to Neil Ormerod, and Beyond," *Theological Studies (Baltimore)* 68, no. 4 (2007): 900–915, <https://doi.org/10.1177/004056390706800407>; Christiaan Jacobs-Vandegeer, "Envisioning a Methodical Theology of Grace: Exercises in Transposition Spanning the Early and Later Writings of Bernard J. F. Lonergan" (ProQuest Dissertations Publishing, 2009), <https://search.proquest.com/docview/305061533?pq-origsite=summon>; Jeremy W. Blackwood, "Sanctifying Grace, Elevation, and the Fifth Level of Consciousness," *Method: Journal of Lonergan Studies* 25, no. 2 (2011): 143–62; Jeremy W. Blackwood, *And Hope Does Not Disappoint: Love, Grace, and Subjectivity in the Work of Bernard J.F. Lonergan, S.J.*, Marquette Studies in Theology ; #88 (Milwaukee: Marquette University Press, 2017); Jeremy D. Wilkins, "Dialectic and Transposition: Lonergan, Scholasticism, and Grace, in Conversation with Robert Doran," *The Irish Theological Quarterly* 85, no. 3 (2020): 286–306, <https://doi.org/10.1177/0021140020926598>.

point hypothesis with a theory of history, in discussions focusing on the fifth-level in consciousness as that on which love occurs, in Jeremy Wilkins's proposal that we consider grace within a heuristic structure informed by Lonergan's and Piaget's notions of development that necessarily include the larger existential context of subjects, and in Dadosky's proposal of a fourth stage of meaning characterized by the turn to the Other.¹¹⁷

However, none of these works seem to address directly the last problem/catalyst that Utzerath identifies, namely, "How does grace serve God's purpose for all of creation?"¹¹⁸

In recent years, this question has started to receive some attention, especially in relation to the ecological call raised by *Laudato Si'*.¹¹⁹ However, there have been no

¹¹⁷ Utzerath, "Enlarging the Horizon of Transposition: Grace Considered from the Perspective of Lonergan's Worldview," citing Doran, "The Starting Point of Systematic Theology"; Robert M. Doran, "'Envisioning a Systematic Theology,'" *Lonergan Workshop* 20 (2008): 105–26; Jeremy D. Wilkins, "Grace and Growth: Aquinas, Lonergan, and the Problematic of Habitual Grace," *Theological Studies* 72, no. 4 (2011): 723–49; John D. Dadosky, "Midwiving the Fourth Stage of Meaning: Lonergan and Doran," in *Meaning and History in Systematic Theology: Essays in Honor of Robert M. Doran, SJ*, ed. John D. Dadosky, Marquette Studies in Theology; #68 (Milwaukee, Wis.: Marquette University Press, 2009); John D. Dadosky, "Is There a Fourth Stage of Meaning?," *The Heythrop Journal* 51, no. 5 (2010): 768–80, <https://doi.org/10.1111/j.1468-2265.2009.00518.x>.

¹¹⁸ While this project was conceived and executed prior to our discovery of Utzerath's conference paper, it is worth noting that she advocates for the coordination of grace and world process as a natural outgrowth of Lonergan's theology of grace combined with his worldview: "The unity of Lonergan's worldview, in which vertical finality serves to link the natural order and the supernatural order under grace, provides, I believe, a warrant or compelling reason to enlarge the horizon of transposition of grace to include his worldview... One argument could be made, for example, on the basis of a consideration of the totality of Lonergan's life's work as itself a transposition in which the transposition of grace from theoretical to methodical theology is related integrally to the whole. A second argument could be made from within intentionality analysis itself, specifically, from Lonergan's analysis of intentional acts which implies that one's consciousness is never solely of oneself as isolated, but of oneself-as-related and as part-of. Lonergan referred to consciousness of being related as "common consciousness." I believe that it is in common consciousness that the experience of grace as that of being-in-love unrestrictedly is to be sought and located. In conclusion, I maintain that a full transposition of grace into interiority requires that we take Lonergan's worldview into account. In turn, taking Lonergan's worldview into account imposes on us the requirement to take the teleological thrust of grace in realizing God's purpose for all of humanity and creation into consideration. This requirement further mandates that we include the developmental processes through which the teleological thrust of grace is realized, such as individual, communal, cultural, and historical development occurring under vertical finality and emergent probability." While Utzerath never developed this idea beyond the bounds of that lecture, her broad outline for such an enlarged transposition of grace accord with our own in this dissertation.

¹¹⁹ See, for instance, Lucas Briola, "Dramatic Artistry in Our Common Home: Robert Doran and the Doxological Anthropology of *Laudato Si'*," in *Intellect, Affect, and God: The Trinity, History, and the Life*

attempts to move beyond the limited contexts of grace in relation to human relationships with and responsibilities for and to the larger creation; that is, there has been no account of grace that considers how grace may be said to operate beyond the strictly human context. Such a theology would go beyond the limits of what Lonergan or most of his students envisioned, at least as far as the special categories of grace are concerned. Nevertheless, such a reorientation of the special categories as is envisioned in this project would prove critical to both making sense of our place within larger, cosmic history and to reshaping Christian attentiveness, understanding, judgments, and decisions going forward.¹²⁰

Lonergan's thought provides many of the needed resources to frame such a project. Grounded firmly in Aquinas's thought, Lonergan accounts for the theorem of the supernatural in his early theology and articulates an account of metaphysics that preserves the concepts of ontological emergence and relative and absolute supernaturality. He also sets up an "ontology of the good," emphasizing that the goodness of the universe is an emerging goodness. He transposes the Aristotelian framework that structured Thomas's theological synthesis into a new, critical, heuristic metaphysics,

of Grace, ed. Joseph Ogbonnaya and Gerard Whelan (Milwaukee, Wis.: Marquette Univ Pr, 2021). This will be treated in Chapter Four of this dissertation.

¹²⁰ "Theological foundations, the fruit of the collaboration of self-appropriation and appropriation of the tradition and situation, grounds the derivation of the further categories needed for the direct theological discourse that would mediate from the present into the future. Those further categories, in turn, effect the further development of the religious and historical traditions on which hermeneutical method works to ground yet further derivation of categories, etc., etc., etc. At this point of generativity and creativity, theology not merely illuminates, but becomes, praxis. For a change in constitutive meaning is a change in the world, and the labor involved in changing constitutive meaning is itself historical, world constitutive praxis. If Lonergan's cognitional theory is a higher synthesis beyond epistemological materialism and idealism, his position on constitutive meaning—a position that itself is a function of his acknowledgment of an existential level of consciousness—is a higher synthesis beyond the practical idealism and materialism respectively excoriated and promoted in Marx's formula, 'Until now the philosophers have only interpreted the world in various ways; the point, however, is to change it.'" Robert M. Doran, *Theology and the Dialectics of History* (Toronto: University of Toronto Press, 1989). 647

capable of engaging contemporary insights and the questions in methodical fashion. His account of grace, both early and late, emphasizes the efficacy of divine action in grace and the genuine freedom of human subjects. He provides a renewed basis for natural theology, free from the overemphasis on necessity and universality that too often adhered to Aristotelian and neo-Thomist approaches. And, in articulating both the realms of meaning and the task of transposition into interiority, Lonergan provides a framework for protecting and promoting the enduring value of both common sense and theoretical insights throughout the history of the tradition without forcing contemporary problems into those more limited viewpoints.

1.5.5 A Note on “History”

Before turning from this summary of the resources in Lonergan’s thought to the theology of grace that we will develop in this dissertation, it is incumbent upon me to clarify the term “history” as it is deployed throughout the remainder of this text. As we have suggested above, one of the most significant shifts that attends the move from a theology or philosophy in the realm of theory to one in interiority is the integral account of development and of history. In fact, it would be no exaggeration to say Lonergan’s lifelong process was precisely aimed at helping Catholic thought to address the rise of historical consciousness. As he himself affirmed, “All my work has been introducing history into Catholic theology.”¹²¹ Not only did Lonergan recognize the need for a critical

¹²¹ J. Martin O’Hara, ed., *Curiosity at the Center of One’s Life: Statements and Questions of R. Eric O’Connor*, Thomas More Institute Papers 1984. (Montreal: Thomas More Institute, 1987) 427; Bernard J. F. Lonergan, “Belief: Today’s Issue,” in *A Second Collection*, Second edition, revised and augmented / edited by Robert M. Doran and John D. Didosky, Lonergan, Bernard J. F. Works (Lonergan Research Institute) ; v. 13 (Published for Lonergan Research Institute of Regis College, Toronto by University of Toronto Press, 2016), 87–99. 96. Cited in Briola, *Worship and Care in Our Common Home: Perspectives from Bernard*

understanding of history, but he also recognized the deleterious effects brought on by theories of history in Hegel, Marx, and the false optimism of liberal progressivism. As he noted in a questionnaire regarding the state of philosophy in 1976, “It has long been my conviction that if Catholics...are to live and operate on the level of the times, they must not only know about theories of history but also must work out their own.”¹²²

Lonergan’s own theory of history unfolds against the backdrop of emergent world processes as described in *Insight*, where Lonergan describes the dynamic universe as being in process according to his theory of “emergent probability.”¹²³ By “emergence,” Lonergan refers to the advent of something genuinely new in the world that did not exist or occur before. However, emergence does not occur *ex nihilo*. Instead, emergence of a new reality is brought about by the conditions fulfilled by a concrete plurality of lower order phenomena already existing in the world.¹²⁴ Depending on the occurrence of suitable conditions on the level of physics, subatomic particles fulfill the conditions for the emergence of more complex elements and compounds operating on the distinctly chemical level while depending on the perdurance of realities whose intelligibilities is

Lonergan. Briola’s summary of this vector in Lonergan’s career proved especially helpful in framing this section.

¹²² Bernard J.F. Lonergan, “Questionnaire on Philosophy: Response,” in *Philosophical and Theological Papers, 1965-1980*, ed. Robert Croken and Robert M. Doran, 2nd ed. Edition, vol. 17, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2004), 352–83. 366

¹²³ Bernard J. F. Lonergan, *Understanding and Being: The Halifax Lectures on Insight*, ed. Elizabeth A. Morelli, Mark D. Morelli, and Frederick E. Crowe, CWBL 5 (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 1990). 141-162.

¹²⁴ According to contemporary physics, classical laws are distinct from statistical laws, so “classical laws reveal that if A then B, provided other things are equal, while statistical laws tell us how often things are equal.” When the consequent of each preceding law in a series is the condition of the next following law, then a series of laws forms a chain; and if the result of the last in a series is the condition of the recurrence of the first, there is a “scheme of recurrence.” Chains of laws and recurrence schemes “are abstract possibilities that become actualities in accord with statistical laws.” Such recurrence schemes temporally may have probabilities of either emergence or survival. See Bernard J. F. Lonergan, *Macroeconomic Dynamics: An Essay in Circulation Analysis*, Lonergan, Bernard J. F. Works. 1988 CWBL v. 15 (Toronto ; Buffalo: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 1999), 3.

properly physical. In accord with the schedules of probability, these lower order schemes of recurrence ground further schemes—from the genera of physics to chemistry, biology, and sensitive and rational psychologies. These emergences are not necessary or mechanistic, but are the result of a world of interdependent, contingent events that mutually condition one another such that these emergences amount to an “upwardly but indeterminately directed dynamism.”¹²⁵

For Lonergan, emergent probability and stable schemes of recurrence provide an explanatory account for the genuine newness introduced by the advent of life and by intelligent human life (genetic intelligibility) and by the sinful realities of human failure to be intelligent and loving (dialectical intelligibility). Where prior processes unfolded according to the interplay of classical and statistical regularities, genetic intelligibility proper to the emergence of biological realities regards new, self-organizing processes that can affect what is often referred to as a “downward causation” on lower order realities, particularly as living things struggle to promote the necessary conditions for their own survival and reproduction.¹²⁶ Similarly, with the advent of human life, dialectic intelligibility is introduced. For the first time, events may unfold according not only to the intelligible interplay of events but also as the result of human actions that are unintelligent and perhaps even unloving.

¹²⁵ Lonergan, *Insight*, 501, cited in Patrick H. Byrne, “The Integral Visions of Teilhard and Lonergan: Science the Universe, Humanity, and God.” In Ilia Delio. *From Teilhard to Omega: Co-creating an Unfinished Universe*. (New York: Orbis Books, 2014) 83-110, 100.

¹²⁶ We have employed the term “downward causation” here because it is in wide use and because it communicates the irreducibility of higher order emergences (e.g. some biologically identified phenomenon) to the lower explanatory accounts (e.g. the chemical and physical). Nevertheless, this term carries its own risks, as it is sometimes counterpositionally used to suggest that the lower orders are interrupted or suspended by the higher. This topic is treated extensively in our discussion of emergence later in this dissertation.

The newness introduced by dialectical intelligibility in particular features prominently in Lonergan's understanding of history, which refers exclusively to human history. Against the backdrop of emergent probability, Lonergan suggests a Thomist vision of human history as "a cord woven with three strands" of nature, sin, and grace.¹²⁷ Lonergan coordinated these three categories with progress, decline, and redemption in human history, respectively. In the dialectical intelligibility proper to human actions, we have to natural capacity to act attentively, reasonably, responsibly, and lovingly, but, inexplicably, we often fail or even refuse to do so. This dialectic is described by the interplay of (good) nature and the distorting effects of sin. From the theological viewpoint, this is the problem of evil: "Given that God is all-good, all-understanding, and all-powerful, the problem is that there has to be something more to the unity of the universe than has been envisioned so far in generalized emergent probability. Evil is the problem to which this 'something more' is the solution."¹²⁸ Thus, for Lonergan, grace plays a particular role in history because it describes how God provides this "something more" needed to heal the moral impotence of fallen humanity with respect to the challenges of our dialectical situation.

Lonergan's account of history has been a powerful resource for attending to the concrete functions of grace in human lives, cultures, and institutions.¹²⁹ However, the difficulty, from our perspective, is that Lonergan's account of history is too small. The circumscription of history to human history is understandable. For one thing, the full

¹²⁷ Lonergan, *Macroeconomic Dynamics*, 93-4.

¹²⁸ Patrick H. Byrne, "The Integral Visions of Teilhard and Lonergan: Science the Universe, Humanity, and God," in *From Teilhard to Omega: Co-Creating an Unfinished Universe*, ed. Ilia Delio (Maryknoll: Orbis Books, 2014), 83-110. 103

¹²⁹ Perhaps nowhere more clearly developed than in Doran, *Theology and the Dialectics of History*.

implications of evolutionary and ecotheology were hardly on Lonergan's radar when he developed these theories, which responded more proximately to the inordinate dangers of nuclear war, genocide, the specter of communism, etc., all of which are evils stemming from the uniquely human situation. Moreover, Lonergan was aware of and pushed back against the tendency among many scientists to reduce humanity to the level of biology, chemistry, and physics, ignoring those aspects of human life and consciousness that make us truly unique in our world. Nevertheless, the narrowing of the category of history to humans alone leaves out too much. It erects a barrier between humans and other species that obfuscates the ways in which our own situation has been and continues to be shaped by our evolutionary situation. Furthermore, it seems to erect a barrier between God's action in nature through creation and God's ongoing redemptive work in history.

In this dissertation, we will use the word "history" to refer to the story of the whole cosmos since the big bang, which includes specifically human history. In many places, we will use the phrase "cosmic history" to underscore the intended breadth of our usage. This trend is not without precedent. There has been a move among some evolutionary theoreticians to talk about "Big History," in order to reunite humans with their larger cosmic context, as we will note briefly in Chapter Two in relation to the work of John Haught. While we recognize that this may risk obfuscating real distinctions between humans and other creatures, we believe that these distinctions can be made without excluding so much of our own evolution from our history. The Judeo-Christians affirmation that "God is the Lord of nature and history" has long been a way of rejecting that our God is a merely a deist demiurge or a watchmaker, but is a God who is intimately involved in the events of our lives. By extending our concept of history

outwards to the reaches of the cosmos, we recognize that God's loving and transformative presence is nowhere lacking, and the emergence of humans is not the emergence of grace as a divine remedy to the problem introduced by human decisions. Thus, where Lonergan recognized the need to describe both healing and creating vectors in history, we recognize the need for both of these vectors all throughout the good creation, which is everywhere marred.¹³⁰

1.6 Towards a Renewed Theology of Grace: Four Foundational Notions

While we will reserve treating Lonergan's theology of grace in greater detail until the later chapters of this dissertation, here at the outset, we would like to highlight four key features of the theology of grace that we will propose.

1.6.1 Heuristic

First, any theology of grace apropos to the contexts of both human lives and to the whole cosmos must be a heuristic theology. In terming his critical metaphysics "heuristic," Lonergan underscored that human knowers are limited, finite, and fallible, and so our knowledge of reality is partial. The goal of knowing the totality of reality in all its intelligibility remains more potential than actual, especially with respect to any particular human knower. Thus, while a heuristic metaphysics affirms the full intelligibility of the world, its goal is to orient and organize the ongoing inquiry into the richness of

¹³⁰ Bernard J. F. Lonergan, "Healing and Creating in History," in *A Third Collection*, ed. Robert M. Doran, John D. Didosky, and Frederick E. Crowe, Second edition, revised and augmented / edited by Robert M. Doran and John D. Didosky, Lonergan, Bernard J. F. Works (Lonergan Research Institute); v. 16 (Toronto; Buffalo; London: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2017), 100–109.

intelligibility beyond human circumscription. Similarly, our heuristic theology of grace does not propose to exhaustively account for all of the ways in which God's relationships transform each and all in creation. Rather, it will draw our attention to the possibility of discerning its concrete effects: healing the wounds of sin, accompanying creatures in their suffering, empowering creatures to live up to their natural ends, raising creatures both individually and collectively to a perfection that is beyond their limited nature, creating new possibilities for life, and offering hope for the ultimate defeat of death in the general resurrection and the life to come.

1.6.2 Hermeneutic

Second, related to its heuristic function in aid of discernment, we further note that the theology of grace we propose functions hermeneutically. This further correlates our theology of grace with Lonergan's critical realism, which, as we have suggested above, grounded both metaphysics and epistemology in a phenomenologically verifiable cognitional theory that attends to acts of knowing across all fields of knowing. In particular, Lonergan argued that knowing is not the mere abstracting of concepts from experience, but in every case involves an intermediary act of understanding. Lonergan described such truncated accounts of knowing as akin to a "metaphysical sausage machine, at one end slicing species off phantasm, and at the other popping out concepts."¹³¹ Rather, the mediating act of understanding is constituted by both our mental reconstruction of the experiential data in our consciousness and by our free play with the image as we struggle to grasp its latent intelligibility. The tension of inquiry is only

¹³¹ Lonergan, *Verbum*, 1997. 47-48

released through the spontaneous reception of a possibly relevant insight into the image, which intelligibility prompts further questions about the accuracy and adequacy of that understanding at the level of judgment. Whether in the field of math, science, history, sociology, philosophy, theology or common sense, any genuine act of understanding always involves this intermediary, interpretive act. Grounding his own account of hermeneutics on these experientially available and testable accounts of knowing across diverse fields, Lonergan's hermeneutics avoids the pitfalls of many other philosophies that have proliferated in the students of its originating genius, Martin Heidegger. As Frederick Lawrence notes, "the hermeneutical strategy of Gadamer is too undifferentiated, while the deconstructivist and genealogical strategies [of Derrida, Foucault, Lyotard, and others] are too dialectically flawed, to offer the theoretical and systematic basis for making good the requirements of contemporary liberation and political theology," or, we would add, the requirements of an evolutionary theology, which must take seriously diverse forms of knowledge and adjudicate between their realms of expertise.¹³²

In addition to framing his philosophical contributions, Lonergan's hermeneutic turn also shaped his later theology. Following the move from the realm of theory to that of interiority, Lonergan shifted from a framework for discussing the effects of God's grace in humans according to causal metaphysics to one framed by hermeneutic discernment in the conscious experience of human subjects.¹³³ This hermeneutical shift is

¹³² Frederick G. Lawrence, "The Fragility of Consciousness: Lonergan and the Postmodern Concern for the Other," in *The Fragility of Consciousness: Faith, Reason, and the Human Good*, Lonergan Studies (University of Toronto Press, 2017), 229–76.

¹³³ The difference of the move from a theoretical metaphysics to interiority in relation to the problem of the supernatural is discussed in detail in Jonathan Robert Heaps, "The Ambiguity of Being: Medieval and Modern Cooperation on The Problem of the Supernatural" (Dissertation, Milwaukee, Marquette University, 2019). As Heaps summarizes in his abstract, "The recent debate over the supernatural has proved

critical to our own method. While we would continue Lonergan's later attention to the experiences and effects of grace, we do so by attending both to the data of consciousness revealed through intentionality analysis (rather than faculty psychology) and to the data of the dynamically evolving world (rather than the more mechanical view of Aristotle and Plato). This requires that we become a certain kind of subject, which Elizabeth Johnson, drawing on Michael Himes, has termed a process of becoming "sacramental beholders" in the evolving world.¹³⁴ This formation entails the development of a

intractable in part because of a failure to distinguish two irreducible-but-linked problems of the supernatural, one medieval and one modern. The first is a metaphysical problem concerning the cooperation of humans with God. Bernard Lonergan's retrieval of St. Thomas Aquinas's solution to this problem indicates that a grasp of divine concursus is integral to a theory of nature and grace. A metaphysics of universal cooperation with God implies a pair of ambiguities about creaturely being. The general ambiguity is that, because the fundamental explanatory term for creaturely causation is both universal and transcendent, it remains possible to gain adequate causal knowledge of the world while merely assuming that the universe is intelligible. The specific ambiguity applies the general ambiguity to human action. If the ground of every human enterprise is universal and transcendent, then we may wonder whether this ground makes any difference in our practical projects.... It cannot be reduced to metaphysics, because its appearance depends on a solution to the medieval problem. Still, an effort to answer the modern problem by metaphysical means offers two important determinations of the modern problem. Because human freedom is rational, human actions emerge from a process of deliberation and are formally constituted by meaning. Thus, discerning what God is doing in human action is a diachronic and hermeneutical task. Taking the full scope of human enterprises, the modern problem of the supernatural calls out for a theological hermeneutics of culture." While Heaps argues for the importance of hermeneutics for discerning God's action in human lives and culture, following Aquinas, he distinguishes between God's effects on humans through the unmerited gift of grace from God's broader but no less gratuitous effects on all creation in generic "action." However, as he explains on pages 39-40, his exclusion of grace from the question of God's specific action on the rest of creation follows from the more limited scope of the contemporary debates with which he is concerned: "As the generic form of the specific problem [of God's grace in creation] is not much at play for parties in the contemporary anglophone controversy, I will not bother addressing it here. Bernard Lonergan's *Grace and Freedom* has convinced me as well that there exist in Thomas's corpus generic and specific forms of a solution to the generic medieval problem of the supernatural. In brief, the answer to the generic form of the generic medieval problem [regarding God's general action in Creation] is Thomas's theory of universal causal cooperation with God. The answer, in turn, to the specific form of the generic medieval problem [of God's general action in relation specifically to humans] is Thomas's theory of free cooperation with God. Lonergan shows why both are integral to Thomas's position on the specific form of the specific medieval problem [of God's grace in human beings,] and I am arguing that all of these together constitute a medieval solution to the medieval problem overall, at least as it is raised in the contemporary debate." 40: "In other words, once one knows how God makes a difference in creation generally and in human beings specifically, it follows one can ask exactly what that difference is. But in chapter 2 we will see that in part the difference God makes is to make creatures to be in general and human beings to be free in particular."

¹³⁴ Elizabeth A. Johnson, *Ask the Beasts Darwin and the God of Love* (London; New York: Bloomsbury Pub, 2014).

spirituality attuned to the incredible richness and diversity of life that surrounds us. However, as with all sacraments, this involves both a subjective and an objective pole, as the possibility of recognizing God’s activity in the world depends on our being conformed to the God revealed in the missions of the Son and the Spirit.¹³⁵ As Norman Wirzba helpfully summarizes, “Jesus is the hermeneutical lens that brings the world into the kind of focus that enables us to see it as either fallen or flourishing.”¹³⁶ Thus, as we are ourselves in ongoing formation through God’s grace, we come to recognize the much larger networks of grace that are transforming the whole world.

1.6.3 In Relation to “Ecological Conversion”

Third, and following the implications of the hermeneutical emphasis on subjectivity, we affirm that coming to recognize grace in the world is part of what Pope Francis describes as an “ecological conversion.”¹³⁷ Although the phrase dates to the Pontificate of John Paul II, its scope and meaning remained somewhat unclear in his usage, in part due to the tension noted earlier in the chapter between “human” and “natural” ecologies.¹³⁸ *Laudato Si’* helped to address this ambiguity. However, as Neil Ormerod and Cristina Vanin note, “the pope’s own direct handling of the term is fairly circumscribed to what we might call

¹³⁵ See the critique of an uncritical application of sacramental theology in ecological theologies in Timothy Patrick O’Malley II, “The Hermeneutic Sacramentality of Augustine: Learning to Contemplate the Invisible Reality of God in the Visible Creation,” in *God, Grace and Creation: College Theology Society Annual Volume*, ed. Philip J. Rossi, vol. 55, College Theology Society Annual Volume (Maryknoll, NY: Orbis Books, 2010), 23–42.

¹³⁶ Norman Wirzba, “On Learning to See a Fallen and Flourishing Creation: Alternate Ways of Looking at the World,” in *Evolution and the Fall*, ed. William T. Cavanaugh and James K. A. Smith (Grand Rapids, Michigan: Eerdmans, 2017), 156–77.

¹³⁷ Pope Francis, “*Laudato Si’* (ON CARE FOR OUR COMMON HOME).” § 5, 216–221

¹³⁸ Pope John Paul II, “General Audience Address,” January 17, 2001, http://conservation.catholic.org/john_paul_ii.htm; Pope John Paul II, “*Pastores Gregis*,” October 16, 2003, http://w2.vatican.va/content/john-paul-ii/en/apost_exhortations/documents/hf_jp-ii_exh_20031016_pastores-gregis.html.

the religious, indeed Christian, dimension of such a conversion.”¹³⁹ Ormerod and Vanin suggest that the full implications of an ecological conversion may be fleshed out through Lonergan and Robert Doran’s accounts of four different dimensions of conversion: religious, moral, intellectual, and psychic.¹⁴⁰ Where “ecological” conversion has a categorical determinant in that it regards a particular subset of the concrete data of the world in which we live, these four conversions are transcendental, in that they refer to different though interrelated modalities of self-transcendence proper to human beings as conscious subjects.

Lonergan defines religious conversion as
being grasped by ultimate concern. It is otherworldly falling in love. It is total and permanent self-surrender without conditions, qualifications, reservations. But it is such a surrender, not as an act, but as a dynamic state that is prior to and principle of subsequent acts. It is revealed in retrospect as an undertow of existential consciousness, as a fated acceptance of a vocation to holiness, as perhaps an increasing simplicity and passivity in prayer...¹⁴¹

Religious conversion is not something we achieve, then, so much as something that we undergo and experience as a gift of friendship with God, though we may and must cooperate with that offer if we would continue to grow in knowledge and love of God. Following Lonergan, we would also distinguish between Christian conversion and religious conversion, the former being one particular expression of the latter. Moral

¹³⁹ Ormerod and Vanin, “Ecological Conversion.”

¹⁴⁰ See Lonergan, *Method in Theology*, 2017, 223-230; Robert M. Doran, *Theology and the Dialectics of History* (Toronto: University of Toronto Press, 1989), 42-63.

¹⁴¹ Lonergan, *Method in Theology*, 2017, 226. Further down the same page, Lonergan continues, “For Christians [religious conversion] is God’s love flooding our hearts through the Holy Spirit given to us. It is the gift of grace...” While we would affirm that this is true, though we would stress that this is only one (albeit tremendously important) dimension of grace.

conversion refers to the change in “the criterion of one’s decisions and choices from satisfactions to values.”¹⁴² It is realized when we recognize the self-constitutive effects of our decisions and choose to act in the light of what we know to be true and good as we work to root out the biases that prevent us from apprehending and choosing this good in every instance. Intellectual conversion entails “a radical clarification and, consequently, the elimination of an exceedingly stubborn and misleading myth concerning reality, objectivity, and human knowledge. The myth is that knowing is like looking, that objectivity is seeing what is there to be seen and not seeing what is not there, and that the real is what is out there now to be looked at.”¹⁴³ Intellectual unconversion may come in many forms: in the general bias that dismisses theoretical and technical knowledge in favor of the conclusions of common sense, in radical and reductive empiricism, or in world denying idealism. Finally, psychic conversion—developed by Doran on the basis of an implicit account in Lonergan’s thought—refers to the change in the function of the pre-conscious psychic censor regarding “images for insight and over concomitant feelings - from a repressive to a constructive role, thus enabling simultaneously the participation of the psyche in the operations of intentionality, and the embodiment of intentionality through the mass and momentum of feeling.”¹⁴⁴ Given that we spend most of our lives operating in the stream of consciousness that Lonergan referred to as the “dramatic pattern of human experience,” the redirection of our psychic images and

¹⁴² Lonergan, 225. While we will, for the sake of brevity and convenience, rely on Lonergan’s relatively compact explanation of moral conversion in these terms, Patrick H. Byrne has convincingly argued that Lonergan’s own way of characterizing moral conversion needs to be amplified in several ways in Patrick H. Byrne, *The Ethics of Discernment: Lonergan’s Foundation for Ethics*, Lonergan Studies (University of Toronto Press, 2016), especially 227-234.

¹⁴³ Lonergan, *Method in Theology*, 2017. 223

¹⁴⁴ Doran, *Theology and the Dialectics of History*. 59-63

spontaneous feelings towards the truth and goodness and beauty is crucial to living out our conversion.¹⁴⁵

As Ormerod and Vanin argue, ecological conversion does not represent some fifth kind of conversion, but requires the commitment of multiply converted subjects to the work of ongoing conversion. While they do not link this conversion with the kind of broad rethinking of a theology of grace envisioned in this project, they underscore the need for any such project to reflect each of these dimensions of ecological conversion. The failures of humans to treat the rest of creation with respect and care are in fact multiple: from theologies that downplay God's gracious and enduring action and presence among non-human creation; to personal and corporate greed, laziness, and apathy; to the anti-scientific and anti-academic bias that simultaneously fuels the denials of evolution and climate change alike; to the failures to respond to creaturely suffering and the failure of imagination regarding another way of life. All of these forms of un-conversion have contributed to the ecological crises of the present.

1.6.4 Corporate and Corporeal

The fourth and final point for a renewed theology of grace is the need to attend to grace as both corporate and corporeal. By grace as corporate, we mean to emphasize that grace is not a substance or a quantity that inheres in one place or being and not another. While this has long been acknowledged in this history of theology, there has too often been a commodified view of grace among Catholics, especially with respect to the grace conferred in the sacraments. Perhaps especially following the Reformation and

¹⁴⁵ Lonergan, *Insight*, 1992. 211-214

Counterreformation, Catholic theologies of grace have too often emphasized how grace acts on individual persons. While the major revolutions in the theology of grace in the last century addressed the commodification of grace, they did not do enough to restore the emphasis on corporate salvation. Attending to grace as interpersonal, social, and, in what follows, as operating on all creaturely reality, we may avoid the overemphasis on personal salvation and personal sin that has proved to be a hindrance in addressing the most significant evils facing humanity in the present day, including not only the mounting ecological crises, but also the crises of racism, sexism, nationalism, jingoism, etc.

Similarly, by emphasizing grace as corporeal, we want to push back against the tendency to locate grace solely in (especially human) interiority by tying its effects to psychic and spiritual realities. On the contrary, grace affects the whole of reality. Grace transforms the flesh of the whole, evolving world, which in the present age bears the marks of sin and evil everywhere. Some recognition of this point may already be overserved in the push to articulate accounts of social sin and grace, as well as in some of the treatments of “sin of the world” in post-Vatican II theologies. It also finds resonances with the push towards greater theological embodiment, particularly in feminist, ecofeminist, womanist, and Mujerista theologies, among others.¹⁴⁶ In fact, though, the prototypical image of this graced transformation of flesh is affirmed already in the dogma of Mary’s bodily assumption, “[in which] Mary’s body is in solidarity with all of material creation and is now ‘fully united with God in Heaven’ ... [revealing] how great the

¹⁴⁶ Sallie McFague, *The Body of God: An Ecological Theology* (Minneapolis: Fortress Press, 1993); M. Shawn Copeland, *Enfleshing Freedom: Body, Race, and Being*, 60351st Edition (Minneapolis: Fortress Press, 2009).

capacity is for material creation to be glorified and joined together with God and thereby open the way for the whole physical cosmos to follow.”¹⁴⁷ Through this dissertation, we will argue that grace not only creates the social, cultural, and religious conditions for the healing and elevation of creatures and of creaturely reality, but that it also effectuates the material transformation of this whole, as grace reaches all the way down.

1.7 Overview of Subsequent Chapters

In the chapters that follow, we will suggest our own outline for a theology of grace that builds on the foundations laid by Lonergan, but which seeks to answer more broadly and boldly the challenge of a renewed theology of grace to meet the demands of both the ecological and evolutionary horizon of the present day. We survey the four most widely read and influential Anglophone Catholic theologians who focus on ecological and evolutionary questions. Beginning with John Haught, we argue that, while his dedication to the advancement of a more evolutionarily conversant theology has been prophetic within Catholic thought, his “metaphysics of the future” as rooted in a form of process thought creates barriers both for engaging the larger, Catholic theological tradition and for facilitating a dialogue with the natural sciences. Turning more favorably, then, to the work of Elizabeth Johnson, we describe the “evolutionary turn” from her earlier, eco-feminist engagements to her more recent work in *Ask the Beasts*. We also describe how this shift entailed a greater emphasis on God’s redemptive (and not only creative) action in evolutionary history and in non-human contexts, highlighting her contributions to

¹⁴⁷ Aurelie A. Hagstrom, “Resurrection of the Body and Ecology: Eschatology, Cosmic Redemption, and a Retrieval of the Bodily Assumption of the Blessed Virgin Mary,” in *God, Grace and Creation: College Theology Society Annual Volume*, ed. Philip J. Rossi, vol. 55, College Theology Society Annual Volume (Maryknoll, NY: Orbis Books, 2010), 147–62. 148

theologies of Deep Incarnation and Resurrection in Catholic thought. However, noting her reticence to translate this into a theology of grace, we then move on to the work of Denis Edwards, which complements Johnson's Rahnerian-Thomism in several key ways. Paying particular attention to Edwards' book, *How God Acts*, we show how Edwards has gone further than most in explicating how the redemptive logic of contemporary evolutionary theologies requires a rethinking of traditional theologies of grace. However, we push back against his apparent collapsing of special divine action into general divine action, which seems at times to undermine the view of God's love as elective and selective in generating surprising possibilities in the world. Finally, we underscore Celia Deane-Drummond's contributions to a Catholic account of cosmic redemption, especially through her representation of other animals and the rest of creation as actors and not merely props or scenery in the Theodramatics of cosmic history. In addition, we call attention to her use of Bulgakov's Sophiology to evoke images of a hereditary grace unfolding between generations of embodied beings, even though she does not provide an adequate systematic framework to fully integrate those insights.

In order to transpose the insights of these four thinkers into a framework capable of dialoguing with both the larger Catholic and especially Thomist tradition, on the one hand, and the modern sciences, on the other, in the third chapter, we offer an overview of Lonergan's contributions, attending to three critical periods in his career. First, drawing from Michael Stebbins' magisterial work, we describe Lonergan's retrieval of Aquinas's theology of grace during the first phase of his studies. We also stress the particular importance of the notion of the vertical finality of a dynamically unfolding and deeply interconnected world order, which Lonergan began to develop during this time. Then,

with Pat Byrne, we argue that the second stage of Lonergan's career, during which he wrote *Insight*, represents an effective retrieval of the concept of "nature" from the Scholastic theoretical stage of meaning, transposing it into the terms and relations of a critical realist metaphysics grounded in a phenomenologically verifiable account of the dynamic acts which constitute human knowing across all fields of inquiry. Therein, Lonergan provides a basis for engaging with the modern sciences, as well as a foundation for the subsequent transposition of the matched category of grace. Finally, we briefly note some of the key elements of Lonergan's own efforts at transposing the category of grace, especially as developed in his *Method in Theology*.

However, noting that even this transposed account does not consider the question of grace beyond human contexts, in Chapter Four, we enter more fully into the constructive phase of this project. There, we suggest an understanding of grace as "God's created relationship of transformative love and care for all creatures that opens them up to ever deeper relationships with God and with each other." We argue that, in fact, this need not abrogate the existing theologies of grace in relation to human psyches and spiritualities, as these represent one particular application of the larger framework that we articulate. To clarify how grace heals, completes, and elevates the whole of God's good creation, we return to Lonergan's account of absolute, horizontal, and vertical finality as developed in the articles "Finality, Love, Marriage," and, later, in "Mission and the Spirit." We argue that grace as the created relation between God and the creature establishes a transformative relationship (1) with respect to God as ground of ontological being and eschatological fulfillment, (2) with respect to the dignity of each creature in realizing its own finite and particular excellences, and (3) with respect to the incalculable

number of relationships that achieve among and between species in an evolving world. Drawing especially from Robert M. Doran's account of the psyche as the bridge between the underlying bio-chemical processes of our bodies and the higher emergent manifolds of mind and spirit, we emphasize that our understanding of grace in human beings represents a microcosmic example of the macrocosmic order grace, as all the lower manifolds are sublated through the grace that transforms us as embodied beings in the world. That is to say, there can be no healing of the mind and heart that does not also leave a mark on the body and on the relationships of that embodied person with the other creatures in the world. In the final sections of this chapter, then, we suggest some ways in which this framework might shift our understanding of grace in relation to our own familiar human context.

In Chapter Five, we treat the account of grace in embodied and interconnected human lives as a heuristic for exploring how grace might also be understood to transform the whole cosmos. Employing the same framework of absolute, horizontal, and vertical finality, we suggest places where we may observe the unfolding of a whole graced order of creation, proceeding from non-human animals, to non-animal life, and finally to a brief reflection on grace in all matter. In each case, we stress how grace operates conservatively with respect to the particular dignity and excellences of each creature, but also brings them to a relatively disproportionate excellence through their participation in the vertical finality of the whole order of creation and redemption. Moreover, we argue that, if the whole world order is a composite of grace and nature, then the empirical and phenomenological approach of the natural sciences is critically complemented by a theology of grace, which is uniquely able to both distinguish and relate the natural

excellences of any creature considered in abstraction to the way in which that creature is also taken up into the larger flow of cosmic grace. Therein, we argue that theology has a distinct and irreducible contribution to make in relation to the sciences, and need not only assume a purely passive role.

Then, in Chapters Six and Seven, we turn to three key conversations in modern evolutionary theory in order to suggest how, through the eyes of faith, we may identify resonances between the theological conjugate supplied by this theology of grace and the patterned unfolding of the dynamic world order.

Chapter Six treats the notion of “emergence,” which features prominently in Lonergan’s thought but has also been discussed independently from Lonergan in both philosophy of science and evolutionary biology. We argue that, not only does Lonergan’s account of emergent probability as couched within his larger metaphysics help to identify problematic accounts of emergence on the side of nature, but, moreover, that the theology of grace offered in this dissertation helps us to attend to and even to expect emergence in human and cosmic history in ways that avoid some recent trends towards cosmic fatalism. At the same time, we note that the further specifications and developments of emergence according to each distinct branch of the sciences fills out Lonergan’s philosophical account in critical ways.

Taking the emergentist framework as foundational, Chapter Seven turns to two other conversations in contemporary evolutionary theory around the meaning and significance of forms of evolutionary convergence and cooperation. Focusing first on the work of Simon Conway Morris, we explore how his identification of convergent patterns in evolution challenges the narrative of radical contingency and randomness championed

by Stephen Jay Gould and others, especially to the extent that they suggest nihilistic metanarratives regarding the course of evolution. Reflecting on the complete intelligibility of all reality and the transformative effects of grace, we argue that there are both scientific and theological reasons to resist those narratives that too strongly state the case for absolute randomness, chance, and a total lack of purposiveness in the universe. Then, turning to the collaborative work of theologian Sarah Coakley and mathematician and evolutionary biologist Martin Nowak, we examine the phenomenon of cooperation in both creaturely interactions and in the history of evolution. Being careful not to project theological conclusions into the science itself, we argue against the equally unscientific status of the principle of genetic selfishness suggested and defended by Richard Dawkins and others; further still, we argue, with Coakley, that there are actually forms of cooperation that the sciences can acknowledge on their own steam. While we do not seek to blur the line between the natural theological approach proposed by Coakley and our own foundational theology of grace, we suggest that the theology of grace in this project is differently and perhaps more powerfully able to engage in the dialogue between religion and science than many more natural theological approaches.

2. CHAPTER TWO: THE STATE OF THE QUESTION

In this chapter, we engage four of the most prominent theological voices in the Catholic advance toward evolutionary theology: John Haught, Elizabeth Johnson, Denis Edwards, and Celia Deane-Drummond. In addition to treating their most significant and influential works regarding evolution, we have also tried to give an admittedly limited account of the development of their thought in order to demonstrate how their later, explicit concern for evolution in theology arises naturally out of a concern for other, traditional theological loci such as faith and reason, theology and science, ecological ethics, etc. Although, in some sense, evolutionary theory is not new on the intellectual scene, explicit theological reflection on its implications has been rather sluggish. This delay owes in part to the time it took for the Catholic teaching office to come around to accepting evolution,¹ and to be sure, to the laborious and lengthy process of exploring and working out some of the intelligible implications that follow from that affirmation. Thus, while each thinker treated here has exhibited a nearly career-long interest in ecology, science, and evolution, we will call attention to certain, developmental shifts in their work that reflect this process.

¹ The first, limited, papal approbation of the theory of evolution appears in Pope Pius XII, “*Humani Generis*” (Vatican Website, August 12, 1950), http://w2.vatican.va/content/pius-xii/en/encyclicals/documents/hf_p-xii_enc_12081950_humani-generis.html. It stresses that the evolution of human species as a whole need not be understood as contrary to the Catholic faith, though it underscores the provisional status of evolutionary theory and emphasizes both the direct creation of each human soul by God (36) and incompatibility of polygenetic inheritance with the revealed truth of Adam and Eve as the monogenetic progenitors of humanity (37). John Paul II gave a stronger endorsement of evolution as founded on the convergence of multiple fields of independent scientific inquiry and therefore as “more than just a hypothesis” in Pope John Paul II, “*Message Aux Participants à l’Assemblée Plénière de l’Académie Pontificale Des Sciences* (22 Octobre 1996) | Jean Paul II” (Vatican Website, October 22, 1996), https://w2.vatican.va/content/john-paul-ii/fr/messages/pont_messages/1996/documents/hf_jp-ii_mes_19961022_evoluzione.html.

2.1 Possible Criteria for a Catholic Theology of Evolution

Before turning to the work of these thinkers themselves, however, we would like to offer a few criteria or standards that are met to a greater or lesser degree by these thinkers and suggest these as a basis for assessing the adequacy of their respective Catholic approaches to evolutionary theology. Our setting forth distinctly Catholic criteria is not meant to suggest any special Catholic authoritativeness regarding these matters since it is obvious to even the casual reader in the field of evolutionary theology that the Catholic response to the evolutionary and ecological turn in theology often lags behind that of our ecumenical partners—Protestant, Evangelical, or Orthodox. Instead, we wish to delineate a distinct set of historical, philosophical, and doctrinal concerns that directly affect the possible contributions of these evolutionary theologies within the Catholic fold.

2.1.1 The Meaning of the Delimiter “Catholic,” Here

This is not to suggest a litmus test for orthodoxy or an effort to draw exclusive lines in the sand or a circling of the theological wagons. We intend these criteria to enhance inclusivity, in the sense that the best of contemporary Catholic theology seems to draw from the many and variegated sources of Catholic intellectual history, including some sources that may be unfashionable in the larger academic climate today. To be a Catholic theologian in this sense means allowing all relevant sources and contexts to make claims on our present theological thinking and to use them in seeking creative solutions. As such, the challenge for evolutionary theology as Catholic is to expand this historical and

cultural inclusivity even to the non-human world, the richness and complexity of which we are only beginning to understand today.

The scope of this project is limited to thinkers from English-speaking and—with the exception of Denis Edwards—North-Atlantic theological contexts. Much more work would be needed to expand the conclusions of this project to engage in a wider dialogue with ecological and evolutionary theologies developed in other languages and cultures. However, the limited compass of this treatment benefits from the fact that the four thinkers considered here share the common exigency to respond to the barriers between science and religion, faith and reason, that unfortunately are a part of the North Atlantic intellectual climate. Each of the theologians we treat below frames their projects with respect to both apologetic, collaborative, and constructive projects in either of two directions: to recognize that the scientific illiteracy of both religious and non-religious persons contributes to denial of the current eco-crisis; and, to criticize the scientistic rejection of the need for religious and cultural resources to reshape imaginations, beliefs, and practices, which a change of worldview would require. Rooted in that common project, the scholarship of these thinkers has become entwined in a common conversation.²

Beyond professed identity or common cause, we suggest that the manner in which they handle both the relationship between faith and reason as well as their relationship to the tradition of Catholic theological sources and traditions distinguishes them from most Protestant contemporaries. Therefore, the criteria of Catholicity that we outline have a

² While all four of these theologians reference each other's works extensively, there is a particular resonance between Elizabeth Johnson and Denis Edwards, who were classmates at the Catholic University of America; notably, Johnson became the first woman to receive a PhD in theology from that institution in 1981.

heuristic function, although one or another are challenged or even rejected by some of the thinkers treated below. However, their disagreements about these criteria influence in a major way their particular approaches in relation to other areas of theology. The criteria proffered here concern the relationship of each thinker to (1) metaphysics, (2) natural theology, and (3) grace understood both ontologically and ontically.

2.1.2 The Role of (a) Metaphysics

First, the metaphysical commitments of each thinker affect their ways of linking doctrines and systematics, and the manner in which these theological dimensions may be related to the data and interpretations supplied by various secular sciences. In many contexts, philosophy has long touted the necessary and immanent death of metaphysics—most recently in the form of post-modern and post-structural critique of grand narratives, foundationalism, and latent and oppressive motives behind systemic claims.³ While many Catholic theologians follow this line of thinking in pursuing post- or non-metaphysical theologies, Catholic evolutionary theologians have recognized at least some metaphysical language as indispensable to facilitating conversation between religion and science. This has proved especially true regarding the topic of evolution, as their task requires the mediation of both epistemological and ontological claims staked by both theologians and scientists. Besides this practical exigence, though, Catholic theologians are often motivated by the need to clarify their own positions with respect to the larger theological tradition, especially in relation Aquinas's theological use of metaphysical analogies. With

³ For a good overview of some of the most prominent of these critiques and for a response to them in dialogue with Lonergan's thought, see the titular essay in Frederick G. Lawrence, *The Fragility of Consciousness: Faith, Reason, and the Human Good*, Lonergan Studies (University of Toronto Press, 2017). 229-277.

the exception of John Haught—whose earlier forays into metaphysics began with Lonergan but, over time, increasingly veered towards a modified process metaphysics—each of the thinkers treated below favor some form of a Thomist metaphysics (though not the *Thomistic* metaphysics of decadent Neo-Scholasticism), clarifying their own positions through their interpretations of and modifications to Aquinas’s thought.

2.1.3 “Natural” Theology

The second criterion relates this proclivity for metaphysics to the development of some version of natural theology, as based on observed data and our overall experience of the natural world—what Augustine sometimes called the “Book of Nature.” Natural theology begins from the conviction that the world is meaningfully related to the Creator God, and so it stresses the value and goodness of creation. To resist various forms of Christian dualism—especially the dualist penchant for generally disregarding ecological issues—each of the thinkers treated below reflects at length on the discoveries verified by scientific investigation that are pertinent for knowledge of God and God’s action in the world. Even above the obvious importance of such a framework for any evolutionarily-oriented theology, this question takes on an additional significance in relation to broadly Thomist framework. While Haught and, to a lesser extent, Deane-Drummond are critical of the excesses of certain natural theologies, Johnson and Edwards’ particular Thomist framework leads them to regard the project of natural theology more favorably. In Chapter Three, we will describe the significant potential of Bernard Lonergan’s work to the ongoing renewal of natural theology through his critical, heuristic, and relational

metaphysics. Then, in Chapters Four and Five, we suggest our own account of how this must be further coordinated with an expanded account of God's grace in the world.

2.1.4 The Effects of Grace as Ontic and Ontological

The third heuristic criterion affirms both the ontological and the ontic consequences of the reality of grace in the world. By “ontological,” we mean (approximately) the transformative effects of grace set forth in terms of Thomas's mature theology of sanctifying grace that both justifies and elevates the soul independently of any prior or subsequent human acts or works. By the “ontic” effects of grace, we mean (approximately) both what Aquinas referred to as “the habit of charity,” which pertains to the transformation of the potential for action in the justified person through divine friendship; and to “gratuitous grace” (*gratia gratis data*) as a gift of some charism, which enables a person to make a specific contribution to the salvation of others, whatever the state of their own personal or behavioral character may be. While Protestant theologies have historically tended to emphasize first and foremost the ontological aspects, Catholic theology has long emphasized both kinds of God-given gifts. It should be noted, though, that this criterion marks the greatest divergence among the thinkers treated, due in part to the lack of any adequate transposition of Aquinas's speculative theology of grace in relation to both the conscious intentionality of incarnate subjects and to up-to-date scientific explanations of concrete reality.

Having outlined these criteria, we now treat the four thinkers in turn, each of whom has made an important contribution to a sound Catholic theology of evolution. However, as we have noted above, these criteria are to function heuristically, in the sense

that they will guide our possibly relevant interpretations of the theologians' writings for the sake of constructing a more comprehensive explanatory synthesis in the latter chapters of this project.

2.2 John Haught and the “Metaphysics of the Future”⁴

I begin with the works of John Haught because he is an outlier regarding to the criteria discussed above. In one sense, he is perhaps the clearest of our four thinkers on the value of an explicit metaphysics in relation to scientific and theological concerns within an evolutionary worldview. At the same time, he proposes what we deem to be a seriously limited “metaphysics of the future” both for Catholic theology and for its mediation of secular disciplines and thinkers. Haught's approach is deeply influenced by process thought and shares much in common with prominent Protestant contributors to evolutionary theology.⁵ As a result, it gives a sense of the larger ecumenical conversation surrounding evolution and foregrounds the similarities that are shared among the three thinkers treated later in this chapter.

2.2.1 Haught's Early Works on Religion and Science

Though our focus here is Haught's evolutionary theology, especially in *God After Darwin*,⁶ we will briefly examine his earlier works on religion and science in order to

⁴ This treatment of Haught's metaphysics is drawn with slight modification from Benjamin J. Hohman, “Prolegomena to any ‘Metaphysics of the Future’”, *Horizons*, Volume 26, Issue 2, December 2019, pp. 270-295.

⁵ This includes but isn't limited to Charles Hartshorne, John B. Cobb, Ian Barbour, David Griffin, and others.

⁶ John F. Haught, *God after Darwin: A Theology of Evolution*, 2nd ed. (Boulder, CO, Boulder, Colo.: Westview Press, 2008).

understand his larger project. In his first major book, *Religion and Self-Acceptance*,⁷ Haught uses Bernard Lonergan's thought to delineate five different "cognitional modes"—the sentient, the interpersonal, the narrative, the aesthetic, and the theoretic. Because reductively materialist scientism ignores all these modes except the theoretical, it undermines other, more practical ways of engaging the world and loses touch with the criteria of truth and of wonder that orient human knowing. As a result, they are less able to account for realities that existed either in the past or that will exist in the future.⁸ Their exclusion of significant dimensions of human wonder—not to mention the richness of the world as both mediated and constituted by acts of meaning—short circuits knowledge of the good Creator God, in and by whom alone our desire to know is liberated most fully.

Lonergan's attention to cognitional theory, epistemology, and metaphysics was indispensable for Haught's critiques of religious and scientific fundamentalist biases. However, Haught became increasingly convinced of how inadequate the resources of the Catholic theological tradition are both for responding to the "New Atheist" critics and for mediating theologically the contributions of contemporary science. Haught saw the Catholic response to the challenges of both modernism and postmodernism as being languorous and inadequate when compared with the efforts of Protestant theologians. As his subsequent book *Mystery and Promise: A Theology of Revelation* suggests, Haught came increasingly to question whether Catholicism's limited notions of revelation and inspiration are simply "another sign of Catholic theology's not yet having caught up with

⁷ John F. Haught, *Religion and Self-Acceptance: A Study of the Relationship between Belief in God and the Desire to Know* (Washington, D.C. [etc], Lanham, MD: University Press of America, 1980).

⁸ Haught. 59

the times... [and] a signal of its unwillingness to adhere to current academic standards.”⁹

While Haught ultimately defends the enduring importance of revelation as symbolically invaluable, he asserts that “in an age of science, astrophysics, evolutionary biology, and information.... we are obliged to treat the notion of revelation in terms that relate it to these developments.”¹⁰ Thus Haught’s foundations take seriously both the dialogue between science and religion in the latter part of the Twentieth Century and the most powerful influences in Protestant theology during this period, the latter of which proved decisive for his growing affinity for process metaphysics.¹¹

2.2.2 *God After Darwin* and the “Metaphysics of the Future”

Haught had touched on the topic of evolution already in these earlier publications. In *God After Darwin* (first published in 2000), however, he makes his first and perhaps most important case for reorienting theology toward a thoroughly evolutionary worldview by establishing the metaphysical program for all his subsequent books. Recalling his arguments in *Religion and Self-Acceptance*, Haught criticizes the truncated view of the mind in much modern science, but he also criticizes many Christian theologies as well, arguing that an antiquated metaphysics is insufficient to acknowledge either the breadth of contemporary scientific knowledge or the implications of the Christian eschatological message of hope. Only a “metaphysics of the future” can accommodate the richness of evolutionary and eschatological aspects of reality.

⁹ John F. Haught, *Mystery and Promise: A Theology of Revelation*, New Theology Studies; v. 2 (Collegeville, Minn.: Liturgical Press, 1993).

¹⁰ Haught.

¹¹ In addition to the allusion to Process thought above, Haught’s work also seems to be powerfully marked by the post-liberal emphasis on narrative, especially as a way of understanding the function of revelation as a kind of closed, meaning-making system.

As Haught sees it, “traditional natural theology” is ill-equipped to meet the challenge of suffering, death, and extinction as the probable result of the “contingency and turmoil in the life process” at the heart of evolution.¹² While many theologians assent to the truth of evolution, this assent had little or no bearing on the way they think about theology. Haught criticizes this tendency toward a model of “separatism” in theology, which presumes a disjunction between the conclusions of science and religion that is effectually close to the fundamentalist view.¹³ Haught’s advocacy for a model of “engagement” rests on the possibility for both scientists and theologians to occupy a common metaphysical worldview, in which metaphysics is broadly understood as “the term philosophers use to refer to the general vision of reality that one holds to be true.”¹⁴

While Haught continues to draw on Lonergan’s thought in some ways, his metaphysics both performatively and theoretically departs from Lonergan’s critical realist metaphysics of proportionate being grounded in the phenomenologically-verified structure of human acts of knowing. Haught does not advert to or comment on this divergence, however, and so it is unclear whether he believes his own framework to remain consonant with Lonergan’s project. While we will postpone our elaboration of Lonergan’s metaphysics until the next chapter, our treatment of Haught’s work in the remainder of this chapter is shaped by Lonergan’s foundations and his dialectic of positions and counter-positions.

As Haught describes, his own metaphysics reflects a version of process thought: “When the idea of divine creativity is tempered by accounts of God’s vulnerability, and

¹² Haught, *God after Darwin*. ix

¹³ Haught. 31

¹⁴ Haught. x

when nature itself is viewed as promise rather than simply as design or order, the evidence of evolutionary biology appears not only consonant with faith, but lends new depth to it as well.”¹⁵ Thus, Haught describes process thought as seeking a real consonance between a God who develops and a developing world, thereby aligning religious expectations with evolutionary science, and, at the same time, evoking a vision of God that more closely approximates the kind of just, humble, and compassionate God described by Christianity:¹⁶

...a persuasive God [like that described by process theology] is much more powerful than a hypothetical deity who magically forces things to correspond immediately to the divine intentions.... [A] world given lease to become more and more autonomous... has much more integrity and value than any conceivable world determined in every respect by an external “divine designer.”¹⁷

Absent a putative, preexistent divine-blueprint, the changing God also responds to the universe’s own co-creation. As humanity is drawn into the inbreaking future by God’s loving but non-compulsory action underpinning a divine impetus intrinsically affected by space and time, creation shifts from *vis a tergo* to *vis a fronte*. This view emphasizes both the freedom of persons and of processes, while conceiving a God who is lovingly affected by contingent events in the created order.

¹⁵ Haught. x

¹⁶ The extension of this worldview to other world religions is not ruled out in *God After Darwin*, but it is not until the recent publication of *The New Cosmic Story* that his scope has more intentionally and explicitly included a focus on the multiple traditions that emerged during Jasper’s axial age. For Haught’s own account of this, see especially

John F. Haught, *The New Cosmic Story: Inside Our Awakening Universe* (New Haven: Yale University Press, 2017).6–25.

¹⁷ Haught, *God after Darwin*. 45

On the basis of these well-intentioned shifts from the supposedly static approach of classical metaphysics, Haught pursues a “metaphysical framework centered on the biblical picture of ‘the humility of God.’”¹⁸ He is perhaps rightly concerned that, historically, Christian theology has too often missed the fundamental Trinitarian insight that “the crucifixion of Jesus [is] an inner dimension of God’s experience rather than something external to the deity,” and so has made “the image of Caesar rather than that of the humble shepherd of Nazareth... the regnant model of God.”¹⁹ For Haught, the “best of our theologies”—in which he includes Bonhoeffer, Schillebeeckx, and Moltmann—have tried to supplant “the specter of an invulnerable, immobile, and essentially non-relational God that seems so antithetical to the world’s evolutionary becoming and self-creativity.”²⁰ As in his earlier works, Haught argues that too many Christian apologists have ignored issues of development, focusing instead on “the question of how to reconcile God’s ‘power’ and ‘intelligence’ with the autonomous, random, and impersonal features of nature’s evolution.”²¹ By embracing the process approach, Haught suggests that Christian apologists could eliminate these false problematics entirely.

Moreover, Haught’s metaphysics incorporates insights of Teilhard de Chardin. Recognizing the scientific and philosophical critiques of Teilhard’s approach, Haught maintains that Teilhard’s account of a “divine power of attraction... was never intended to be taken as a strictly scientific explanation,”²² but was intended to evoke a different conception of metaphysics altogether—a “metaphysics of *unire*.”²³ In other words,

¹⁸ Haught.

¹⁹ Haught.

²⁰ Haught. 52

²¹ Haught. 56

²² Haught. 90

²³ Haught. 91

Teilhard clarified the need for a new theology for an evolutionary age, even as he maintained that neglected understandings of truths lie at the root of the whole Christian tradition:

Evolution... seems to require a divine source of being that resides not in a timeless present located somewhere “up above,” but in the future, essentially “up ahead,” as the goal of the world still in the making. The term “God” in this revised metaphysics must once again mean for us, as it did for many of our Biblical forbears, the transcendent future horizon that draws an entire universe, and not just human history, toward an unfathomable fulfillment yet to be realized.²⁴

In the spirit of Teilhard’s metaphysics of *unire*, Haught’s own metaphysics of the future is meant to be a step toward liberating Jerusalem from the influence of inadequate versions of Athens.

Haught’s metaphysics of the future, then, is to play an important role in regard to the sciences: “[There is a] need to place the results of all scientific discovery within at least some general understanding of the nature of reality... [which] is the task of metaphysics, some version of which we all carry with us, whether we are aware of it or not.”²⁵ Given the necessity of (at least an implicit) metaphysics inevitably connected with any truth claims, a metaphysics of the future is considered the best means of accounting for the developmental character of the universe as described by contemporary astrophysics, evolutionary biology, and genetics. Haught admits that “to the empirical eye and within the self-limiting scope of purely scientific ‘explanation,’ the whole idea of

²⁴ Haught. 91

²⁵ Haught. 58

God will rightly be considered superfluous.”²⁶ Still, even if the idea of God cannot be drawn inappropriately into scientific investigations, Haught suggests that the metaphysics of the future can still interpret properly scientific discussions and conclusions from a higher viewpoint.

Specifically, Haught discusses the scientific notion of “information” claimed to be built into the unfolding world order: “Though it is not physically separate, information is logically distinguishable from mass and energy. Information is quietly resident in nature, and in spite of being nonenergetic and nonmassive, it powerfully patterns subordinate natural elements and routines into hierarchically distinct domains.”²⁷ Information in the world, then, is a way of indicating the setting of the conditions for higher emergences “by comprehensively integrating particulars (atoms, molecules, cells, bits, and bytes) into coherent wholes.”²⁸ Haught emphasizes that this information as “real” must

[reside] in some other logical space than that of the atomic and historical particulars that natural science appeals to in its modern ideal of explanation... [and is] a metaphysical necessity. For in order for anything to be actual at all it must have at least some degree of form, order, or pattern. Otherwise a thing would be indefinite, and whatever is indefinite is no-thing.²⁹

Haught’s metaphysics, therefore, provides a “place” for the existence of intelligible and higher order phenomena as constituent elements of the “real world” (instead of mere idealist projections) as a framework within which theologians may enter on common

²⁶ Haught. 59

²⁷ Haught. 74

²⁸ Haught. 79

²⁹ Haught. 80

metaphysical ground with scientists to anticipate the ongoing emergence of a dynamic world.

After suggesting the benefits of his own metaphysics of the future, Haught contrasts his account with two opposing approaches to metaphysics. Despite the positive example set by the forward-looking theologies of Moltmann, Rahner, Pannenberg, and Ted Peters, Haught criticizes the persistence of a metaphysics of the present/presence. This approach is comprised of the remnants of the “Platonic and Aristotelian philosophical concepts” that still determine many contemporary theologies and spiritualities that are “ruled by a metaphysics of the ‘eternal present.’”³⁰ In these theologies, Haught contends, “the natural world is the always deficient reflection of—if not a perverse deviation from—a primordial reflection of ‘being’ that exists forever in a fixed realm generally pictured as ‘above’ creation, untouched by time.”³¹ Haught also criticizes the metaphysics of the past for “[locating] the source and substance of life’s diversity in the purely physical determinism that, allegedly, has led, step by fateful step, out of the dead causal past to the present state of living nature in all its profusion and complexity.”³² Haught attributes this metaphysics to naturalist materialists, who describe the universe as fundamentally lifeless, meaningless, and valueless matter that only accidentally (and ultimately inconsequentially) yields life and intelligence.³³

By way of contrast, Haught argues that a metaphysics of the future explains the whole cosmos as caught up in the perpetually inbreaking future in virtue of its orientation

³⁰ Haught. 91

³¹ Haught. 92

³² Haught. 93

³³ John F. Haught, *Is Nature Enough?: Meaning and Truth in the Age of Science* (Cambridge, UK; New York: Cambridge University Press, 2006). 60-63

toward the greater emergence of life and levels of consciousness. Rather than employing the metaphysics of either the present or the past, Haught considers that his approach avoids defining things and persons either by reference to static and abstract natures in an (allegedly) Platonic and Aristotelian manner or by a reductionist and scientistic accounting of mere material and efficient causality in relation to something like a Cartesian *res extensa*. They are grasped in a way that does justice to their contingency and freedom in a developing world so as to envisage a future completion that “according to the biblical vision of reality’s promise... is the most real (though obviously not presently actualized) of all the dimensions of time.”³⁴ Haught defends his assertion of the ontological preeminence of future realities on the grounds not only that they “always [show] up even after every present moment has slipped into the past, but ultimately because [the reality of the future] is the realm from which God comes to renew the world.”³⁵

Haught’s metaphysics implies a series of further theological conclusions as well. For example, rejecting the traditional interpretation of the exile from the Garden of Eden, he asserts that the stain of sin is no more than a mark of incompleteness in ongoing creation.³⁶ Thus, the abolition of the common understanding of the Fall implies that “the

³⁴ Haught, *God after Darwin*. 127.

³⁵ Haught. 127. Haught advocates for this view of God’s action breaking in from the future throughout the chapter, but in this paragraph, he cites the particular influence of Jürgen Moltmann, *The Coming of God: Christian Eschatology*, trans. Margaret Kohl (Minneapolis: Fortress Press, 1996), 259-295. As we will argue below, Haught’s statements here seem to problematically suggest an image of God as being conditioned by space and time.

³⁶ Haught. 148. He provides a more nuanced account of this claim in *Is Nature Enough?* pages 171–172: “...it is entirely appropriate to keep telling the old stories about the origin and end of suffering, but that our religion and theology should not recite them any longer as though Darwin never lived and evolution never happened. Evolutionary biology clearly requires the widening of theological reflection so as to take into account the enormous breadth and depth of nonhuman pain and the unfinished character of the universe. Even if theology is a reasonable alternative to naturalism it must not be seen as an alternative to good science.”

age of expiation is over and done with, once and for all.”³⁷ Again, he explores process implications regarding the possible subjectivity of prebiotic matter,³⁸ and, arguing against the scientific account of evolution as a mere “contingency + law + the immensity of space and time = evolution,” Haught insists that “the sheer immensity of time and space cannot be a cause of anything.”³⁹ Concluding his book, Haught claims that “the varying degrees of value or meaning that we attach to the distinct ‘levels’ of nature... reside not so much in their being sacramental representations of a God totally outside of time—still less in their being dim reminders of a lost plenitude—but in their being anticipations of an excellence yet to be actualized.”⁴⁰ In short, only a metaphysics of the future can do justice to the hyper-real future breaking into our midst.

While almost twenty years have passed since its first publication, *God After Darwin* provides a clear and concise account of the metaphysical convictions that have remained at the core of Haught’s theological program in the intervening years. Some elements of his focus have shifted—such as his increasing appreciation for cosmic narrative and drama and his more recent emphasis on interreligious dialogue—but the metaphysics of the future has remained vital to his articulation of this project.⁴¹

³⁷ Haught. 149

³⁸ Haught. 186

³⁹ Haught. 190

⁴⁰ Haught. 214

⁴¹ See, for instance, John F. Haught, *Making Sense of Evolution: Darwin, God, and the Drama of Life*, 1st ed. (Louisville, Ky.: Westminster John Knox Press, 2010), 143; John F. Haught, *The New Cosmic Story*: 58–64, 88, 163, & 199.

2.2.3 Problems with Haught's "Metaphysics of the Future" and Process Thought

Haught's emphasis on a truly evolutionary theology and his attention to the exigencies both of scientific and theological inquiry in the search for an adequate metaphysical framework for his theology make valuable suggestions for the ongoing work of evolutionary theology. However, from the standpoint of Catholic theology, there are a number of serious problems with his approach, many of which stem from his emphasis on a process metaphysics.

First, Haught's broad definition of metaphysics as "the term philosophers use to refer to the general vision of reality that one holds to be true" obfuscates the explanatory character of metaphysics, as well as the specific nature of its normativity. He is correct in thinking of metaphysics as implicitly involved in any true judgment as in accord with the reality in question. But he fails to understand metaphysics as a discipline that makes explicit the structure latent in whatever is known insofar as it is isomorphic with the structure of knowing that consists in the experience, understanding, and judgment enacted by persons operating attentively, intelligently, and reasonably.⁴² Haught's account of metaphysics appears to suggest only one instance of an array of imaginative and optional frameworks.

Rather than providing a highly differentiated framework that can accommodate the dynamisms both of knowing and of the known, Haught's assumes that what is most real is that which has not yet occurred or existed, on the basis of "the *experience* that

⁴² It should be noted that this view of metaphysics and the critique that follows are premised on Lonergan's work of metaphysics, which Haught seems to have either misunderstood or consciously rejected in later stages of his career, despite his continued deployment of Lonergan's thought to combat various forms of reductionism. While we will present a more complete treatment of Lonergan's metaphysics in subsequent chapters, the critique of Haught above may be understood without substantial knowledge of Lonergan's work therein.

people have of something that to them is overwhelmingly and incontestably real, namely, what might be called metaphorically the ‘power of the future.’”⁴³ He suggests that the deeply felt experience of this power is rooted in an “irreducibly religious origin,”⁴⁴ but he resists “the invitation to clarify.... [since this] almost always means—at least in academic circles—to situate it in terms of either the classical metaphysics of *esse* or, in a more modern vein, the metaphysics of the past that hovers over scientific materialism.... [and thus to risk] having its very heart cut out of it.”⁴⁵ Troublingly, Haught rejects the possibility of explaining or even adequately describing the character of this religious experience, even as he presents it as the bedrock of his metaphysics and the ground of any genuine interdisciplinary dialogue between religion and the sciences. As a result, the challenge of interpreting the meaning of the “power of the future” is left largely up to the reader.

One possible interpretation of Haught’s “experience... of the power of the future” is that it is rather similar to what David Tracy has called “limit-situations,” in which people come into contact with the borders of their horizon and may feel themselves compelled to raise questions in relation to general revelation.⁴⁶ This interpretation would suggest that, to grasp Haught’s metaphysics of the future, one would need only to rationally assent to the existence of God; this in turn would open up further possible questions about the origin and destination of the world. However, while this interpretation might be philosophically defensible, Haught rejects this version of natural

⁴³ Haught, *God after Darwin*. 95

⁴⁴ Haught. 95

⁴⁵ Haught. 96

⁴⁶ David Tracy, *Blessed Rage for Order, the New Pluralism in Theology* (New York: Seabury Press, 1975). 91-119

theology several times in the book in favor of a theology that can be more closely associated with the Abrahamic promise. Moreover, if Haught were to embrace this interpretation, it would undermine his more radical disagreements with the other two kinds of metaphysical accounts. The move from Tracy's limit experiences to Haught's position would involve a shift from some unthematic grounds to more thematic ones, apparently by way of a special revelation. Haught's insistence on some form of prior religious experience doesn't necessarily mean the special revelation of the Bible or the Incarnation, but it would certainly seem to involve an experience of something beyond or disproportionate to the capacities of merely human knowing, thereby making reason dependent on faith in a way that is likely to jeopardize the very dialogue between theology and science that Haught aims to promote.

Glossing over this problem, perhaps, Haught claims that scientists don't require metaphysics for their investigations, and that those who are open to a metaphysical perspective would probably need to table his metaphysics in the course of their work:

It is necessary for science, working within the boundaries of the scientific method, to leave out any such reference [to the dimension of the future], since including such a reference to the future would implausibly attribute efficient causation to events that have not yet occurred. Nevertheless, I would argue that the inability on the part of science itself to entertain a metaphysics of the future is a consequence of the abstract nature of scientific work. In saying that science is abstract I do not mean that science does not deal with concrete reality, but rather that each science

must leave out broad bands of nature's actual complexity in order to say anything clearly at all.⁴⁷

It is true that, due to its specialized nature, scientific inquiry involves bracketing the data of other fields of inquiry. However, while a physicist may legitimately bracket the data of biology or anthropology, she cannot bracket the metaphysics implicit in all explanatory inquiry, for, as Haught claimed, metaphysics is the general vision of reality that a scientist holds to be true. If she were capable of doing so, then she would be denying the necessity and legitimacy of scientific verification of what is real by bracketing the very structure of coming up with hypotheses and marshaling and weighing evidence to grasp whether it is sufficient or insufficient for even probable judgment.

Various sciences are concerned with correctly understanding the intelligibility of the world according to the methods of their particular specialty—physics, chemistry, biology, etc. Scientists themselves are often quite passionate about their work and its potential to improve human lives both in its capacity to enrich our common store of knowledge and to help address the challenges of our common lives. Insofar as any science takes seriously the business of seeking verified understandings of the world, it contributes to the work of bringing all of us into deeper and closer contact with the intelligibility (and even the beauty) of reality to which the metaphysics latent in all human inquiry ought to orient them.⁴⁸ The prefix “meta” in the word “metaphysics” does not intend a discipline wholly apart from or other than investigations in the physical

⁴⁷ Haught, *God after Darwin*. 95

⁴⁸ This point is conveyed with clarity and beauty in Elizabeth A. Johnson, *Ask the Beasts*, 40–44, where she describes how Darwin's account of his scientific investigations reveal him to have been a “beholder” in relation to the beauty and intricacy of the created world in such a way that he serves as a model of ecological (and perhaps even sacramental) awareness for Christians.

world; on the contrary, it is “meta” in that it underlies and unites all investigations in all fields in the unity of truth. As correctly understood, the metaphysics implicit in investigations is correlative to the performance of genuine scientists, insofar as it is grounded in a self-appropriation of conscious and intentional operations performed in one’s own knowing process. In particular, it highlights the spontaneously structured emergence of ever-new questions for understanding (What? Why? How?) and for critical judgments of fact (Is it the case?) and of value (Is it worthwhile? What should I do? Should I do it?).

On the contrary, though, Haught seems to be strangely open to private realities shaped by one’s needs, tastes, and dispositions. Given his earlier rejection of the separatist model of dialogue, this strikes one as odd. Instead, Haught almost seems to deny that science’s concern with truth by setting up a model for dialogue that is fraught by arbitrary and exclusionary preconditions for knowing reality.⁴⁹ This presents serious implications for theology’s engagement with metaphysics as a valuable means of clarifying both the specific truth claims of Christianity and their intelligibility with respect to human knowledge in other realms of discourse.

Despite his at least partial awareness of this problem, one reason for Haught’s adopting this framework may be on account of his overly bleak mischaracterization of the other metaphysical options, which he narrows down to the reductionist metaphysics of the past and the arid and abstract metaphysics of a so-called eternal present. Haught’s insistence on his own *tertium quid*, then, rests on his account of what we would argue is a

⁴⁹ For an critique of the model of capitulation in ecumenical dialogue, see George A. Lindbeck, *The Nature of Doctrine: Religion and Theology in a Postliberal Age*, 1st ed.. (Philadelphia: Westminster Press, 1984). 16-17

false dilemma, because not all scientists in their implicit metaphysics subscribe to reductionist and materialist scientism. Moreover, if and when they transcend this limitation, they do not necessarily do so on explicitly religious grounds. Instead, they do so with an awareness of the limited scope of achievable answers in accord with the nature and scope of the originating questions and methodologies. In spite of Haught's acknowledgement that some scientists do avoid reductionism, he fails to come to terms with their consciousness of their operations of performing specifically scientific investigations based on their own experience as knowers.

Haught's overly broad critique of metaphysics among the sciences is matched by his sweeping criticisms of metaphysics within the theological tradition. To be sure, some theologians and theological schools *are* guilty of the excesses or outright errors inherent in decadent metaphysics, but not all or even most were or are. Nevertheless, few actual examples escape his accusation of subscribing to the "metaphysics of the eternal present." Though Haught does not offer a detailed elaboration of this canard, it is redolent of the comprehensive deconstruction of (1) the "metaphysics of presence"; of (2) the long Western history of onto-theo-logies; and of (3) the hypostatization of God as a necessary *causa sui* by Heidegger and Derrida. Haught does not expressly cite their arguments, nor does he elaborate his own alternative meaning; instead, he uncritically repeats the now standard criticisms of the language of metaphysics of substance and accidents.

My criticism of Haught on this point does not entail a wholesale rejection of the valid aspect of Heidegger's or Derrida's philosophical deconstruction of wrongheaded philosophical theologies. However, we must reject the uncritical use of deconstruction to lay waste to many centuries of legitimate theological thought, practice, and prayer. In full

knowledge of the dangers of hypostatizing God, critical-historical research in recent decades has exonerated many of the major texts of Christian tradition from this and related charges. In many quarters, a renewed appreciation for Thomas's regard for the mystery of divine otherness has gradually been replacing the decadent classicist metaphysics of late scholasticism.⁵⁰ Moreover, some of Thomas's strongest critics have come to recognize the validity of these more nuanced and fair-minded interpretations, as happened, for instance, in Jean Luc Marion's re-edition of *God Without Being*, where he admits that his earlier treatment of Thomas as an onto-theo-logian was precipitous and at least partially in error.⁵¹ The theology of Bonaventure has been similarly vindicated,⁵² and many contemporary theologians concerned with the demands of eco-theology and evolution regard his works as a uniquely powerful resource within the medieval tradition.⁵³

This complex history notwithstanding, Haught has repeated his blanket criticism across numerous subsequent works, where, in addition to the undifferentiated criticism of the metaphysics of presence articulated in *God After Darwin*, he lumps together thinkers

⁵⁰ Robert Barron, *Thomas Aquinas: Spiritual Master*, Crossroad Spiritual Legacy Series (New York: Crossroad PubCo, Crossroad, 1996); Bernhard Blankenhorn, *The Mystery of Union with God: Dionysian Mysticism in Albert The Great and Thomas Aquinas*, Thomistic Ressourcement Series ; v. 4 (The Catholic University of America Press, 2015); Fran O'Rourke, *Pseudo-Dionysius and the Metaphysics of Aquinas* (University of Notre Dame Press, 2005); Gregory P. Rocca, *Speaking the Incomprehensible God: Thomas Aquinas on the Interplay of Positive and Negative Theology* (Washington, D.C.: Catholic University of America Press, 2004).

⁵¹ Jean-Luc Marion, *God without Being Hors-Texte*, Second edition., Religion and Postmodernism (Chicago; London: The University of Chicago Press, 2012). 199-236

⁵² Zachary Hayes, *The Gift of Being: A Theology of Creation*, New Theology Studies; v. 10 (Collegeville, Minn.: Liturgical Press, 2001). See also the account of hylomorphism described in the chapter on Bonaventure's theology of creation in Delio Ilia, *Simply Bonaventure, 2nd Edition: An Introduction to His Life, Thought, and Writings* (New City Press, 2018). 54–66, especially pages 57–60.

⁵³ Ilia Delio, "Bonaventure's Metaphysics of the Good," *Theological Studies* 60 (1999): 228–46; Denis Edwards, *Jesus the Wisdom of God: An Ecological Theology*, Ecology and Justice (Maryknoll, N.Y.: Orbis Books, 1995), 101-110; Daniel P. Horan, *All God's Creatures: A Theology of Creation* (Lanham, Maryland: Lexington Books / Fortress Academic, 2018), 143-180; Kenan Osborne, "Our Relational World Today: Exploring the Wisdom of St. Bonaventure," *Franciscan Studies* 71 (2013): 511–39.

as diverse as “Plato, Augustine, Averroes, Maimonides, Aquinas, and Bonaventure, along with contemporary perennialists such as Huston Smith and Seyyed Hossein Nasr.” Each represents for Haught an instance of historically useful but ultimately inadequate “analogical theology”—as distinct from Haught’s preferred category, “anticipatory theologies.”⁵⁴ Haught’s diagnosis of each thinker’s inability to confront the contemporary challenges of evolutionary theology motivates him to opt for a metaphysics of the future based on process philosophy.

Nevertheless, it remains unclear that the process approach adopted by Haught evades the criticisms that he and others level against its competitors, particularly given his desire to affirm both process in the world and in God. It seems that the move from a process-world to process-in-God interprets the critique of onto-theology as a matter of theologians’ having mistakenly projected their static metaphysics onto God, instead of projecting a process metaphysics onto God. But this remains a failure to reverse problematic accounts of metaphysics by stressing that finite human intelligence cannot know God’s essence without actually *being* God, a principle that lies at the heart of the analogical approach to theological understanding of the divine mystery.⁵⁵ In short, Haught substitutes the projection of one finite metaphysics onto God for another. While Haught might respond that a metaphysics of the future is not finite at all because it is not yet realized, the expectation of the realization of that future in space and time would problematize such a defense.

⁵⁴ Haught, *The New Cosmic Story*. 62

⁵⁵ The classical definition of this principle comes from the Fourth Lateran Council in 1215: “...between Creator and creature, there is always a greater difference than likeness.” Peter Hünermann editor et al., *Compendium of Creeds, Definitions, and Declarations on Matters of Faith and Morals*, 43rd ed. (San Francisco: Ignatius Press, 2012).

Haught's tendency to project metaphysical frameworks back onto God appears in a number of places throughout his writings. For instance, in *God After Darwin*, he argues that "in spite of this century's reacquaintance with biblical eschatology and a God who relates to the world primarily in the mode of promise, Christianity's conversion to the metaphysics of the future implicit in its foundations is still far from complete. This, I think, is the main reason why evolution does not have 'its own God.'"⁵⁶ In other words, Haught's God is so intimately tied to creation that the two cannot be thought apart. This is evident in later works as well, where he implies that there must be a real distinction between God and created being in order for God to be God, while asserting that divine transcendence is dependent upon the world's imperfection:

As Teilhard and others have already suggested, there is no possible alternative, theologically speaking, to an unfinished initial creation.... why? Because if a creator, in the beginning, made a perfectly finished, fully completed world, such a world would not be distinct from its maker. It would not be other than God. If the world were created perfectly in the beginning, then this world would be nothing more than an extension of God's own being, an appendage to a dictatorial deity. It would not be a world at all."⁵⁷

Such a claim is anomalous when measured against the larger theological tradition. For instance, angels have always been understood as unconditioned by space and time according to their nature even though, as created, they are really distinct from God.⁵⁸

⁵⁶ Haught, *God after Darwin*. 91

⁵⁷ Haught, *Is Nature Enough?* 189

⁵⁸ ST I, Q. 50-64, especially 50 and 62. While Aquinas notes that angels still require grace to reach their supernatural end, the beatific contemplation of God, they are perfect according to their natures and, in this regard, unchanging.

According to the doctrine of creation, everything God created is good, yet none of creation is identified with God. Creation is not the splitting off of something new and lesser than a perfectly good God-being, but is the constitution of created-being (*ens commune*) itself such that anything at all that may be said to “exist” does so contingently, in the same way human beings contingently experience, understand, and judge their occurrence.⁵⁹ Haught fails to maintain these distinctions adequately, and, as a result, he thinks he should construct a metaphysics as if the revelation of an eschatological future had bestowed on him comprehensive understanding of world-process from God’s viewpoint.

For all of these reasons, then, Haught’s metaphysics as a basis for grounding either dialogue between religion and science or a Catholic approach to evolutionary theology is problematic. Properly speaking, metaphysics mediates the explanatory heuristic structure (on the side of the object known) correlative to the empirical, intelligent, and rational structure of conscious intentionality (on the side of the cognitional subject) in relation to one another. This is achieved so that, in principle, that structure can be understood and verified for the purpose and the possibility of dialogue independently of any prior faith claims or any religious experience. Furthermore, no metaphysical program can succeed without an adequate dialectical analysis of other available theological approaches to metaphysics that have evolved throughout history. What is needed is to develop their verifiable positions and reverse their unverifiable

⁵⁹ This is the sort of being that Aquinas understands to be the only proper term of metaphysics, as explained in Thomas Aquinas, *Commentary on the Metaphysics of Aristotle*, proem., trans. John P. Rowan (Chicago: Henry Regnery Co., 1961), 1–2.

counter-positions, rather than a wholesale rejection of them, with the goal of discovering helpful analogies for an evolutionary theology.

2.2.4 Conclusions

Up to this point, our central focus has been the first heuristic criterion stated above in relation to the way that Haught's version of process metaphysics has pervasively affected his subsequent thought, especially as regards (1) his negative view of natural theology (or at least those versions Haught has in mind); and (2) his tendency to incorrectly apprehend the dialectical relationship between sin and grace in the world. These problems are connected with Haught's way of using thematic religious experience and doctrines, effectively subverting the autonomy of scientific and philosophical knowing, so that the possibility of developing an up-to-date *evolutionary* natural theology is also undermined. Haught's position on the effects of sin and grace in relation to the natural world order has been somewhat less developed, due to Haught's failure to adequately account for the dialectical subversion of world order by sin. This interpretation seems motivated by his desire to do away with inaccurate interpretations of original sin, which he does by proposing that sin be considered simply as a matter of inadequate development in an ongoing process in a way that has little or nothing to do with evil or moral impotence causing a gap between natural freedom and effective freedom. Thus, the surd of sin is reduced to a simply natural dead-end linked to schedules of emergence and survival within an evolving world order. Correlatively, Haught's account of redemption collapses the historical causality revealed in the death and resurrection of Jesus into a natural feature of the creative order so that the theology of the cross becomes virtually

meaningless. To bring these critical issues into focus, we turn now to the work of Elizabeth Johnson, who has been developing an evolutionary theology in terms both ‘deep’ Incarnation and ‘deep’ resurrection.

2.3 Elizabeth Johnson and the Evolutionary Turn: Grace in the Non-Human World

In the following pages, we trace the development of Johnson’s mature evolutionary theology from her earlier roots in eco-feminist critique. In addition to her strong emphasis on Christology and redemption as compared with Haught, Johnson’s understanding of Aquinas’s metaphysics and of the failures of some subsequent historical iterations of it add a far greater nuance and clarity. As regards the first criterion, we argue that Johnson employs a fairly strong Thomist metaphysics, although this is filtered through both feminist critique and a Rahnerian theological framework. Highlighting Johnson’s evolutionary turn also calls attention to her position concerning the second criterion, natural theology, as her later works begin from a consideration of the realities of suffering and death in evolutionary processes as revealed by scientific investigations. Finally, in respect of the third criterion, we argue that Johnson’s relative reticence on the explicit working of grace should be understood as itself a meaningful critique of the inherited theology of grace and of any mere half-measures in revising it.

Despite the obvious continuities between the eco-criticism in Johnson’s earlier work and the evolutionary emphasis of her more recent *Ask the Beasts* and *Creation and the Cross*, Johnson describes a distinct turning point in her work as she notes a “relentless anthropocentric focus” even in the most overtly ecologically oriented theologies: “While much post-conciliar Catholic theology... made the modern ‘turn to the subject’ and then

the postmodern ‘linguistic turn,’ it [remains] urgently necessary not to stop there but to keep turning to include the heavens and the earth.”⁶⁰ In order to clarify how this third theological turn comes to expression in Johnson’s own writings, it is necessary to begin with her ecological works that predate the self-critique quoted above.

2.3.1 The Influence of Eco-Feminism and Johnson’s Critique of “Hierarchical Dualism”

Although there are some hints at an ecological consciousness in her first book on Christology, *Consider Jesus*,⁶¹ Johnson’s earliest sustained ecological reflections were filtered through a conversation with eco-feminist critique, especially by Sallie McFague and Rosemary Radford Ruether. Johnson links the subjugation of non-human creation to the systematic subjugation of women, tracing both back to an insidious, hierarchical dualism running throughout Western thought. In her 1993 Madaleva lecture at Saint Mary’s College, entitled *Women, Earth, and the Creator Spirit*, Johnson describes the “taproot” of these two problems stemming from a “two tiered universe... [which first] divides reality into two separate and opposing spheres, and... [then] assigns a higher value to one of them.”⁶² As Johnson argues,

In terms of the three basic relationships that shape an ecological ethic, this results in a view in which humanity is detached from and more important than nature; man is detached from and more important than woman; [and] God is disconnected from

⁶⁰ R. Haight, “Elizabeth Johnson’s Ask the Beasts: Darwin and the God of Love,” *Theological Studies* 77, no. 2 (2016): 466–87, <https://doi.org/10.1177/0040563916635120>.

⁶¹ Elizabeth A. Johnson, *Consider Jesus: Waves of Renewal in Christology* (New York: Crossroad, 1990). 140

⁶² Elizabeth A. Johnson, *Women, Earth, and Creator Spirit*, Madeleva Lecture in Spirituality; 1993 (New York: Paulist Press, 1993).

the world, utterly and simply transcendent over it, as well as more significant than it. Hierarchical dualism delivers a two-tiered vision of reality that privileges the elite half of a pair and subordinates the other, which is thought to have little or no intrinsic value of its own but exists only to be of use to the higher.⁶³

Johnson alludes to the source of this hierarchicalism in the influence of Greek philosophy's Spirit/Matter dualism on early Christianity, which was then compounded in the estrangement of mind/spirit/meaning from matter in the Enlightenment, particularly through Descartes's distinction of the *res cogitans* from the *res extensa* and Newton's classical-mechanical view of the world.⁶⁴ Today, these influences may be observed in the degradation and alienation of women from men, of non-human creation from humans, and of the world from its Creator God. However, Johnson is both more sanguine and more careful in her critique of Western theology on the matter of God's relation to the world, noting that the best of Christian thought has maintained that God's perfect transcendence grounds God's perfect immanence; to downplay either of these characteristics is to misunderstand both. Johnson holds up Aquinas's theology as a highpoint of this synthetic insight—with the notable exception of his now infamous remarks on the production of women.⁶⁵

⁶³ Johnson. 10-11

⁶⁴ Johnson. 11-14

⁶⁵ ST I, q. 92, resp: "It was necessary for woman to be made, as the Scripture says, as a "helper" to man; not, indeed, as a helpmate in other works, as some say, since man can be more efficiently helped by another man in other works; but as a helper in the work of generation. This can be made clear if we observe the mode of generation carried out in various living things. Some living things do not possess in themselves the power of generation, but are generated by some other specific agent, such as some plants and animals by the influence of the heavenly bodies, from some fitting matter and not from seed: others possess the active and passive generative power together; as we see in plants which are generated from seed; for the noblest vital function in plants is generation. Wherefore we observe that in these the active power of generation invariably accompanies the passive power. Among perfect animals the active power of generation belongs to the male sex, and the passive power to the female. And as among animals there is a vital operation nobler than generation, to which their life is principally directed; therefore the male sex is not found in continual union with the female in perfect animals, but only at the time of coition; so that we may consider

To remedy the errors stemming from the reigning, disordered worldview, Johnson offers a series of prescriptions. First, she emphasizes a move from a model of dominion and kingship toward one of kinship with all creatures; though Johnson acknowledges the resonance of this view with evolutionary science,⁶⁶ at this time she makes the argument largely on the basis of an eco-feminist critique of hierarchicalism.⁶⁷ In light of these reflections, Johnson then asks: “What must the creator be like, in whose image this astounding universe is created? Realization of its energy, diversity, relationality, fecundity, spontaneity, and every surprising mixture of law and chance makes the times ripe for a rediscovery of the neglected tradition of the Creator Spirit.”⁶⁸

As this suggests, Johnson’s early ecological works are marked by a profoundly pneumatological emphasis,⁶⁹ focusing especially on Nicene designation of the Holy Spirit as *vivificans*.⁷⁰ She explains this term by reference to Rahner’s panentheistic account of

that by this means the male and female are one, as in plants they are always united; although in some cases one of them preponderates, and in some the other. But man is yet further ordered to a still nobler vital action, and that is intellectual operation. Therefore there was greater reason for the distinction of these two forces in man; so that the female should be produced separately from the male; although they are carnally united for generation. Therefore directly after the formation of woman, it was said: “And they shall be two in one flesh” (Genesis 2:24) As regards the individual nature, woman is defective and misbegotten, for the active force in the male seed tends to the production of a perfect likeness in the masculine sex; while the production of woman comes from defect in the active force or from some material indisposition, or even from some external influence; such as that of a south wind, which is moist, as the Philosopher observes (*De Gener. Animal.* iv, 2). On the other hand, as regards human nature in general, woman is not misbegotten, but is included in nature's intention as directed to the work of generation. Now the general intention of nature depends on God, Who is the universal Author of nature. Therefore, in producing nature, God formed not only the male but also the female.”

⁶⁶ Johnson, *Women, Earth, and Creator Spirit*. 32-40

⁶⁷ Johnson. 29-30

⁶⁸ Johnson. 48

⁶⁹ While Johnson’s early ecological works emphasize pneumatology more strongly than Christology, especially in relation to her later, evolutionary works *Ask the Beasts* and *Creation and the Cross*, it should be noted that she exhibits a developed Christology in some of her other early works, including *Consider Jesus* and her dissertation, Elizabeth A. Johnson, “Analogy, Doxology, and Their Connection with Christology in the Thought of Wolfhart Pannenberg” (Doctoral, Catholic University of America, 1981).

⁷⁰ Johnson, *Women, Earth, and Creator Spirit*. 42

the Spirit's mutual but asymmetrical indwelling with the world.⁷¹ It is to this intimate relationship that she attributes the real if incompletely realized solidarity between all

⁷¹ While Johnson seems to connect her version of panentheism with Rahner's thought, there is some wider debate over whether or not Rahner's theology is accurately classified as panentheistic. It is worth noting that Johnson's understanding of panentheism became a central focus of the criticisms raised by the USCCB's Committee on Doctrine against her book *Quest for the Living God: Mapping Frontiers in the Theology of God* (New York: Continuum, 2007). In her reply to that criticism, she offers perhaps her clearest explanation of what she does and doesn't mean by panentheism: "[The] statement rightly observes that the book underscores both the transcendence and immanence of God vis-à-vis the world. But then it judges that by introducing the model of panentheism to illuminate the God-world relationship, Quest makes the world 'ontologically constitutive of God's own being.' Let me make a clarification that is also a correction of the committee's Statement in the strongest possible terms. I do not think this and never wrote it. Nor does the mental model of panentheism necessitate such a conclusion. Certain instances of process theology which operate with the panentheistic model do make the world necessary for God and might warrant this critique. But while learning a great deal from this school of thought, I am not a process theologian. Formed by scripture as interpreted by Aquinas, my understanding has always posited the ontological distinction between God and the world. The category panentheism (all-in-God) has been developed precisely to delineate and demarcate a view different from pantheism (all [is] God). As used in contemporary theology, it provides a third option between theism and pantheism, one which gives stronger play to divine immanence than does modern theism, while maintaining the absolute transcendence of God which pantheism does not. By definition, panentheism is 'the belief that the being of God includes and penetrates the whole universe, so that every part of it exists in Him, but as against pantheism, that his being is more than, and is not exhausted by, the universe' (Oxford Dictionary of the Christian Church). Karl Rahner's Dictionary of Theology notes further that pantheism is heretical only if it denies creation and the distinction of the world from God, which Quest obviously does not do. As the title of this chapter indicates, my main interest lies in bringing pneumatology back into the discussion of the relation of God and the world, to ask about divine presence in the evolving world. It seems to me that the doctrine of God the Holy Spirit is a largely untapped resource that could help theology think through the doctrine of creation in light of recent scientific discoveries. Panentheism as a model lends itself to this retrieval. Quest (188) declares that 'The mystery of the living God, utterly transcendent, is also the creative power who dwells at the heart of the world sustaining every moment of its evolution.' The book goes on to suggest that the Spirit not only dwells within the world but also surrounds our emerging, struggling, living, dying, and renewing planet of life and the whole universe itself. It illustrates this with Luther's great image of God in and around a grain; with Augustine's magnificent image of the whole creation like a finite sponge floating in an infinite sea, necessarily filled in its every pore with water; and with the beautiful image of the pregnant female body (backed up by Moses' reprimand of the Israelites' infidelity: 'you forgot the God who gave you birth' - Deut 32:18). These are all heuristic images that help theology explore divine immanence. As Quest explains, they increase understanding of the utterly transcendent God who yet is not far from us, being the One 'in whom we live and move and have our being' (Acts 17:28). It is interesting that the Statement also cites this biblical text but neither credits Quest's exploration of its meaning nor presents its own understanding of this text. But the 'in whom' opens the door to the model of panentheism: God in the world and the world encircled by God who infinitely transcends the world. Examining this chapter again, I see that perhaps it would have forestalled its misunderstanding of panentheism if Quest had stated explicitly that creation is God's free gift, a gratuitous act of love and thus not necessary. I assumed this, given the book's basic understanding of God, as this excerpt indicates: the Creator Spirit dwells at the heart of the natural world, graciously energizing its evolution from within, compassionately holding all creatures in their finitude and death, and drawing the world forward toward an unimaginable future. Throughout the vast sweep of cosmic and biological evolution, the Spirit embraces the material root of life and its endless new potential, empowering the cosmic process from within. The universe, in turn, is self-organizing and self-transcending, energized from the spiraling galaxies to the double helix of the DNA molecule by the dance of divine vivifying power (191). Far from making the world ontologically necessary to God, Quest's discussion of the Spirit's presence and activity explores the transcendent God's free and

creatures, the “rejuvenating energy” that repairs a damaged world, and the genuine “novelty... [and] surprise [that] the universe is capable of spawning out of a pre-given order or chaos.”⁷² This is no Hegelian Spirit, however, as the Creator Spirit works with a truly free creation. As she summarizes, the Spirit is

the great, creative Matrix who grounds and sustains the cosmos and attracts it toward the future. Throughout the vast sweep of cosmic and biological evolution she embraces the material root of existence and its endless new potential, empowering the cosmic process from within.... not [supplanting] that of creatures but [working] cooperatively in and through created action, random, ordered, or free. Nor does the Spirit’s dynamic power arrive as an intervention from “outside,” but is immanent in the world that is becoming.⁷³

Despite this intimate divine presence to all creation, there remains a great deal of suffering, death, and “the surd of sin,”⁷⁴ none of which can be explained away, in Johnson’s view. However, she notes that in a relationship of perfect intimacy, God remains in solidarity with the suffering and brings an offer of new life out of the ashes.

2.3.2 *She Who Is* and Johnson’s Critique of “Modern Theism”

Johnson’s ecotheology may be further understood in the light of her book *She Who Is*, released just a year before the lecture cited above. In *She Who Is*, Johnson broadly criticizes “classical theism,” which corresponds more or less to the “hierarchical dualism”

intimate relation with the world.” See Elizabeth A. Johnson, “To Speak Rightly of the Living God: Observations by Dr. Elizabeth A. Johnson, CSJ, on the Statement of the Committee on Doctrine of the United States Conference of Catholic Bishops about Her Book *Quest for the Living God: Mapping Frontiers in the Theology of God*,” “*Origins*,” *Catholic News Service* 41, no. 9 (July 7, 2011).

⁷² Johnson, *Women, Earth, and Creator Spirit*. 42-44

⁷³ Johnson. 51

⁷⁴ Johnson. 58

of the two-tiered universe referred to in her Madaleva lecture.⁷⁵ Johnson also maintains her strong pneumatological focus as she criticizes the idolatrous reification of the male names for God by working to recover the many female symbols, metaphors, and analogies for God found in women's experience, the scriptures, and the larger tradition. As a result of patriarchal exclusion of women, often justified implicitly or explicitly through the relative primacy of the male names "Father" and "Son," many of the divine names that Johnson retrieves come from what is traditionally seen as "the field of the Spirit."⁷⁶ Johnson argues that her emphasis on the primacy of these pneumatological names "coheres not only with the existential but also with the historical pattern by which faith in the triune God arises," pointing to the work of the Spirit in creation and in the Jewish tradition to which Jesus belonged.⁷⁷

Whereas her emphasis on Spirit in the Madaleva lectures centered on the Creator Spirit—described here under the divine name Spirit/*Shekinah*⁷⁸—in *She Who Is*, Johnson focuses most strongly on the name Sophia. By exploring the meanings revealed by the name Sophia in relation to each of the three Trinitarian persons, Johnson develops a Trinitarian foundation for her Wisdom Christology, which would prove decisive for both her own later evolutionary theology and that of Edwards and Deane-Drummond.⁷⁹

⁷⁵ Elizabeth A. Johnson, *She Who Is: The Mystery of God in Feminist Theological Discourse*, 10th anniversary ed. (New York: Crossroad, 2002). 19-21. As in those lectures, Johnson engages deeply and largely positively with Aquinas's thought as a corrective in this text, suggesting that her own critique is less at Aquinas than at the decadent or baroque neo-Thomism of the manuals and the endurance of that influence in some circles today.

⁷⁶ Johnson. 122

⁷⁷ Johnson. 123

⁷⁸ Johnson. 82-86

⁷⁹ As documented later in this chapter, Edwards' and Deane-Drummond favor a Wisdom Christology for their evolutionary theologies, and Edwards acknowledges Johnson's work in this area as a direct influence on his own Christology. For a clear and succinct account of her developing Wisdom Christology, see also Elizabeth A. Johnson, "Redeeming the Name of Christ," in *Freeing Theology: The Essentials of Theology in Feminist Perspective*, ed. Catherine Mowry LaCugna (San Francisco: Harper San Francisco, 1993).

Regarding divine Sophia, Johnson relates how the Hebrew tradition formed an important scriptural resource for Early Christian interpretation of Jesus' identity.⁸⁰ The Hebrew Bible speaks of Sophia in terms of the Wisdom of God pervading the earth, but also refers to the localization of this Spirit in Jerusalem and especially in the Torah. The early Christians drew deeply from this image to describe their experience of Christ as God among them. Although the theological connotations of the Christ-Sophia tradition exerted a significant influence on the Evangelist John and others, Johnson notes that the name Sophia itself fell into relative neglect.⁸¹ Nevertheless, this original association with Sophia allowed early Christians to "attribute cosmic significance to the crucified Christ, relating him to the creation and governance of the world."⁸² Johnson therefore affirms the power of a Wisdom Christology for grounding ecological and evolutionary theologies today, especially as Christ's redemptive action is revealed in unity with his intimate role in creating and sustaining the world.

In addition to this important retrieval of divine Sophia, *She Who Is* also contains one of Johnson's most sustained reflections on the role of grace in the world, about which she says surprisingly little in other works. Here, in her discussion of Spirit-Sophia, Johnson describes the role of God's grace in transforming and vivifying the whole world. She suggests numerous loci of the Spirit's mediation in creation: in encounters with the natural world, in "personal and interpersonal experiences," and also at "the level of the macro systems that structure human beings as groups, profoundly affecting consciousness

⁸⁰ For an account of the scriptural tradition around the name Sophia, see Johnson, *She Who Is*, 2002. 86-100

⁸¹ Johnson. 96-99, 150-154. Johnson suggests numerous possible reasons for this, including the Gnostic connotations of Sophia and its later adoption by some Arians of evidence of Christ's creatureliness and, more sinisterly. However, she also notes that part of the systematic suppression of this name came as a result of a patriarchal turn in the developing Church.

⁸² Johnson. 98

and patterns of relationship.”⁸³ However, Johnson remarks that there has been an historical “forgetting [of] the Spirit,”⁸⁴ pointing to Protestant privatization and Catholic institutionalization of the Spirit, the latter of which was affected through the abrogation of the work of the Spirit in favor of the Eucharistic cult and to the intercession of Mary.⁸⁵

Johnson then explores a number of works traditionally ascribed to the Spirit, while offering a disclaimer about the messiness of talking about these through “analogy with human deeds.”⁸⁶ As in the Madaleva lectures, she focuses strongly on the “vivifying” Spirit as the “transformative energy” that funds the “renewing and empowering” of all creatures. Johnson warns against the “overspiritualization” of the work of the Spirit, whose “recreating includes the integrity of nature, the liberation of peoples, the flourishing of every person, and the shalom of the whole world in rescue from the powers of evil, which foster sin and destruction.”⁸⁷ At the very end of this section, though, Johnson returns to the work of the Spirit specifically under the heading of “Gracing”:

Up to this point the Spirit’s vivifying and recreative functions have been contextualized within the widest possible world of everything that exists.... The world of the specifically religious, however, is also an arena for Spirit-Sophia’s presence, and in an explicit way the vivifying, renewing Spirit dwelling within the whole world is associated with the life and development of religious traditions.

While the offer of grace is universal, it is the religions which thematize this offer in

⁸³ Johnson. 125-26

⁸⁴ Johnson. 128

⁸⁵ Johnson. 128-131

⁸⁶ Johnson. 133

⁸⁷ Johnson. 138

narrative and ritual, thereby clearly focusing on the Spirit's deeds of drawing all creation toward the holiness of God.⁸⁸

At least here, then, Johnson reserves the language of grace for the Spirit's work in the explicitly religious dimensions of human life, rather than applying it to the broader influence of *vivificantem*. Johnson's strong emphasis on the thematization of grace in narrative and ritual resonates with some of the emphasized *loci* of grace in Scholastic theologies, namely, in inspiration and in sacraments, though she also briefly notes Aquinas's treatment of the indwelling of the Spirit as an outpouring of charity in human hearts.⁸⁹

Through the lens of divine Sophia, Johnson argues that the intimate, immanent God is revealed as being deeply concerned with the plight of Her people, and thus challenges the adequacy of at least some of the metaphysical accounts of divine impassibility. She correctly recognizes Aquinas's stress on divine transcendence beyond the framework of causality, but declares that this is frequently misinterpreted in a way that undermines God's immanence, resulting in confusion and spiritual-dryness; and she therefore defends the "revolution" in contemporary language about God as suffering with Her people.⁹⁰ Finally, Johnson suggests that the name "She Who Is" is a particularly apt way of uniting the feminist image of a compassionate God with a renewed understanding of Aquinas's analogy of being, thereby promoting a clearer expression of God's deep,

⁸⁸ Johnson. 139

⁸⁹ Johnson. 145. However, Johnson argues that, while Aquinas "is eloquent about how the Spirit 'constitutes us as God's friends,' and about charity as 'a kind of friendship' between a human person and God, God is never named a friend in return, and thus the mutuality inherent in the idea of friendship is not brought fully to expression." She suggests that Sallie McFague's work presents a stronger account of the mutuality of divine and human friendship in Sallie McFague, *Models of God: Theology for an Ecological, Nuclear Age* (Philadelphia: Fortress Press, 1987). 157-167; and Sallie McFague, *Metaphorical Theology: Models of God in Religious Language* (Philadelphia: Fortress Press, 1982). 177-192.

⁹⁰ Johnson, *She Who Is*, 2002. 21

liberating concern for all creation, and in a special way for those who are suffering, whether human or non-human.⁹¹

2.3.3 *Ask the Beasts*: A Stronger Evolutionary Turn

As is clear in these earlier writings, Johnson's regard for non-human animals and for the health of the planet at large has been prominent in her work for decades. However, in *Ask the Beasts*, Johnson moves from ecological concern as grounded in ecofeminist critique, to a worldview defined by its engagement with evolutionary science from the start.

Although her earlier works acknowledge evolution as true in a general sense, her "turn" consists in unpacking the broader social, cultural, and religious implications of that subscription. This means challenging the tendency to treat the rest of evolutionary history as mere preamble to God's revelatory action in history as inaugurated in human beings. Theology in an evolutionary worldview entails new reflection on the multiple, contingent emergences that characterize cosmic history; on the vital role of both individual death and the extinction of species in progressive emergences; and on the blurring of old, essentialist lines that separate humans from nature.

Thus, in *Ask the Beasts*, Johnson asks, "What is the theological meaning of the natural world of life?"⁹² She begins with a close, sympathetic reading of Darwin's *Origin of Species*, exhorting the reader to attend to the "sustained attention [Darwin] lavished on the natural world."⁹³ She describes Darwin as a "beholder," who, despite his journey away from his earlier Christian faith, provides a model for Catholics as "sacramental

⁹¹ Johnson. 224-245

⁹² Elizabeth A. Johnson, *Ask the Beasts: Darwin and the God of Love* (New York: Bloomsbury, 2014). xiv

⁹³ Johnson. 41

beholders” of who God’s Self-revelation through the particularities of contingent, evolutionary creation.⁹⁴ Johnson observes that Darwin also provides the necessary space in which these reflections unfold, as his theory of natural selection dealt a deathblow to the apparently prevailing understanding of “special divine creation” at the time he published it.

Turning to the more theologically constructive part of her argument, Johnson begins from a now familiar place: the Holy Spirit as *vivificans*.⁹⁵ She again emphasizes the transformative power of the Spirit’s indwelling;⁹⁶ the relational participation of all created being in the dynamism of divine being;⁹⁷ and the mutual though asymmetrical indwelling of Creator and creation, a view she traces back to Rahner’s panentheism and—at least in her reading—to Aquinas.⁹⁸ Far from exercising an authoritarian control over nature and history, God grants nature the power to organize itself in complex, new ways and empowers it to overcome obstacles to life as “the Spirit continually calls it forth

⁹⁴ Johnson. 40-42

⁹⁵ Johnson. 128

⁹⁶ Johnson. 122-153

⁹⁷ Johnson. 143-150

⁹⁸ Johnson. 147. “Aquinas understands divine indwelling ‘in all things’ and ‘everywhere’ to entail an interesting mutuality. When bodily things are said to be in another, they are contained by whatever they inhabit. Spiritual things, however, cannot be so easily confined. In particular when we are speaking of God, divine presence spills over beyond the interior of creatures, so to speak, to encompass them on the outside as well. Hence, while ‘God is in all things,’ Aquinas argues, it can also be said that ‘all things are in God,’ inasmuch as they are ‘contained’ or embraced by a living presence which cannot be limited in any way [Thomas Aquinas, *Summa Theologiae*, I.8.1. ad 2]. Contemporary theology calls this model of the God-world relationship panentheism, from the Greek *pan* (all), *en* (in), and *theos* (God): all-in-God. Simply put, it envisions that the world is indwelt by the presence of the Spirit while at the same time it is encompassed by divine presence which is always and everywhere greater. Rather than conflating God and the world as happens with pantheism, panentheism allows that God who dwells within also infinitely transcends the world at every point. At the same time, it honors the immanence or closeness of God, which is frequently overlooked in unipersonal theism which posits God solely as a transcendent cause. Different from either of those options, panentheism entails a kind of asymmetrical mutual indwelling, not of two equal partners, but of the infinite God who dwells within all things sparking them into being and finite creatures who dwell within the embrace of divine love. In truth, since God in principle does not have any spatial attributes, this is a metaphor whose ‘en’ expresses the intimacy of relation in an ontological sense.”

to a fresh and unexpected future.”⁹⁹ Johnson argues that God’s plan for the world is expressed in “ontological dependence and operational autonomy,”¹⁰⁰ and invokes Thomas’s notion of primary and secondary causality to explain this relation, which she describes as “rich with interpretive possibilities.”¹⁰¹ She acknowledges the reality of chance mutations and events but rejects creation as mere chaos, since discernible laws and regularities condition the contingent unfolding of the created world.¹⁰²

Johnson then turns to consider the dark side of evolution: namely, the suffering, death, and extinction that are, in fact, integral to the actual functioning of evolution and emergence, and, therefore, cannot be seen as the result of a historical Fall: “Like pain and suffering, death is indigenous to the evolutionary process. Without it, not only would there be no food for eaters to eat, but eventually there would be no room for new sorts of creatures to emerge. The time-limit that ticks away in all living organisms and ends with their death is deeply structured into the creative advance of life.”¹⁰³ Still, Johnson declines to explain the extent of radical suffering in the world, arguing that “suffering and death are too much of an enigma to submit to [the logic of theodicy]. Rather..., what is needed is a theological inquiry that takes the evolutionary function of affliction at face value and seeks to reflect on its workings in view of the God of Love made known in

⁹⁹ Johnson. 156

¹⁰⁰ Johnson. 160

¹⁰¹ Johnson. 160-169. Johnson engages a number of critics of this theory, including Ian Barbour, Arthur Peacocke, and John Polkinghorne. She argues that God achieves all of God’s ends in the world through the actions of secondary causes, including through the outcomes of genuinely contingent events. She does not directly engage the question of how God operates in miracles or other hard cases rising in view of her singular devotion to the explanatory matrix of primary/secondary causality, though these are treated in greater detail in Edwards’ *How God Acts*, treated in detail in the next section of this chapter.

¹⁰² Johnson. 172. Although Johnson affirms a kind of God-directedness showing forth in the interplay of chance and necessity, she does not offer a genuinely explanatory account of what, following Lonergan, we will discuss as the “upwardly but indeterminately directed dynamism towards ever fuller realization of being,” especially as explained according to his framework of generalized emergent probability.

¹⁰³ Johnson. 184

revelation.”¹⁰⁴ Thus, while humans have a grave responsibility to account in theological terms for the sin, suffering, and death stemming from our own actions, we cannot overcome our own deaths or those of other species: “How could we ever fight against and overcome the death of millions of pelican chicks outside the nest, and why would we even want to?”¹⁰⁵

Johnson’s subsequent response to the dark side of evolution is twofold. First, she attributes these realities to “free process,” since God creates through contingent processes; thus, not every aspect of those processes is directly willed by God as such, though God wills the existence of those processes.¹⁰⁶ She draws parallels here with Aquinas’s distinction between *malum culpae* and *malum poenae*, or the evils that are suffered as a result of sin and the evils that are suffered as a result of being part of finite creation, respectively. Regardless of the source of suffering, though, theologians must “affirm the compassionate presence of God in the midst of the shocking enormity of pain and death.”¹⁰⁷

Johnson’s own theological affirmation of this comes through her engagement with “Deep Incarnation.” The phrase “Deep Incarnation” comes from the work of Niels

¹⁰⁴ Johnson. 187-188. Johnson distinguishes her own view from that of Celia Deane-Drummond, who describes suffering and death in Niebuhrian terms as “unnecessary but inevitable,” arguing that this seems to diminish the indispensable role that death does in fact play in the possibilities of further life and evolutionary emergence.

¹⁰⁵ Johnson. 190.

¹⁰⁶ Johnson. 191

¹⁰⁷ Johnson. 191. What some readers may note as missing, here, is an affirmation of the goodness of creation that surpasses these evils, namely, the goodness of God’s valuing of the universe that surpasses human understanding. This hallmark of both the Augustinian and Thomist approaches does not wholly dismiss human concern and discomfort over the realities of suffering and evil in the world, but it affirms the goodness and wisdom of the creator God who, with the perspective of total transcendence, recognizes a good of the whole created order within which these finite evils are couched. In this sense, it situates human concerns within a broader and less anthropological framework, recognizing that God’s perspective and judgments are not limited to human judgments. While Johnson is likely aware of this answer, her decision not to engage these arguments in greater depth likely stems from her desire to take the suffering of other creatures more seriously than the larger theological tradition has in the past.

Gregersen, who developed an account of Christ's presence to all of suffering creation by applying Luther's theology of the cross alongside contemporary ecological and evolutionary insights.¹⁰⁸ Johnson's own approach to Deep Incarnation joins her earlier emphasis on Sophia/Wisdom with an account of Logos/Word as enunciated in the Prologue to John's Gospel, which notes that the Word became not "a human being (Greek *Anthropos*), or a man (Gr. *aner*), but flesh (Gr. *sarx*), a broader reality."¹⁰⁹ This is not to deny Jesus' humanity but, rather, to situate it in relation to the close bonds of descent, kinship, and interdependence of different species across space and time. Deep Incarnation signifies the "radical divine reach through human flesh all the way down into the very tissue of biological existence with its growth and decay, joined with the wider processes of evolving nature that beget and sustain life."¹¹⁰ Johnson further links her view with Rahner's emphasis on "God's becoming material," a phrase that leaves "no wiggle room" for us to avoid the radical claim suggested by the doctrine of the Incarnation.¹¹¹ Linked materially to Christ, the suffering of all creation is intimately united to God in Jesus and illumined through the "Christic paradigm... [of] liberating, healing, and inclusive love" such that God's relation to creation is one of compassion and suffering-with.¹¹²

¹⁰⁸ Niels Gregersen, "The Cross of Christ in an Evolutionary World," *Dialog: A Journal of Theology* 40 (2001): 192–207.

¹⁰⁹ Johnson, *Ask the Beasts*. 195

¹¹⁰ Johnson. 195

¹¹¹ Johnson. 196. See Karl Rahner, "Christology Within an Evolutionary View of the World," vol. 5, *Theological Investigations* (New York: Seabury, 1975), 157–92. at 176–7.

¹¹² Johnson, *Ask the Beasts*. 201. Johnson refers here to Sallie McFague, *The Body of God: An Ecological Theology* (Minneapolis: Fortress Press, 1993). 161. Notice that this responds to Haught's concern that for an account of God who can love, suffer with, and be compassionate toward persons, which led him toward a process metaphysics and theology. As we will argue more fully in the conclusion of this chapter, we believe Johnson achieves this within the confines of a more acceptable metaphysical model, even if she is less explicit about the contours and fundamentals of that model. To this end, Johnson and several other evolutionary theologians, particularly those in the Catholic tradition, have gone to great lengths to show that this "suffering-with" suggested here is not the same as that suggested by the di-polar God of process

Beyond God's solidarity, realized and revealed especially on the Cross, Johnson argues that we are called to also affirm a "'deep resurrection'... [extending] the risen Christ's affiliation to the whole natural world."¹¹³ What was begun in Christ's death and in the glorification of his risen body has ramifications for not only humanity, but for the whole, created, and inalienable world to which God was united in the Incarnation. The emptiness of the tomb betokens not the annihilation of Christ's flesh in his suffering, but its rebirth in a perfected, glorified state, which stands as an eschatological promise to all flesh and "gives grounds to hope that the presence of the living God in the midst of pain bears creation forward with an otherwise unimaginable promise. This does not solve the problem of suffering in a neat systematic way. It does make a supreme difference in what might come next."¹¹⁴ The move to deep resurrection lends an eschatological character to Johnson's whole evolutionary theology, as she pivots from the *creatio continua* of ongoing, cosmic evolution to the hoped-for future of *creatio nova*. Distancing herself from Aquinas's view, Johnson advocates for a "symmetrical" consummation of all creation, arguing that the God revealed in the Christ-event would not create so many diverse lifeforms only to annihilate subhuman species in the ultimate consummation of

thought, nor does it amount to a denial of divine impassibility. For a helpful explanation of the limits of this claim in relation to evolutionary theology, see Denis Edwards, "The Attractor and the Energy of Love: Trinity in Evolutionary and Ecological Context," in *The Natural World and God: Theological Explorations* (ATF Press, 2017), 23–41. For an account of how this claim may be understood not to contradict classical understandings of the impassibility of God, see Paul L. Gavriluk, *The Suffering of the Impassible God: The Dialectics of Patristic Thought*, 1st pbk. ed., Oxford Early Christian Studies (Oxford, Oxford; New York: Oxford University Press, 2006). At the same time, these defenses should not be taken as diminishing the significance and, in a sense, newness of Johnson's claim in comparison to the "classical theism" and its overemphasis on divine transcendence at the expense of divine immanence. As Johnson argues, "So profound are these changes and deviations from the classical [theist] approach that it is not uncommon for theologians engaged in their development to proclaim that a "revolution" in the idea of God is occurring in our day" Johnson, *She Who Is*, 2002. 21.

¹¹³ Johnson, *Ask the Beasts*. 208

¹¹⁴ Johnson. 210

the universe.¹¹⁵ Rather, human devaluation of other life stems from our own “stingy spirits.” Echoing naturalist John Muir’s protest against this myopic, soteriological anthropocentrism, Johnson avows that “[God’s] charity is broad enough for bears.”¹¹⁶ In the final pages of the book, she moves from this eschatological vision of solidarity to a robust ecological ethics based on a sense of responsible kinship.

As this recounting suggests, Johnson’s “evolutionary turn” comprises a number of important advances over her earlier works: She engages more deeply in relevant dialogue with the sciences; has a more compelling, Trinitarian account of God’s work in nature; offers a serious response to the hard questions posed by suffering and extinction in evolutionary processes; and offers a coherent argument for considering the redemption of the whole created world. Moreover, in placing an increasingly emphasis on Christ’s cross and its redemptive implications for the whole created order, Johnson recapitulates the historical development of ecological criticism itself, placing her in dialogue with more contemporary eco-theologies.

2.3.4 Bypassing Grace

What is surprising, though, especially given Johnson’s deeper emphasis on God’s presence to and redemption of non-human creation, is the near omission of any substantial discussion of grace to flesh out a broader account of God’s saving action

¹¹⁵ Johnson. 228-230. Quoting *ST III, Supplement*, q. 91, a.1 & a. 5, respectively, Johnson summarizes Aquinas’s position on the (non-)perdurance of non-human biological life succinctly: “We believe all corporeal things to have been made for man’s sake” and, since humans will no longer have need of them for sustenance in the fullness of time, “plants and animals will altogether cease after the renewal of the world.” However, she notes that “the relish with which Aquinas engaged to the new science and natural philosophy of his day gives a good reason to expect that he would shift his position on this question in light of the evolutionary knowledge of a later age.”

¹¹⁶ Johnson. 228. See John Muir, “Thoughts on Finding a Dead Yosemite Bear,” in *The Wilderness World of John Muir*, ed. Edwin Way Teale (New York: Houghton Mifflin, 2001). 317.

among non-human creatures. In fact, grace in non-human contexts is only substantively referred to twice in the entire book. The most significant of these appears under the telling section heading, “Obstacles,”¹¹⁷ where she describes how Scholastic theologians contracted the tradition of tripartite theological reflection on “God, the human race, and the natural world” down to a narrower focus on the “anguish of the human dilemma, to Christ’s redemption of sinful human beings, and to the moral demands entailed in living a saved life.”¹¹⁸ She asserts that this anthropocentrism was systematized in the High Medieval distinction of nature and supernature:

[The] emphasis on God’s free gift of grace led indirectly to neglect of divine initiative on the other, so-called natural side of the ledger. Theology began to draw the implication that non-graced nature, both human and non-human, had little to do with divine graciousness. The natural world in particular, not caught up in the history of sin and grace, had a simply natural character. Consequently, in David Burrell’s astute insight, late medieval theology drew the implication that the natural world is not a “gift” but simply a “given.”¹¹⁹

Johnson’s appraisal suggests that the subsumption of grace exclusively under debates about human freedom, divine action, and the gratuity of the beatific vision profoundly undermined the available connotations of grace at work throughout the world, thus colonizing it within an unyielding, psychologized anthropocentrism.

Johnson’s critique alludes to the arduous work still needed to free grace from its historical limitations such that we can talk about the work of grace in the natural world,

¹¹⁷ Johnson, *Ask the Beasts*. 125-128

¹¹⁸ Johnson. 125

¹¹⁹ Johnson. 127

the cosmos, and the course of evolution. Nevertheless, while Johnson avoided specific use of the term in order to avoid its more fraught associations, her deeply pneumatological writings show that the reality of grace in the world was never far from her thoughts. As she confirmed to me in a recent correspondence:

My work has bypassed the language of grace so as not to give rise to the wrong impression in readers' minds, who would almost inevitably think in anthropomorphic terms.... [My] own understanding of grace is influenced by Rahner's view that grace is God's self-communication in love. Rather than some third thing between the world and God, "the Giver Himself is the gift" (ignoring the gender restriction for the moment). In my own mind I was writing about grace every time I spoke of divine presence in the world or the empowering action of the Holy Spirit, not just regarding suffering but the whole creative evolutionary process. The reality is all the way through, although not expressed in the language of grace.¹²⁰

In our own estimation, Johnson's resistance to terminological closure by an over-hasty appropriation of the traditional language of grace may yet prove to be among her most important contributions to a more evolutionarily-oriented theology.

Ultimately, Johnson's account—which demonstrates an ability to dialogue more meaningfully with the Catholic intellectual tradition and to apprehend its firmer metaphysical footing (in dialogue with Aquinas)—has much to recommend it over Haught's approach. Through her concomitant emphasis on both God's immanence and transcendence, Johnson tries to come to terms with a world in process within the embrace

¹²⁰ Elizabeth A. Johnson, "Grace, Ecology, and Evolution," February 7, 2019.

of divine compassion, without implying that the indeterminacy of the created world and cosmic order entails any change in God. And, while avoiding a theology of grace applied to evolution (for the reasons cited above), Johnson's *Ask the Beasts* joins her pneumatologically focused theology with a proposal concerning Deep Incarnation and resurrection that does imply a coherent role for grace in creation, redemption, and eschatology.

In the next section, we will take up some of these same themes as they are developed in the work of Denis Edwards, especially in his book *How God Acts*. Over the last three decades, Edwards' and Johnson's theologies have in many ways been deeply influenced by each other, as each seems to learn from the best developments in the other. Owing to both the strong influence both Rahner's and Aquinas's thought, and the long-standing interdependence that marks their efforts, Edwards' theology is perhaps better understood as a complement to Johnson's.

2.4 Denis Edwards and Rahnerian Natural Theology

Denis Edwards' career-long engagement with ecology, evolution, and cosmology was marked by his frequent dialogue with Elizabeth Johnson. Both manifest the strong influence of Thomas Aquinas's account of primary and secondary causality and of Rahner's dual emphases on the panentheistic indwelling of the Spirit in creation and on the priority of uncreated grace. Both also demonstrate a Christological shift toward Deep Incarnation and cosmic deification as a result of their developing engagement with evolutionary science and theology. What differentiates their ecological and evolutionary theological works from each other most clearly, though—aside from Edwards' greater

reliance on early Patristic authors to ground some of his points—is Edward’s more single-minded focus on unpacking some of the additional systematic elements of a theology of evolution in comparison with Johnson’s more selective engagements. Given their similarities, we suggest that Edwards’ account of grace and divine action—particularly as formulated in *How God Acts*, which we will treat at the end of this section—might be understood as one possible line of development of the Rahnerian theology of grace suggested by Johnsons work.¹²¹

2.4.1 The Strong Influence of Karl Rahner

In one of Edwards’ earliest works, *Jesus and the Cosmos*, he lays out a series of principles from Rahner’s work on both anthropology and Christology that “have not received the attention they deserve” in relation to evolutionary theology.¹²² The first set of principles describes Rahner’s theology of God’s activity in creation: “[F]irst, that all creatures form one community grounded in their creator; second, that human beings are the cosmos come to self-awareness before God; [and] third, that evolutionary change is empowered by the pressure of divine being from within creatures.”¹²³ These principles flow from Rahner’s “theological holism” regarding the unity of spirit and matter in their complete dependence on God, which Edwards offers as a theological antidote to the vexing endurance of what he identifies as an enduring, Augustinian, Neoplatonic dualism.¹²⁴ Rahner recognizes real differentiation through emergence, though, rejecting a

¹²¹ While she has certainly been a friendly reader of Edwards’ project, we cannot, of course, speak for Johnson on this matter. In light of the excerpt from our conversations (above), we wonder, though, if Edwards effectively overcomes her critique of grace being too often conceived of as psychologized and anthropomorphized, though we will defer the pursuit of this critique until the end of this chapter.

¹²² Denis Edwards, *Jesus and the Cosmos* (New York: Paulist Press, 1991). 4

¹²³ Edwards. 22

¹²⁴ Edwards. 23-24

“leveling view... [where] it is adopted uncritically that a human person can be understood to have no more value than a worm or a fungus.”¹²⁵ This real differentiation of humans as emergent from lower orders opens creation up to self-transcending grace and deification:

...the movement of self-transcendence at the heart of cosmic processes does not reach its fulfillment simply in human life, or in human community, but only in the embrace between creator and creatures that is called grace. The evolutionary history of the cosmos reaches its climax only when the creative Ground of the whole cosmic process engages in self-giving love with the free human person. We live in a world of grace, a world in which God is present in self-offering to human beings at every point. Every act of knowing, every free act, is an opening toward the mystery that comes close to us in love.¹²⁶

While, at times, Edwards seems to suggest that grace may apply to the relationship of “embrace between creator and creatures” in a sense broadly inclusive of all creatures, here and elsewhere, he tends to then redirect these comments more exclusively towards human beings as the privileged and proper object of grace. Nevertheless, he also affirms that the emergence of human beings from the whole cosmic and biological order represents the achievement and the self-transcendence of creation as a whole. The unifying logic of all these created instances of self-transcendence is rooted partially in Aquinas’s view of creation as a “relationship of the creature to the Creator as the principle of its very being,” in which God’s intimate action unfolds according to the

¹²⁵ Edwards. 27

¹²⁶ Edwards. 29

orders of primary and secondary causality.¹²⁷ Edwards notes that, by working through created, secondary causes with their own integrity, God's action unfolds "in the world as a becoming," giving all creation a dynamism of being which Rahner called "active self-transcendence."¹²⁸

In the remainder of the book, Edwards elaborates additional principles from Rahner's evolutionary Christology and eschatology: "First, Jesus can be understood as the self-transcendence of the cosmos toward God; second, there is an intrinsic inter-relationship between God's self-communication in grace to all people and God's action in Jesus of Nazareth; [and] third, Jesus can be understood, from God's side, as God's self-communication to the cosmos."¹²⁹ Edwards argues that, although Rahner developed an account of Christ within the heart of the evolutionary order, his account of cosmic redemption remained somewhat underdeveloped. Edwards notes how, in a lecture given toward the end of his life, Rahner calls for "an expansion of the theology of redemption in terms of the redemption of the body and the redemption of the cosmos... consistent with his Christology within an evolutionary view of the world."¹³⁰ However, noting that Rahner never achieved this in his own life, Edwards briefly offers his own suggestions

¹²⁷ Edwards. 35-36. Thomas Aquinas, *Summa Theologiae*, 1.22.3, 1.23.8, 1.45.1

¹²⁸ Edwards. 36-38. See Karl Rahner, *Hominisation: The Evolutionary Origin of Man as a Theological Problem* (New York: Herder and Herder, 1965). Karl Rahner, "Evolution: II Theological," in *Encyclopedia of Theology: A Concise Sacramentum Mundi* (London: Burns and Oates, 1975). 478-488; Rahner, "Christology Within an Evolutionary View of the World." 165; Karl Rahner, "Christology in the Setting of Modern Man's Understanding of Himself and of His World," vol. 11, *Theological Investigations* (New York: Seabury, 1975), 215-29.; Karl Rahner, *Foundations of Christian Faith: An Introduction to the Idea of Christianity* (New York: Seabury Press, 1978). 185. This notion may be fruitfully compared with Lonergan's notion of finality as "upwardly but indeterminately directed dynamism," which is discussed at length in later chapters of this dissertation.

¹²⁹ Edwards, *Jesus and the Cosmos*. 65

¹³⁰ Edwards. 85

for the development of such a theology, drawing on Rahner's writings on the body (especially in relation to his theology of death), on time, and on the “new Earth.”

2.4.2 An Ethic of Intrinsic Value

While, in *Jesus and the Cosmos*, Edwards built on Rahner's account of creaturely transcendence through human divinization, he increasingly saw the need to further develop “an ethic of intrinsic value” as regards non-human creation that went beyond the basic Rahnerian framework. Edwards began to develop this ethic around a more robust and thoroughly fleshed out Wisdom Christology in his book *Jesus the Wisdom of God: An Ecological Theology*.¹³¹ Drawing from especially from the earlier work of Elizabeth Johnson and Bruce Vawter, Edwards presents the critical role of Wisdom theology as “the bridge to [a] theology of Incarnation” for the early, culturally-Jewish Christians.¹³² Whereas Johnson focused largely on the roots of Wisdom Christology in the First and Second Centuries, Edwards emphasized the patristic appropriation of this theology. He highlights the theological resources developed in Athanasius's Christology as particularly valuable for extending Christ's saving action to all of creation: “[The] identification between Wisdom and the cross... suggests that the love revealed on the cross is the very same loving Wisdom that is at work in, and manifest in, an ecosystem, a rain forest, and the Milky Way Galaxy. It is *this* Love that ‘moves the stars.’”¹³³

Building on Athanasius' emphasis on love as the universal mover, Edwards explores the reception of these Christological insights in various Trinitarian theologies

¹³¹ Edwards, *Jesus the Wisdom of God*, 1995. In addition to Johnson's influence, Edwards also draws heavily from Bruce Vawter.

¹³² Edwards. 33

¹³³ Edwards. 72

from Richard of Saint Victor and Bonaventure, through the contemporary work of John Zizioulas, Walter Kasper, and Catherine LaCugna. Edwards describes a form of Trinitarian-relational structure to the metaphysics emerging from each of these theologies, while at the same time criticizing Thomas for having a comparatively non-relational metaphysics based on an “ontology of substance.”¹³⁴ Edwards seems especially to favor Bonaventure’s view of creation as *bonum diffusivum sui* and as an expression of “God’s fountain fullness,”¹³⁵ suggesting its creative potential in a dynamic view of the world in process.¹³⁶

Many of the themes are also taken up in Edwards’ later book, *God of Evolution: A Trinitarian Theology*.¹³⁷ There, he describes at greater length his views on: Trinitarian persons as persons-in-mutual relation and as persons-in-mutual-love, metaphysics as personal/relational over substantial/ontological, creation as trinitarian self-expression, and creation as “characterized by the vulnerability and liberating power of love... [that] respects both the freedom of human beings and the integrity of nature’s processes.”¹³⁸

Although there is a good deal of consistency between these works, *God of Evolution*

¹³⁴ Edwards. 99-100. Edwards repeats what is sometimes called the “De Regnon Thesis,” a now widespread criticism of Latin/Western Christian essentialism, aimed particularly at Augustine, Aquinas, and the larger Scholastic tradition in its many iterations. In its popular form, this critique alleges that Latin/Western theologians focus on nature and only then move to persons, where Eastern theologians, following Nyssa and others, focus first on the persons, thereby yielding for the Christian East a robust social trinitarianism that recognizes persons and relations above essences and natures. The adequacy of this narrative has been challenged in significant ways in recent years, including in Michel Rene Barnes, “De Regnon Reconsidered,” *Augustinian Studies* 26, no. 2 (1995): 51–79. and Sarah Coakley, ed., *Rethinking Gregory of Nyssa* (Oxford: Blackwell, 2003). Moreover, the adequacy of this reading of De Regnon’s argument and his original intention has been challenged in Kristin Hennessy, “An Answer to de Régnon’s Accusers: Why We Should Not Speak of ‘His’ Paradigm*,” *Harvard Theological Review* 100, no. 2 (2007): 179–97.

¹³⁵ Edwards, *Jesus the Wisdom of God*, 1995. 101-102

¹³⁶ Edwards. 108-110. Note that, while Edwards uses the word “process” to describe the strengths of Bonaventure’s metaphysics over Thomas’s, he explicitly rejects any connection with “problematic” Whiteheadian process thought.

¹³⁷ Denis Edwards, *The God of Evolution: A Trinitarian Theology* (New York: Paulist Press, 1999).

¹³⁸ Edwards, *Jesus the Wisdom of God*, 1995. 122. For a summary of all these points, see Chapter Five, “An Ecological Theology of the Trinity: Some Theses,” 111-130.

represents a culmination of Edwards' specifically Trinitarian approach to evolution,¹³⁹ and it marks a significant moment in Edwards' own evolutionary turn, as Edwards seems to ask anew: "What difference does acceptance of the theory of evolution make to a Christian theology of God?"¹⁴⁰ In this, Edwards' turn mirrors Johnson's in that it stems largely from a consideration of the "dark side of evolution," leading Edwards to ask, "Is the God who creates in such a way [as that revealed by evolutionary history] cruel and capricious?"¹⁴¹ Although Edwards will ultimately reject this dark vision of God, these questions lead him to a series of new commitments.

At the outset, these concerns lead Edwards to raise objections to the classical understanding of divine omnipotence: "If one's view of God is of a being who is *absolutely* omnipotent, unencumbered by any limits of any kind whatsoever, then it is difficult to reconcile such a God with the pain and death that accompanies natural selection and still affirm divine goodness."¹⁴² Again, Edwards is careful to distinguish his

¹³⁹ It should be noted here that Edwards reprises and expands on the trinitarian theology developed in *The God of Evolution* in his more recent work, Denis Edwards, *Partaking of God: Trinity, Evolution, and Ecology* (Liturgical Press, 2014). In this latter work, Edwards notes that his releasing of yet another book devoted to the relation of the Trinity to the natural world may "raise some eyebrows" among his friends and readers, he notes that, though he still backs the "theology of divine communion" developed in that text, he wishes to develop it in a number of ways: namely, by elaborating "its grounding in the biblical narrative of God's creating and saving action" and giving a "more dynamic account of the Trinity in action" (3-4). Here, Edwards also provides his own list of the central questions facing evolutionary theologies: "the question of God's suffering with creatures in light of the costs of evolution; the idea of the humility of God in relation to the relative autonomy of evolutionary processes; church teaching on the human soul in relation to the insights of neuroscience into the mind and brain; and the doctrines of grace and original sin in relation to evolution" (4-5). While each of these themes is present in *The God of Evolution*, Edwards reflects further on them in *Partaking of God*, particularly through a deeper and more sustained engagement with Athanasius's Incarnational theology. While a complete accounting of Edwards' project would need to consider these latter developments more fully, we have chosen to engage only *The God of Evolution* because it highlights some of the important thematic changes characterizing Edwards' evolutionary turn and because it remains a salient and widely read introduction to Edwards' Trinitarian project. Moreover, it sets the stage for our focus on what we take to be Edwards' most complete and systematic treatment of these issues in his book *How God Acts*.

¹⁴⁰ Edwards, *The God of Evolution*. 3

¹⁴¹ Edwards. 35

¹⁴² Edwards. 39

critique from the similar critique raised in “Whiteheadian Process Theology,”¹⁴³ pointing to his own continued commitment to doctrines of “Trinity, divine transcendence, and divine freedom in creation.”¹⁴⁴

Moreover, unlike Haught, Edwards argues for a need to retain (if still to rethink) the notions of sin, original sin, and grace. He rejects the assignation of sin or grace neatly to either nature or culture, noting that there are genetic and behavioral substrates that contribute to human limitations and failures, and culture may variously ameliorate or exacerbate these underlying conditions.¹⁴⁵ Original sin describes the effect of cultural and communal choices that become constitutive of individual interiority, which demands individual transcendence but not personal, individual atonement.¹⁴⁶ Edwards also maintains that not only sin, but also grace must be thought within our evolutionary situation, noting that “we can think of our ancient forbears coming to self-consciousness in a world that was already a world of grace.”¹⁴⁷ However, what this means is somewhat unclear, since his reflections on grace remains tied to the experience of grace within (human) reflective self-consciousness: “Whenever there was the first, perhaps childlike self-awareness, then this can be seen as the beginning of the human experience of a world of grace.”¹⁴⁸ While he limits the language of grace to this more or less psychological domain, Edwards affirms that the Spirit is at work throughout creation in line with his earlier comments on active self-transcendence, stressing more strongly still that the same Spirit enables “the unfolding of the early universe from the Big Bang..., the formation of

¹⁴³ See, for instance, Charles Hartshorne, *Omnipotence and Other Theological Mistakes* (Albany: State University of New York, 1984).

¹⁴⁴ Edwards, *The God of Evolution*. 39

¹⁴⁵ Edwards. 65, 68-69

¹⁴⁶ Edwards. 66-67

¹⁴⁷ Edwards. 71

¹⁴⁸ Edwards. 72

our planetary system, the emergence of life on Earth, and the evolution of self-conscious human beings... [and] the life and ministry of Jesus of Nazareth within our evolutionary and cultural history as the radically Spirit-filled human being.”¹⁴⁹

Edwards argues that this view is deeply rooted in the larger Christian tradition, recalling Gregory the Great’s writings on God’s presence “...through essence (*per essentiam*)..., through power (*per potentiam*)..., [and] as all embracing knowledge (*per praesentiam*),” all of which are “different ways of reflecting about the one simple presence of the triune God to each and every creature.”¹⁵⁰ Moreover, Edwards links this complex experience of the presence of God in the world back to the human experience of ecstatic grace in love, arguing that non-human creation shares in this spiritual communion “by virtue of being God’s creatures, through the ongoing action of the Spirit in the relation of continual creation.”¹⁵¹ Here and throughout this text, Edwards builds beyond Rahner’s theology through a greater awareness of the dark side of evolution and of the intrinsic value of non-human creation.

¹⁴⁹ Edwards. 90

¹⁵⁰ Edwards. 93. The meaning of God’s presence, here, is somewhat unclear, insofar as Edwards is clearly not referring to a physical or material presence. In humans, the meaning of God’s presence may be clarified in relation to human subjectivity and consciousness; however, the degree to which we attribute this to animals is typically limited at most to higher animals and almost certainly not to all creatures, including single celled organisms and the like. For a clarification of these different meanings of presence, see Bernard J. F. Lonergan, “Cognitive Structure,” in *Collection*, ed. Frederick E. Crowe and Robert M. Doran, 2nd ed., rev. aug., vol. 4, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 1988), 205–21. . “There is material presence, in which no knowing is involved, and such is the presence of the statue in the courtyard. There is intentional presence, in which knowing is involved, and it is of two quite distinct kinds. There is the presence of the object to the subject, of the spectacle to the spectator; there is also the presence of the subject to himself, and this is not the presence of another object dividing his attention, of another spectacle distracting the spectator; it is presence in, as it were, another dimension, presence concomitant and correlative and opposite to the presence of the object. Objects are present by being attended to; but subjects are present as subjects, not by being attended to, but by attending. As the parade of objects marches by, spectators do not have to slip into the parade to become present to themselves; they have to be present to themselves for anything to be present to them; and they are present to themselves by the same watching that, as it were, at its other pole makes the parade present to them.”

¹⁵¹ Edwards, *The God of Evolution*. 97

2.4.3 How God Acts

Edwards' reflections on the suffering inherent in evolutionary processes find their most mature, sustained, and methodical expression in his book *How God Acts*, in which he works out the implications of the metaphysics and theology of grace that he had been suggesting through his prior works. He notes a “new intensity to the problem of evil in our day...because of our twenty-first-century scientific worldview,” which challenges the adequacy of traditional accounts of divine action since “no generation ... before us [has known] that these costs are intrinsic to the processes that give rise to life on earth in all its wondrous diversity.”¹⁵² Like Johnson, Edwards does not attempt a response in the form of theodicy,¹⁵³ but proposes instead a theology of divine action grounded on three central principles:

First, it would need to be a noninterventionist theology that sees God as working in and through the natural world, rather than as arbitrarily intervening to send suffering to some and not to others. Second, God's action in creating an emergent universe would need to be understood in light of the resurrection and the promise that all things will be transformed and redeemed in Christ... Third, it would need to be a theology in which God is understood as lovingly accepting the limits of creatures and actively waiting upon finite creaturely processes, living with the constraints of these processes, accompanying each creature in love, rejoicing in

¹⁵² Denis Edwards, *How God Acts: Creation, Redemption, and Special Divine Action*, Theology and the Sciences (Minneapolis [Minn.]: Fortress Press, 2010). xii

¹⁵³ Edwards suggests that theodicies themselves are fraught with the tendency to both presume unknowable knowledge regarding God and to trivialize and patronize suffering through explanation, though he suggests one positive example of a theodicy that avoids this in Christopher Southgate, *The Groaning of Creation: God, Evolution, and the Problem of Evil*, 1st ed.. (Louisville: Westminster John Knox Press, 2008).

every emergence, suffering with every suffering creature, and promising to bring all to healing and fullness of life.¹⁵⁴

Edwards rejects that his “noninterventionism” implies a deism like William Paley’s watchmaker-god, and he stresses the determining realities of “special divine acts, such as the Christ-event, and the experiences of grace and providence in everyday life,” and he couches all of this within “an eschatological vision that sees suffering in the context of hope based on the resurrection.”¹⁵⁵

Edwards admits that both he and Johnson have faced critiques from other evolutionarily-conscious theologians for their reliance on Aquinas. Some have noted, for instance, that their account as couched in the terms of primary and secondary causality fails to identify concrete, special instances of divine action that we might investigate.¹⁵⁶ These critics have also noted that, in Aquinas’s own approach, this account of what Edwards calls “noninterventionism” through primary and secondary causality only holds in relation to “general divine action”; that is, Aquinas asserts that, in the case of miracles, God works without recourse to secondary causes.¹⁵⁷ Thus, ignoring this position in order

¹⁵⁴ Edwards, *How God Acts*, 2010. xiii

¹⁵⁵ Edwards. xiii

¹⁵⁶ Edwards. 63-64 “A common objection to the idea that God acts through secondary causes is that it does not tell us how God acts through them. In response, it is important to say that from a theological perspective, we do not know how God’s creative act works. What we know is the result of this act but not the act itself. God’s creative act is what we are calling, with Aquinas, primary causality. It is an instance, one of many, where theology has to face up to and insist on what human beings cannot know.... A second objection to this approach to divine action through secondary causes is that it does not point to any one particular place where science and theology might collaborate to better describe divine action. It has little to say to science. In response, it is important to note that this approach not only does not exclude detailed discussion between science and theology on particular issues, but encourages and undergirds them by providing clear ground rules. Within this perspective, it is perfectly appropriate to discuss divine action through focusing on one aspect of science, such as quantum mechanics. But divine action would be seen as involving not only the quantum level but every level, every entity and process of the observable universe, at every point of its evolution. In this approach, divine action cannot be located only in any one area of scientific research or human experience. It is always understood from the perspective of a Creator who is present and acting in and through every entity and every process.”

¹⁵⁷ Edwards. 80-84

to meet certain scientific expectations runs the risk of denying Christian convictions about God's action in our midst.

From the outset, Edwards announces his intention of meeting this critique head on, and he emphatically rejects the meaningfulness of "general divine action" understood as "the act by which God enables all things to exist and act." Rather, with Niels Gregersen, Edwards argues that "God's action always has a particular and historical context... [and] the experience of the Spirit today is also specific to particular persons and particular contexts,"¹⁵⁸ and thus all divine action is "special." Unlike Gregersen, however, Edwards advocates for the epistemological (not ontological) priority to special divine action, since all these acts are rooted in the singular, self-giving act of God, "grounded in the unity of divine being... and everywhere [affecting] creation in specific, historical, and finite ways."¹⁵⁹ He connects his position with two key elements from Rahner's theology: "The first is that God's action is not to be thought of only as a series of discrete and disconnected acts... [Rather,] it is a Trinitarian act of self-bestowal: God gives God's self in the Word and the Spirit, in diverse ways, in creation, grace, Incarnation, and final fulfillment. [The] second assumption is that the Incarnation is central to God's purpose in creating."¹⁶⁰ Through the Incarnation, creation and redemption are revealed as mutually illuminating elements belonging to the one act of God's self-bestowing love, given in grace.

Critical of the Neo-Scholastic emphasis on created grace, which he saw as presenting grace as a kind of quantifiable substance added to a person and making them

¹⁵⁸ Edwards. 37

¹⁵⁹ Edwards. 38

¹⁶⁰ Edwards. 39. This second principle is commonly cited as coming from Duns Scotus, and represents an important differentiation from the Thomist account.

holy, Rahner worked to retrieve a richer understanding of uncreated grace.¹⁶¹ He also argued that, lacking an adequate account of the primacy of uncreated grace as the immediate presence of the Holy Spirit in human hearts, the Neo-Scholastics contributed to an anemic and largely nominal belief in the Trinity and a near forgetting of the Holy Spirit altogether. In his own theology, then, Rahner emphasized the saturation of the world by God's presence and the universal offer of grace to all persons at all times. For Rahner—and, in new ways through both Johnson and Edwards—this Trinitarian panentheism grounds the divinization of the world as it is invited into the intratrinitarian life and love of God. This view of the world leavened by God's ubiquitous presence obviated any need for grace conceived of as a divine intervention in an otherwise closed system of law and chance. Rahner rejected this view of grace as efficient cause, preferring to speak instead of grace as a kind of “quasi-formal causality” through which God conforms the world to Godself in a way that prefigures the larger eschatological completion in glory.¹⁶² As “quasi-formal” and not efficient, God's grace is freeing and empowering, for God does not undermine the logic of the world of created causes. As Edwards relates, “The two concepts of divine self-bestowal and creaturely self-transcendence are interrelated: it is God's self-bestowal that enables and empowers creaturely self-transcendence.”¹⁶³ Rahner's account of grace aims to describe the very dynamism of being that enables emergence to take place.

¹⁶¹ Karl Rahner, “Some Implications of the Scholastic Concept of Uncreated Grace,” vol. 1, *Theological Investigations* (New York: Seabury, 1975), 297–346. I

¹⁶² Edwards, *How God Acts*, 2010. 42. This account of Rahner's theology runs throughout much of this text, especially in pages 35-55.

¹⁶³ Edwards. 43

Just as God's kenotic self-bestowal is revealed in the unfolding created order, so, too, is it seen in the Incarnation, as God respects the integrity of world processes even while transforming their very foundations:

God's way is not the way of intervention that would overturn the laws of nature or human freedom to save Jesus from what looked like the total failure of his mission and from a brutal death. God's way is revealed as that of accompaniment in love, transformation in the Spirit, and resurrection life. It appears from the Christ-event that God's way is that of being committed to allowing events to unfold, even when they are radically opposed to the divine will, and to bring healing and liberation in and through them.¹⁶⁴

In redemption, then, as in creation, God neither passively abandons the world to suffering and death nor intervenes through violent rupture. However, Edwards rejects that the consonance between these logics amounts to a diminishment of the unique character of divine presence in the Incarnation: "God's presence and action with regard to an individual sparrow (Luke 12:6) is not the same as God's presence and action in Jesus of Nazareth.... [Though they are] both particular, historical, and special divine acts."¹⁶⁵ But what does it mean to affirm that God's action in evolutionary processes is "particular, historical, and special," if Edwards rejects the distinction between general and special divine action?

Edwards asserts that the answer to this question depends largely on one's view of metaphysics and divine action, and, after surveying a number of prominent views in the contemporary conversation between religion and science, argues that the only viable

¹⁶⁴ Edwards. 50-51

¹⁶⁵ Edwards. 58

alternatives are either Whiteheadian process thought or Aquinas's primary and secondary causality. As noted previously, Edwards favors the latter, since among all options, it alone "upholds the absolute mystery and transcendence of the Creator... gives proper autonomy and independence to creaturely causes and processes... and [avoids exacerbating] the theological problem of suffering."¹⁶⁶ Nevertheless, Edwards notes that his position is frequently criticized by his partners in the dialogue between religion and science on two counts: "[First] it does not tell us *how* God acts through [secondary causes, and, second]... it does not point to any one particular place where science and theology might collaborate to better describe divine action. It has little to say to science."¹⁶⁷ However, Edwards argues that theology ought not direct science to loci of divine action at all, since God acts with purpose throughout all of creation. What makes God's action in evolutionary creation "particular, historical, and special" is that God's action "(1) has a specific effect in creaturely history, the emergence of life in the universe, and (2) [that] this specific effect is intended by God."¹⁶⁸

Edwards does not see a need or a value in theorizing other divine actions that do violence to the very laws of nature that God created in the first place, and pushes back on that line of thinking in Aquinas. What is needed instead is "a theology of miracles in noninterventionist terms: as wonders of God that take place through natural causes."¹⁶⁹ Given the incompleteness of human understanding of the world, Edwards contends that a miracle may involve an unexplained phenomenon, but not an unexplainable one.

Following the Jesuit physicist William Stoeger, Edwards stresses that the laws of science

¹⁶⁶ Edwards. 63

¹⁶⁷ Edwards. 64

¹⁶⁸ Edwards. 64-65

¹⁶⁹ Edwards. 77

are descriptive, not prescriptive, and, as such, describe regularities under ideal circumstances without exhausting what they investigate. They are “limited by the heuristic anticipation of the researcher,” and thus “much of the reality of the matter under observation is missed.”¹⁷⁰ As seen in contexts ranging from quantum mechanics to fluid dynamics and on to the higher-order social sciences, statistical models and ideal types include the reality of unpredictable outliers. Laws of nature are best understood, then, as “approximations of what is manifest in the physical phenomena being observed... [in opposition to] the Platonic view that would give these laws an independent and preexisting reality.”¹⁷¹ Human representations of observed phenomena are not “unconstructed isomorphisms [but, rather] are the result of imaginative and conceptual abstraction guided by continual observation and experiment.... There is no justification for the idea that they correspond in a direct way to the entities, structures, and relationships of physical reality as it is in itself.”¹⁷² Edwards challenges, therefore, that science may be especially ill-equipped to explain the chemical or biological basis of miracles such as healing, which involve a great deal more than only these lower explanatory strata.

Rejecting Aquinas’ understanding of miracles as abrogating the network of primary and secondary causes, Edwards argues that the reports of Jesus’s miracles are the

¹⁷⁰ Edwards. 84

¹⁷¹ Edwards. 86

¹⁷² Edwards. 86. Contrast this position with Lonergan’s account of the distinction between classical correlations and statistical ideal frequencies or probabilities. While both take account of the reality of contingency and randomness in unfolding world processes, Lonergan’s approach emphasizes that the non-systematic divergence of events from an expected ideal frequency is still intelligible and isomorphic with human intelligence, but that its intelligibility is described according to statistical regularities that are themselves an integral part of the intelligibility of the whole. Thus, the intelligibility of the classical laws is not diminished, but the frequency with which they obtain in any given concrete situation is not a function of classical but rather of statistical intelligibility. See our account of generalized emergent probability in the following chapters.

testimony of believers and not “*facta bruta*,” the appellation “miracle” denotes not the account of causes and effects, but instead the personal experience of “God’s self-communication in a particular configuration of events, in such a way that God’s self-communication participates immediately in the event.”¹⁷³ In this sense, Edwards has no difficulty affirming that Christ’s miracles were the genuine act of “a limited, human healer, but... also an act of God,”¹⁷⁴ communicating Godself both to those healed and to the witnesses. Christ’s healing miracles reveal the fullness of the “the laws of nature [as] part of God’s own self-giving... [and therein] are an element within grace.”¹⁷⁵

While Edwards rejects that Christ’s resurrection is a miracle among miracles, he similarly rejects that it violates the laws of nature, arguing that: “(1) The resurrection can be seen as a free act of God that comes from within creation and gives creation its deepest meaning, (2) it is to be understood as an ontological transformation of reality, and (3) it is an act of God that finds expression in secondary causes.”¹⁷⁶ Edwards compares his position to Rahner’s understanding of how “Jesus, a product of evolutionary history, can be understood as the radical self-transcendence of the created universe into God,” culminating in his Resurrection from the dead.¹⁷⁷ Edwards rejects the reduction of the resurrection to mere a psychological or social phenomenon, though he notes that the precise, secondary-causal mechanisms of bodily resurrection remain unclear.

Edwards suggests that the resurrection expresses the innermost truth of the material world that is wholly open to God’s redeeming and completing action.¹⁷⁸ Though

¹⁷³ Edwards. 87-88

¹⁷⁴ Edwards. 36

¹⁷⁵ Edwards. 88

¹⁷⁶ Edwards. 92

¹⁷⁷ Edwards. 94

¹⁷⁸ Edwards. 97

our present understanding of the laws of nature cannot explain how it is possible, Christ's resurrection reveals "the radical transformation, unpredictable fulfillment, and the real meaning and goal of God's work of creation, rather than as the kind of miracle that overturns the natural world and its laws."¹⁷⁹ The real, felt effects of the resurrection within the dynamic world order are revealed in: (1) the encounter with Christ in scripture, sacraments, and "the mysticism of everyday life"; (2) the Easter appearances recorded in the Gospels which have "the structure of an experience of grace that occurs in and through the experience of created realities," recognizing the one they encounter as the "same Jesus who had walked with them in Galilee but who is now radically transformed as the power of new creation"; and, (3) the grounded anticipation of the eschatological transformation of creation, which "may occur through secondary causes that exist in the natural world but are not mapped, or not mapped well, by our scientific theories."¹⁸⁰

Edwards describes how reality is transformed at every moment through this divine indwelling at the heart of creation. Like Johnson, Edwards hinges this claim on an expanded understanding of Christ's mission from a narrow focus on human sin to its healing and liberating dimensions in regards to human and non-human creation alike. Following Athanasius, Edwards notes how the indwelling of the Holy Spirit brings humanity into the intratrinitarian life, affecting an ontological (not merely or mainly ethical) change in us as we are made more human through conformity to Christ as the archetype of perfect humanity.¹⁸¹ Edwards extends the scope of this transformation and

¹⁷⁹ Edwards. 99

¹⁸⁰ Edwards. 101, 103, 104

¹⁸¹ Edwards. 109-118. Edwards also notes that, in discussing the divinity and the mission of the Holy Spirit his *Letter to Serapion*, Athanasius writes that the Holy Spirit unites "creation" to the Word, whereas previous texts mentioned only humanity. Edwards muses cautiously here that this may be perceived as an opening to a wider, cosmic sense of deification: "It may be that, when Athanasius speaks of creation in this text, humanity is still at the forefront of his mind. But there is at the very least openness to a more universal

deification further than Athanasius, though, asserting that, in Christ's flesh, the whole material world is transformed, at least "embryologically."¹⁸²

Edwards argues that matter was always intended to be taken up into eternity, since the Incarnation was willed from eternity; matter is no mere pre-spiritual substrate, but was always the foundation of God's action in the world.¹⁸³ Moreover, because Christ's material, glorified body is taken up forever into God, we are invited to hope and wonder after the glorification of the whole material universe brought to completion, though Edwards cautions that (1) the meaning of redemption may vary in relation to what is proper to each thing and being, and (2) this completion ought to be thought in epistemic humility, especially regarding the tension between its continuity with the present order of nature and the surprising inbreaking of the eschaton as New (Heaven, Earth, Jerusalem, etc.).¹⁸⁴

Changing gears somewhat, Edwards also cautions here that the push for a broader understanding of redemption concerning suffering and death throughout the material world not obscure the distinct need for human redemption vis-à-vis the reign of sin. Edwards emphasizes the importance of the doctrine of original sin, in particular, which he notes has fallen into desuetude in many theological circles today, arguing that this doctrine describes the lived and felt reality given in human social and individual history,

development of thought, to the idea that in some way the whole of creation is adopted and deified in Christ" (116-117).

¹⁸² Edwards. 119-126. This notion of "embryological" deification is drawn from Karl Rahner, "Dogmatic Questions on Easter," vol. 4, *Theological Investigations* (New York: Seabury, 1975), 121-32; and Karl Rahner, "Resurrection," in *Encyclopedia of Theology: A Concise Sacramentum Mundi* (London: Burns and Oates, 1975).

¹⁸³ Edwards, *How God Acts*, 2010. 153-155. For Rahner's account of this, see Karl Rahner, *Hominisation: The Evolutionary Origin of Man as a Theological Problem* (New York: Herder and Herder, 1965), especially 52ff.

¹⁸⁴ Edwards. 155-159

and must not be effaced.¹⁸⁵ Building on René Girard, especially as developed by Raymund Schwager, Edwards couches original sin within “the successful evolutionary strategy of cooperation among early humans [which] had as its underside the construction of enemies and victims.”¹⁸⁶

Edward’s account of original sin must also be understood in the world characterized by “original grace,” where grace is understood as “God’s presence in the Holy Spirit, offering God’s self in love to every human person.”¹⁸⁷ As original, grace does not begin with Pentecost, the Incarnation, or even the Abrahamic Covenant, but is present from the first moment of creation: “The result is a human condition constituted both by God’s free self-offering in grace and by a tendency to sin carried not only in our culture but also in our genes.”¹⁸⁸ This distinction is important, because Edwards comments on how natural selection has led to the emergence of positive instincts for self-preservation and communal cooperation and, at the same time, of competition and distrust of outsiders. Moreover, he argues that human culture can both ameliorate and aggravate various elements of inherited structures and behaviors. With Rahner, Edwards contends that the inherited elements are themselves more the mark of finitude than the mark of sin, though the way that they can be taken up into sin through “the rejection of grace and the rejection of God” by humans is important.¹⁸⁹ Jesus’ message of love and conversion called people into the freedom of a life lived in the acceptance of grace, and his brutal execution, coupled with the disciples’ “knowledge of his radical innocence has

¹⁸⁵ Edwards. 129

¹⁸⁶ Edwards. 131

¹⁸⁷ Edwards. 135

¹⁸⁸ Edwards. 131

¹⁸⁹ Edwards. 135

the capacity, over time, to unmask and subvert the whole scapegoat mechanism.”¹⁹⁰

Nevertheless, Jesus’ death is not only a function of sin, as death is a result of the finitude proper to his fully human nature, and was that assumed by Christ as part and parcel of the Incarnation. Thus, in his passion, death, and resurrection, Christ lovingly responds not only to the particular fact of human sin that caused his own brutal death, but he also stands in solidarity with all creation as it naturally undergoes suffering and death. Through this fuller account, then, Edwards suggests how God’s saving action in the world is addressed both to the problem of suffering and death and to the particularly human problem of sin.

In the foregoing, we have tried to show how Denis Edwards’ evolutionary theology, especially as summed up in *How God Acts*, presents a well-reasoned account of sin and grace within a Rahnerian worldview. In conjunction with the previous section, we have also suggested that Edwards’ theology gives us some insight into how Johnson’s intuitions vis a vis the need to develop a broader, evolutionary theology of grace. Whether or not Johnson would sign on to it, Edwards offers a thoughtful reimagining of grace in the evolutionary order while also retaining its dialectical function in relation to sin in specifically human contexts.¹⁹¹

However, the work of the final author treated in this chapter, Celia Deane-Drummond, raises some important questions regarding Edwards’ project. As we will elaborate in greater detail in the section that follows, Deane-Drummond challenges this more natural theological approach, broadly conceived, for making theological claims

¹⁹⁰ Edwards. 140

¹⁹¹ Of course, Johnson’s *Ask the Beasts* was written several years after *How God Acts*, and she does not, there, openly endorse Edward’s proposal.

overly dependent on a scientific worldview. She also challenges that the framework of primary/secondary causality taken on its own cannot do justice to the Christian belief in divine love as elective and selective, as is seen in relation to Israel as God's chosen people. Deane-Drummond also raises questions regarding the account of both sin and grace that seem, in Edwards' work, to be persistently linked with human intentionality. While there are moments when Edwards suggests a broader context for this dialectic, and while he certainly has much to say about the work of the Spirit indwelling non-human creation and expressing a divine closeness to that creation, this is less explicitly named "grace" in Edwards' work, especially in comparison with Deane-Drummond's account, grounded concretely in her attention to contemporary animal studies. However, Edwards' thoughtful and systematic approach to evolutionary theology presents an important theological development, which, despite Deane-Drummond's critiques, remains vital to framing the epistemological and ontological claims of theology and science in highly contested terrains.

2.5 Celia Deane-Drummond: Cosmic Theodramatics, Sophiology, and a Liminal Metaphysics

Having first begun her academic career as a plant physiologist, Celia Deane-Drummond is a singularly gifted interlocutor with the ever-expanding data of evolutionary science and animal studies, as evidenced in her theological works. Owing both to her international standing and her voracious reading, her work is also marked by an admirable degree of ecumenical consciousness and general cosmopolitanism. Thus, although Deane-Drummond's work represents a distinctly Catholic approach to

evolutionary theology, it also presents a polyphonic critique of some of the tendencies toward non-interventionist natural theology in Johnson and Edwards and a broad, evidence-based challenge to the general view of the mental, emotional, social, and even (perhaps) moral and spiritual lives of animals.

Rather than narrate the larger trajectory of Deane Drummond's thought, here, we will focus on a few key challenges raised in her later, more Christologically-grounded works, which prove particularly important for our project here. This is in part because she appears somewhat less concerned than Johnson and especially Edwards to suggest a systematic or methodical theology, and so it is somewhat harder to scaffold a systematic approach like that attempted in this project in relation to her own.¹⁹² However, as we will argue below, she offers a series of important points of reflection that must be accounted for in any fuller treatment of grace in the natural world. We will begin by considering her book *Christ and Evolution*, which marks a decidedly Christological turn in her approach to evolutionary theology. Though Deane-Drummond's Christological approach, there, is more clearly worked out "from above" than that of Johnson and Edwards—especially that exhibited in Johnson's earlier, Christological works¹⁹³—it evokes a similarly deep-Incarnational stress on the cosmic scope of evolution. Following this, we will turn to Deane-Drummond's book *The Wisdom of the Liminal*, in which she attempts to break

¹⁹² See Celia Deane-Drummond, *Christ and Evolution: Wonder and Wisdom*, Theology and the Sciences (Minneapolis: Fortress Press, 2009). xviii: "This book is more an exercise in the development of a Christology that takes due account of evolutionary theory without succumbing to an identification with or alienation from it. It therefore does not take the same sort of shape as what has been traditionally termed 'science and religion' dialogue, if this is taken to mean scientific theories as they relate to religious belief as such, perhaps refining or even discarding elements of the latter belief. Instead, we offer the reader a way of thinking creatively and critically about Christ and evolution without pretending one discourse can be fused with the other..." See also her praise for Balthasar for his distinct lack of systematization, especially in relation to his applicability in evolutionary theologies, pages 141-144.

¹⁹³ See especially her "feminist, liberating Christology," beginning from below with the historical Jesus in *Consider Jesus*.

down the hard walls put up between humans and other creatures that seem to prevent our inclusion of them as partners and kin in the Theodramatics of history.

2.5.1 Balthasar's Theodramatics and Bulgakov's Sophiology in *Christ and Evolution*

In *Christ and Evolution*, Deane-Drummond proposes to challenge two problematic tendencies in many evolutionary theologies. The first is the tendency toward viewing evolution in terms of a grand narrative of the more or less linear unfolding of the world. Building on the work of Hans Urs von Balthasar—particularly as developed by Ben Quash—she identifies the tendency of narrative theologies to adopt a “view from nowhere” in the construction of an evolutionary “epic.”¹⁹⁴ In the epic mode, history is understood as having a clear beginning and end, and the theologian stands as an omniscient narrator, outside of the story itself. She notes that in reality, all humans make sense of both personal and communal histories in relation to the often-mysterious actions of both other actors and of God, Whom we encounter in the midst of the larger Theodrama. She is, therefore, critical of the tendency to treat Christ's resurrection as merely the next stage of human evolution (a view she ascribes more or less to Teilhard) or as unfolding according to some yet-undiscovered law of nature (as in Pannenberg, Robert John Russell).¹⁹⁵ Although perhaps preferable to the outright denial of Christ and the resurrection, these approaches obscure “the newness of the resurrection and the hope that this brings, not just for human beings, but for the natural world as well.”¹⁹⁶ History,

¹⁹⁴ Deane-Drummond, *Christ and Evolution*, 2009. 51-53. See Ben Quash, *Theology and the Drama of History*, Cambridge Studies in Christian Doctrine ; 13 (Cambridge ; New York, Cambridge, UK ; New York: Cambridge University Press, 2005).

¹⁹⁵ We would note, here, that, in or reading, Teilhard's conception of Christ as the Omega or limit did not imply an intramundane, next step in evolution. See Pierre Teilhard de Chardin, *The Phenomenon of Man* (New York: Harper & Brothers, 1959).

¹⁹⁶ Deane-Drummond, *Christ and Evolution*, 2009. 198

including the history of evolution, is reduced to either an exercise in genealogy or a systemic analysis of change.¹⁹⁷ Therein, the created world is reduced to merely the stage on which human actors play their part. However, she argues that, Theodrama

envisages an encounter between God and creation, where the freedom of the creature is preserved without resorting to pantheistic interpretations of the relationship between God and creation, which surface in many renditions of evolution as narrative.... In Theodrama, the tragic is recognized fully, rather than absorbed and neutralized in the manner that more often than not happens in an epic account...¹⁹⁸

Thus, the Theodramatic framework challenges the exclusionary, anthropocentric logic of many narrative accounts while, at the same time, recognizing the deep involvement of humans as co-actors who are faced with deeply entangled choices in the unfolding action of evolution.

Deane-Drummond's second challenge builds on the first, as she takes aim at the framework of natural theology as frequently deployed in evolutionary theology, noting that properly theological and especially Christological considerations are frequently subordinated to a scientifically-informed, imaginative worldview. First, she rejects that any one scientific account of evolution ought to be the scaffold for the broader project of evolutionary theology,¹⁹⁹ and, with Niels Gregerson, favors a "patchwork view of scientific explanations."²⁰⁰ She is also especially critical of evolutionary psychology—the

¹⁹⁷ Deane-Drummond. 199

¹⁹⁸ Deane-Drummond. 201

¹⁹⁹ Deane-Drummond. 10-22. Drummond draws from a number of different theorists, including the punctuated equilibrium of Stephen Gould and the convergence theories of Simon Conway Morris, arguing that these need not be understood in the kind of radical opposition that is frequently ascribed to them.

²⁰⁰ Deane-Drummond. 23

most problematic inheritor of sociobiology—insofar as it might play a role in these theologies, since she regards nearly the entire discipline as wholly reductive as regards religion and the larger field of human meaning.²⁰¹ Deane-Drummond also challenges that, in trying to perfectly coordinate their own theology with the results of various sciences, theologians too often obscure the most important elements of Christian faith, noting that process approaches often leave out Christology entirely. Moreover, she questions whether the defenders of the primary/secondary causality approach “sufficiently represent God as engaged in the creative process,” arguing that “It would be all too easy to view God as somehow leaving the world to its own devices after creating secondary causes.”²⁰²

Like Johnson and Edwards, Deane-Drummond’s own, constructive approach to evolutionary theology in this work begins from the basis of a Wisdom Christology, though she offers extensive apologetics in favor of retaining a Logos Christology as well. This Christology is developed over the course of the book in dialogue predominantly with the Theodramatics of Balthasar, focusing especially on his view of Trinitarian kenosis, and with the Sophiology of Sergei Bulgakov. While Deane-Drummond is critical of both thinkers on issues ranging from their gender essentialism to periodic evolutionary rejections, she maintains that both of their larger theological insights set the stage for a more thoroughly evolutionary theology and ontology.

In his mature Sophiology, Bulgakov argues that God willed the Lamb to enter history from all eternity to save creation from the disastrous and far reaching consequences of sin by bringing the world back into communion with God.²⁰³ This claim

²⁰¹ Deane-Drummond. 60-94

²⁰² Deane-Drummond. 28. Though she notes Edwards as one exponent of the view in general, it is not clear to what degree this critique is meant to be applied to either his or Johnson’s work.

²⁰³ Deane-Drummond. 112

is more than only soteriological, though, since Bulgakov stresses (1) the work of the Holy Spirit in making the Incarnation possible and (2) the “sophianic maturity” of Mary who cooperates with the working of God in her in the Incarnation: “The act of the Incarnation is not so much God acting through an exclusive power over the other, but God in love eliciting human cooperation. For Bulgakov, in Mary, original sin ‘lost its power’ by receiving the Word.”²⁰⁴ Deane-Drummond notes that the prior, cooperative work of Mary and of the Holy Spirit are so essential to the mission of the Son that Bulgakov insists that “the proper image of the Incarnation is not simply a solitary Christ, but mother and child”²⁰⁵ and that to separate Christ from Mary “is in effect an attempted violation of the mystery of the Incarnation, in its innermost shrine.”²⁰⁶ Bulgakov argued that Mary’s *fiat* had to be preceded by “a ‘hereditary holiness’ accumulated in the centuries leading up to this event, so that she was ‘full of grace’ even prior to the Incarnation.... [thereby countering the effects of] ‘Hereditary sin, the envelopment of spirit by flesh... transmitted through fleshly begetting, which corresponds to man’s sinful state.’²⁰⁷ Despite the problematic linking of sin and sex and the subordination of flesh to spirit, Deane-Drummond draws attention Bulgakov’s insight into the unfolding of grace in the drama of evolution.

In line with the larger Orthodox tradition of deification in relation to the Incarnation, Bulgakov stresses the elevation of Christ’s humanity into “the realm of the Godhead,” but he argues that this elevation is made possible by a “primordial

²⁰⁴ Deane-Drummond. 113

²⁰⁵ Deane-Drummond. 115

²⁰⁶ Deane-Drummond. 121-122

²⁰⁷ Deane-Drummond. 113, FN 62

interrelation” between the hypostasis of the Logos and humanity.²⁰⁸ Bulgakov explains this correspondence through his Sophiology, which asserts that Christ is divine Wisdom incarnate, but that the Incarnation is possible because there is a created Sophia in the world which is born in a special way by humanity: “The vocation of human beings is (1) to be bearers of the Wisdom of God through natural grace and (2) to become divinized and so enter the condition of Divine-humanity, or theanthropy.”²⁰⁹ There is a resonance between this “created grace” that is already present in created humanity and this subsequent, completing grace that invites humanity into the inner divine life. While Bulgakov affirms the mysteriousness of the union of human and divine in Christ, he affirms strongly that this bond entails a fundamental, ontological difference in the world:

[For Bulgakov] the “assumption of the integral humanity signifies not the abstract assimilation of certain human properties, corporeal and psychic, but the concrete assumption of me, you, them.” It seems to me that this aspect is just as important as his attempt to deepen the sense in which humanity interpenetrates the divine; in this case, the divine is fully integrated into all of humanity in the concrete, so that he can say, “The Lord took His humanity not from impersonal nature but from each of us personally. He thus became one with His humanity, introducing it into His own hypostatic being. And only on this basis can it be said: ‘Christ lives in me.’”²¹⁰

As these passages suggest, Bulgakov’s Sophiology affirms the intimate connection between the orders of creation and redemption from all eternity and, therein, firmly

²⁰⁸ Deane-Drummond. 113-114

²⁰⁹ Deane-Drummond. 114

²¹⁰ Deane-Drummond. 115

rejects any effort to “psychologize” or “spiritualize” grace. Deane-Drummond argues that Bulgakov’s emphasis on understanding the Incarnation in relation to the larger creation, and especially as regards the Theotokos, forms a “counterweight to the top-down, somewhat theoretical approaches to the Incarnation that tend to dominate in classical accounts and in Bulgakov’s own *Lamb of God*.”²¹¹ Mary becomes the exemplar not only for human action, but for the possibility of human redemption. As the “personal, living receptacle [of the Holy Spirit], an absolutely Spirit-bearing creature, a Spirit-bearing human being... [she] is venerated as *created wisdom*...”²¹²

Deane-Drummond acknowledges that, although this Christological foundation funds a dramatic rethinking of the role of the Incarnation in evolution—and, for our purposes, of the role of grace in evolution—there is a need to reframe them in less anthropocentric terms. In the second half of the book, then, she considers the breadth of redemption in the human and non-human world. She asks, “Is there a sense in which dolphins, for example, could ‘sin’ inasmuch as they fail to realize their flourishing, becoming addicted to destructive behavior patterns, rejecting their responsibilities as parents, and so on? This is certainly not equivalent to human sin but is related to *their moral capacity in their own world*.”²¹³ Deane-Drummond’s conditional “yes” in answer to this question represents an about-face with respect to her earlier position, and she notes an enduring uneasiness with this notion voiced by Denis Edwards and others.²¹⁴ However, she insists that the outright denial of any moral life for non-human animals denies them the richness that we attribute so readily to ourselves.

²¹¹ Deane-Drummond. 121-122

²¹² Deane-Drummond. 121-122

²¹³ Deane-Drummond. 162

²¹⁴ Deane-Drummond. 162-163

Drawing from the evidence of real if limited decision making and moral agency in various non-human animals as presented by Mark Beckoff, Frans de Waal, John Dupre, and others, Deane-Drummond observes “an unacknowledged disjunction between cosmic models of *Christology* that stress cosmic redemption and narrow versions of *atonement* that confine Christ’s atoning work to human beneficiaries, whether in the broad objective sense or narrow subjective sense.”²¹⁵ Like Johnson and Edwards, she critiques the over-representation of legal satisfaction theories of atonement and suggests a need for a broader understanding of how God reconciles the world to Godself.²¹⁶ Deane-Drummond’s own soteriological proposal draws largely from Balthasar’s kenotic, Trinitarian account of the cross and his reflections on Christ’s descent into Hell on Holy Saturday, in which Christ’s “battle” against sin within the Theodrama transforms all of the sinful, human “No’s” to God, both at an individual and a communal level.²¹⁷ Nevertheless, recognizing the need to extend this account of atonement and redemption beyond the merely human reality, she urges that this transformation must be somehow extended to encompass “all creaturely [No’s], including and especially that of creaturekind.”²¹⁸ To effect this expansion, she begins with Bulgakov’s account of shadow-sophia.

Bulgakov’s Sophiology describes the relation between divine and created Sophia, setting this as an explanatory basis for the Incarnation and the divinization of the world. However, within created Sophia, Bulgakov noted the latent possibility for a perversion of

²¹⁵ Deane-Drummond. 174-175

²¹⁶ Deane-Drummond. 176, FN 44. Here, she briefly but favorably points to Edwards’ move to bring both the divine solution to moral and natural evils under the same umbrella term of “redemption.”

²¹⁷ Deane-Drummond. 184-185

²¹⁸ Deane-Drummond. 184-185

wisdom known as “shadow-Sophia,” which entails the possibility for the deprivation of the fullness of wisdom through its re-orientation away from God and toward the limited beauties and goods in the world. While, from an evolutionary standpoint, Bulgakov’s attribution of the present reign of shadow-Sophia to a protological, human Fall is problematic, Deane-Drummond suggests that this be read as the “*culmination* of tendencies already latent in the natural world, rather than a specific work of a mythological figure called Satan.”²¹⁹ She also approvingly notes that Bulgakov connects the fallenness of the world not only with the moral impotence of humans, but also with the incomplete realization of “universal transfiguration” by the Holy Spirit, who acts in the more limited capacity of enkindling the “natural grace of creation” prior to the complete reunion of divine and creaturely Sophia in the fullness of time.²²⁰ Thus, despite his limitations, Bulgakov critically links the need for human redemption from sin and the need for the redemption of the whole creation from suffering and death and points to the real and vital work of the Holy Spirit in the transformation of the present.

Noting Bulgakov’s periodic tendency toward mythology and epic narration, Deane-Drummond once again couches Bulgakov’s work within Balthasar’s Theodramatic framework, underscoring the radiating effects of Christ’s resurrection throughout history and even into events unfolding in our midst. Instead of a once-and-for-all, ontological change rooted in past events, she argues that Bulgakov’s account of the resurrection only makes sense “as part of a tapestry of other events connected with glorification, including the ascension, sitting at the right hand of the Father, and sending

²¹⁹ Deane-Drummond. 187

²²⁰ Deane-Drummond. 186-187

down the Holy Spirit at Pentecost.”²²¹ Christ’s human nature was itself deified and assumed into the life of the Trinity and thus defining radical possibilities for new life not only in Christ as divine Sophia, but for the created Sophia so assumed, such that “For Bulgakov, ‘resurrection is a new creation of man in which he himself participates; it is the second and concluding act of creation.’”²²² Rather than bookend creation, though, the resurrection remains caught up in “a cosmic vision of present and future hope, where eternity is the foundation of time, and the divine Sophia indwells creaturely Sophia. This helpfully avoids the problem of thinking of eternity as simply the evolutionary continuity of time.”²²³ The resurrection takes place continually through time through a kenosis proper to the Holy Spirit, which “is not a self-emptying through removal of divinity, but self-limitation for the sake of the world, ‘in the subordination of the immeasurable to measure.’”²²⁴ In linking the kenotic missions of both Son and Spirit, Bulgakov suggests that Christ’s resurrection, now extended through the Spirit to the whole world, is a continuation of what was begun already in creation.

In the remainder of the book, Deane-Drummond connects Bulgakov’s Sophiology back to Balthasar’s eschatology, emphasizing the orientation of human beings in spontaneous wonder toward the fullness of being in God and the necessity of human’s accepting love in the Spirit as a condition of the possibility of grace and, in the fullness of time, glory. While Deane-Drummond spends much of this chapter addressing shortcomings in Balthasar’s theology, she affirms the vitality of his deeply kenotic, Trinitarian, and Theodramatic approach for affirming a corporate view of eschatological

²²¹ Deane-Drummond. 214-215

²²² Deane-Drummond. 214-215

²²³ Deane-Drummond. 222

²²⁴ Deane-Drummond. 217

salvation in relation to an evolutionary theology. On this basis, Deane-Drummond begins a brief foray into an evolutionary anthropology, sharply critiquing trans- and post-humanist accounts for their mythological grand narratives and their rejection of creatureliness and finitude.²²⁵ Although this chapter serves a more critical than positive function, it foreshadows the larger anthropological project suggested in *The Wisdom of the Liminal*.

2.5.2 Blurred Lines in a Liminal Metaphysics

In *The Wisdom of the Liminal*, Deane-Drummond pivots from an examination of human nature in view of the link between creaturely and divine Sophia, to one based on a concrete examination of the “human animal, as reflected through consideration of other animals.”²²⁶ While she makes only limited reference to the strong Christological foundations laid in *Christ and Evolution*, she affirms the harmony between the two accounts, both of which are rooted in a view of human nature understood as a form of dynamic relationality.²²⁷ The “wisdom of the liminal” refers to the distinct ways in which human share boundaries both with the divine and with other non-human animals. From this vantage point, Deane-Drummond considers several perceived barriers between humanness and (other) animalism— “human reason, human language, human freedom, or human creativity”²²⁸—and reveals them as more provisional and porous than previously suspected:

²²⁵ Deane-Drummond. 265-266

²²⁶ Celia Deane-Drummond, *The Wisdom of the Liminal: Evolution and Other Animals in Human Becoming* (William B. Eerdmans Publishing Company, 2014).

²²⁷ Deane-Drummond. 3

²²⁸ Deane-Drummond. 4

The liminal boundary is not so much a hierarchical gradation between beings, but more a mark of becoming through associations. The liminal also points to another relational facet of the human, namely, the human capacity for a spiritual life, the associated boundary with the divine. Working out how and in what sense such boundaries came to be expressed is of interest not just to theologians, but to anthropologists and evolutionary biologists as well.²²⁹

Discussion of these categories—which cross lines not only between disciplines but also species—necessitates metaphysical statements, but she charges that Rahner’s metaphysics remains too anthropocentric and has a “Kantian, rationalist flavor.”²³⁰ She grounds her metaphysics more squarely in Balthasar, though she notes that it falls far short of an evolutionary worldview. However, she argues that Balthasar depended less centrally on his problematic anthropology than does Rahner, and thus can be supplemented more easily.

To supplement the anthropological and metaphysical weaknesses of Balthasar’s account, Deane-Drummond suggests her Christological reflections in *Christ and Evolution*, which describe “the becoming and being of the human through being and act, rather than simply in either ontological *or* functional *or* relational terms.”²³¹ Viewed as

²²⁹ Deane-Drummond.4

²³⁰ Deane-Drummond. 10

²³¹ Deane-Drummond. 10-11. It is worth noting here that Deane-Drummond also notes the importance of rethinking the role of grace understood in this context, in conjunction with her rethinking of both anthropology and metaphysics, though she refrains from developing more completely a theology of grace or a pneumatology here: “I am acutely conscious, nonetheless, of the limitations of the study both in the scope of what I could have addressed and with respect to its intersection with other aspects of human experience of the divine. I have only hinted at, therefore, the experience of a graced life, rather than dealing rigorously with pneumatological aspects of human experience” (13). Again, on pages 49-50 of this work, “Balthasar’s attention to the significance of the resurrection for a theological anthropology is, however, a theological move on his part that I do not develop in any detail, preferring to leave this to [49-50] a future work on pneumatology, where I intend to tackle more fully the relationship between “nature” and grace.””

actors and co-actors in the divine Theodrama, she suggests a “re-visioning of human image bearing in terms of *performance*, but it is a performance caught up in a shared drama with other species and oriented toward God’s purposes for history.”²³² Throughout the book, she examines both human and non-human animal performance in relation to reason, freedom, language, community, justice making, and the building and maintaining of caring relationships. Each of these categories has, at one time or another, been used to suggest bright line separations between humans and non-human animals; however, Deane-Drummond observes that in contemporary animal studies, “the attempt to find such human universals in terms of ‘design’ features is becoming rapidly outdated [since] the complexity of variation within groups and individual variation as part of the matrix of natural selection means that even talk of ‘universal’ characteristics among evolutionary scientific positivists is less convincing now than even a decade ago.”²³³ Though she challenges essentialist divisions, Deane-Drummond does not flatten the distinctively human in pursuit of a democratic biocentrism. Nevertheless, the differences that she acknowledges are not intended to refine the old categories or fund new ones in pursuit of a theological anthropology. Instead, human distinctiveness should be understood “as much on performance in the Theo-drama as on specific capabilities,” emphasizing “identity understood through relational community development... in relationship with other animals... [in the course of] ecologically entangled lives.”²³⁴

Noting a “naïve optimism” in many of the sciences from which she draws her animal research, Deane-Drummond also notes an epistemological exigence in her project.

²³² Deane-Drummond. 11

²³³ Deane-Drummond. 18

²³⁴ Deane-Drummond. 22-23

She favors the Thomistic synthesis of philosophy/science and theology, although she criticizes some of his contemporary adopters,²³⁵ who neglect the primacy of properly theological reflection in Thomas's adherence to a "wisdom perspective... [holding] to a metaphysical priority of revelation in naming theological truths."²³⁶ Hence, while this book will engage deeply with numerous different anthropological disciplines,²³⁷ she emphasizes that a properly theological anthropology must be framed at the outset by its attending to the unfolding of God's action in the world in the Incarnation and in the "inner human experiences of God as Other; in theological language, the work of grace."²³⁸ She continues, "The way to achieve an outline of such theological anthropology as a more constructive task is through theo-drama, bringing the world of creation into the human world of history."²³⁹ However, although Deane-Drummond proposes a theo-dramatic and Christologically informed approach to her anthropology, she does not intend to follow Balthasar in grounding her anthropology on Christ's resurrection, "preferring to leave this to a future work on pneumatology, where I intend to tackle more fully the relationship between 'nature' and 'grace.'"²⁴⁰

Following these introductory remarks, Deane-Drummond turns to treat one of the most common sites of human exceptionalism, reason. She begins with a long reflection

²³⁵ She suggests some problems of this sort in Alasdair C. MacIntyre, *Three Rival Versions of Moral Enquiry: Encyclopedia, Genealogy, and Tradition : Being Gifford Lectures Delivered in the University of Edinburgh in 1988* (Notre Dame, Ind.: University of Notre Dame Press, 1990).

²³⁶ Deane-Drummond, *The Wisdom of the Liminal*, 2014. 25. Related to this perspective, Deane-Drummond also favorably treats David H. Kelsey, *Eccentric Existence: A Theological Anthropology*, 1st ed. (Louisville, Ky.: Westminster John Knox Press, 2009).

²³⁷ Deane-Drummond. 51. She notes that, while *Christ and Evolution* dealt primarily with evolutionary theory, charting a course between Simon Conway Morris and Jay Gould, this book focuses more on a wide range of anthropological approaches.

²³⁸ Deane-Drummond. 43

²³⁹ Deane-Drummond. 43

²⁴⁰ Deane-Drummond. 49-50

on Aquinas's position on non-human animals, noting that he is often invoked by those who reject the inherent value of non-human animal life. She acknowledges the fact that Thomas was, in fact, dismissive of inherent worth in animals, but challenges that this is a misreading of Thomas's insights as transposed into the contemporary situation. On the one hand, she demonstrates Thomas's careful attending to the science of his day, the limitations of which fund his frequent disregard of non-human animals. On the other hand, she notes that, in attending to the animal studies available to him in Aristotle and his teacher Albert the Great—the foremost animal researchers of the Middle Ages—Aquinas's theology is deeply rooted in the practice of thinking about humans with respect to their shared boundaries with non-human animals. Although Thomas is often caricatured and criticized today for operating out of a static and deeply limited physics and cosmology, by shifting the conversation to his biological commitments, Deane-Drummond reveals the obvious limits of Thomas's particular judgments regarding non-human animals while highlighting his convictions about the dependence of theological anthropology on a knowledge of humans in relation to the larger, created order.

Building especially on the work of Jean Porter, Deane-Drummond observes that many Medievals acknowledged a real if limited ability of non-human animals to participate in natural law and natural justice according to their form of reason.²⁴¹ Despite the fact that Aquinas limits this to a sort of instinctual behavior governed ultimately by divine providence, Deane-Drummond highlights Aquinas's recognition of the lower faculties of cognition common to both humans and animals. Thus, despite his

²⁴¹ Deane-Drummond. 72-82. See Jean Porter, *Natural and Divine Law: Reclaiming the Tradition for Christian Ethics*, Saint Paul University Series in Ethics (Ottawa, Ont. : Grand Rapids, Mich., Grand Rapids, MI : Novalis ; W. B. Eerdmans PubCo, 1999), especially 63-120.

impoverished view of animal cognition, he nevertheless understood human reason—and their potential to be illumined by grace, which is not dependent on the strength of their reason—as belonging to a continuum running from non-human animals to angels.²⁴²

Deane-Drummond troubles the tendency of limiting the effects of grace to humans, though she remains cautious about any wholesale leveling of human and animal capacities:

[W]hile grace as a work of the Holy Spirit does and can work on the appetitive senses as well as the intellectual senses, inasmuch as it entails a graced freedom it shows forth the particular grace given to human beings rather than other animals. It makes more sense, therefore, to speak of the specificity of human acts as bearing the marks of humanity made in the image of God, rather than focusing just on deontological properties that are shared with other animals detached from the contexts of these acts.²⁴³

In this sense, Deane-Drummond acknowledges a real role for grace in transforming the lower faculties, but she is wary of any reductionist reading of the operations of grace that fails to the graced transformation of the spiritual faculties of persons.

She takes up these larger questions regarding the relation between human freedom and animal agency in the subsequent chapter. Deane-Drummond notes Aquinas’s nuanced understanding of the meanings of freedom (of will, of choice, of action, etc.), by which he avoids the errors of both contemporary compatibilist and libertarian approaches.²⁴⁴ Within this more articulated framework, she then explores the reality of

²⁴² Deane-Drummond, *The Wisdom of the Liminal*, 2014. 82-87.

²⁴³ Deane-Drummond. 88

²⁴⁴ Deane-Drummond. 92-94. Deane Drummond defines these alternatives on 93 as follows: “Philosophical compatibilists are also deterministic in that while they acknowledge that human beings have a genuine

animal freedom in terms of agency. Although some species (e.g. paramecia) are governed by only physical and not truly intentional forces,²⁴⁵ higher animals not only make intentional decisions, but they also share decision making spaces with humans, whose freedom only makes sense “in the context of a community of other humans and other creatures who share to a greater or lesser extent capabilities for agency.”²⁴⁶ Deane-Drummond maintains that Aquinas’s distinction between voluntary (*voluntarium*) and free (*liberum*) decisions acknowledges the free-agency of human and non-human animals in pursuit of desirable goals, while also accounting for the greater ability and responsibility proper to humans, who “[recognize] it deliberatively *as* desirable and [consider] the means to get to that end.”²⁴⁷ Although Deane-Drummond troubles Aquinas’s sharp denial of higher freedoms to other animals, she points positively toward his recognition of the propensity of all creatures to love God befitting their nature.²⁴⁸ She observes the positive impact that this view from Aquinas exerted on Balthasar, who avoids the problematic tendencies of contemporary philosophical approaches to the question of freedom, though she notes Balthasar’s failure to extend that freedom to non-human animals and, through an overdetermined gender essentialism, to women.²⁴⁹

inner sense of free will, that free will is part of a larger process and chain of events that are themselves deterministic. So for compatibilists, as long as the immediate and particular choice comes from the desire of the individual, that choice is still reasonably called free, even if it is constrained by causes outside the agent. So for compatibilists, freedom is still possible even within a deterministic framework.... Libertarians argue against determinism of this sort in favor of a genuine possibility or power to be able to do or act otherwise. An agent is only free if the conscious agent could have chosen differently.” Continuing on the next page, Deane-Drummond argues that both of these views prove incapable of explaining both the efficacy of divine action and the reality of free human will.

²⁴⁵ Deane-Drummond. 98

²⁴⁶ Deane-Drummond. 100

²⁴⁷ Deane-Drummond. 101

²⁴⁸ Deane-Drummond. 106, quoting *Summa Theologiae* 1a2ae 109.3

²⁴⁹ Deane-Drummond. 112-118.

Arguing for a more fluid understanding not only of agency, but also some form of freedom in higher order animals, Deane-Drummond then turns to the quasi or proto moral agency of these animals “according to the norms established in their social worlds.”²⁵⁰ While she is wary of projecting human moral frameworks onto the animal world, she contends that human morality must be understood as part of a larger “intersubjective and intermoral evolution... [not] in isolation from other species, but in coevolutionary contexts.”²⁵¹ She questions how interspecies entanglement effects our understanding of grace-informed passions, virtues, and gifts, noting that contemporary Thomistic ethicists have largely ignored their role with respect to the concrete passions, emotions, and estimative sense of other creatures. Problematically, grace has too often been understood to exclude the lower order phenomena, focusing almost solely on psychological and spiritual realities and ignoring non-humans altogether:

If attention is given to just the former work of grace, then human moral life tends to be split off from the bodily emotive and ecological contexts in which human lifeworlds are situated. If, on the other hand, too much emphasis is given to biological forms, then the possibility of a transformed human moral life in communion with the work of the Holy Spirit is lost.²⁵²

To balance these two moments in a more adequate theology of grace, Deane Drummond turns in the next chapter to elaborate the space of our liminality and “draw out the facets of the evolutionary questions related to *why* humans have the kinds of complex social and cultural worlds that they do, and offer a theological interpretation.”²⁵³

²⁵⁰ Deane-Drummond. 130

²⁵¹ Deane-Drummond. 136

²⁵² Deane-Drummond. 150-151

²⁵³ Deane-Drummond. 194

She surveys various evolutionary anthropological studies, noting how both cooperation and conscience emerged in the earliest human societies. Critical of the strong tendency toward reductionism among especially evolutionary psychologists, Deane-Drummond describes the increasing complexification leading to the emergence of authentic religious consciousness, drawing on the “four-dimensional” account of evolution suggested by Eva Jablonka and Marion Lamb.²⁵⁴ In addition to genetic inheritance, this account attends to informational, instructional/intergenerational, and symbolic transmission. Therein, it better explains the divergent realities of phenotypic inheritance from genotypic expectations and scaffolds more clearly the realities of interspecies entanglement in evolutionary history.

After briefly critiquing the David Kelsey and Sarah Coakley’s theological anthropologies,²⁵⁵ Deane-Drummond returns to Balthasar’s Theodrama as the best framework for scaffolding an anthropology that takes seriously the mutually-constitutive relationships of various species along each of the four evolutionary dimensions. Recalling her broad critiques of both narrative histories and natural theologies, she argues that that Balthasar’s Theodrama—developed along explicitly scriptural and theological lines—

²⁵⁴ Deane-Drummond, 196-197. See Eva Jablonka and Marion J. Lamb, *Evolution in Four Dimensions: Genetic, Epigenetic, Behavioral, and Symbolic Variation in the History of Life*, Life and Mind (Cambridge, Mass.: MIT Press, 2005).

²⁵⁵ Deane-Drummond, *The Wisdom of the Liminal*, 2014, 214. “[Coakley presents] a mirror image of the problems associated with Kelsey’s anthropology. Kelsey begins explicitly with God as Creator, paying lip service to creaturely kinds, but takes away their significance when considering creaturely redemption and the eschaton. Coakley, on the other hand, begins with a hidden view of God that she hopes will come into clearer view through close attention to what is happening in the creaturely world. Kelsey’s address is directed to the ecclesial community. Coakley is bolder, moving into the public sphere. But will biologists ever be convinced by her attempt to lure them into a form of natural revelation? The views of sacrifice emerging from theology and her interpretation of evolutionary biology are about as paradoxical as they can be when brought alongside each other....”

suggests a convergence of the intelligibilities of science and theology without evacuating the integrity of either.²⁵⁶

While evolutionary theories and theologies have too often obscured the agency of non-human actors in the Theodrama, Deane Drummond notes that relatively new framework called “Niche Construction Theory (NCT)” avoids this insidious anthropocentrism:

Standard evolution theory is “externalist” inasmuch as the environment is viewed as an external factor acting in order to select those internal properties that are most adapted to that environment. Natural selection in this view is the “ultimate” category that explains phenotype, including behavioral differences, and devalues “proximate” causes. Hence, standard evolution theory can still include niche construction, but the “ultimate” explanation is still rooted in natural selection. In NCT, the idea of “causation” becomes problematized. So the “dichotomous proximate and ultimate distinction” is replaced with “reciprocal causation.” In this way, niche construction works with natural selection in the evolutionary process in a dynamic interchange. Niches are themselves part of the inheritance process, so that an *interactionist* theory replaces an *externalist* theory.²⁵⁷

NCT explains not only the inheritance of genotypes and phenotypes, but of behaviors, relationships, and values, thus forming an important bridge between the natural and human sciences. It is better able to account for the inheritance of broader capacities to account for more complex behaviors and characteristics, like the inheritance of intellectual and behavioral plasticity and creativity, but it also is able to account for both

²⁵⁶ Deane-Drummond. 215

²⁵⁷ Deane-Drummond. 220

intra- and inter-species cooperation regarding survival and transmission. Through this framework, it becomes possible to both explain and evaluate the “evolution of conscience,” including the evolution and devolution of human ecological conscience, not as remote Kantian subjects, but as a deeply implicated members of a larger ecological community. While Deane-Drummond remains wary of a theology built on any non-theological foundation, she notes the collaborative and creative potential for this approach in a relationship of “convergence” with her Theodramatics.²⁵⁸

In the context of NCT, which articulates the mutual conditioning of intellectual and moral agency among species, Deane-Drummond then considers what responsibilities humans have concerning the larger ecological and evolutionary niches to which they variously belong. She compares the distinctively human potential for justice as grounded in reflection and reasoning with the “‘innate’ sense of fairness or social coordination” found in many non-human animals.²⁵⁹ She reflects at length on Martha Nussbaum’s ethics in light of a “sentience threshold” as developed in *Frontiers of Justice*—a marked improvement over Peter Singer’s utilitarianism, which suffers from a “lack of any deontological or principled foundation” and turns only on an inadequately differentiated pleasure/pain calculus.²⁶⁰ However, Deane-Drummond criticizes Nussbaum for her “pretension that her views are consistent with a total rejection of metaphysics... [given] her attachments to not just wonder but to human dignity and the dignity of life rooted in fellowship and natural law.”²⁶¹ Moreover, she contends that Nussbaum’s approach

²⁵⁸ Deane-Drummond. 234-237

²⁵⁹ Deane-Drummond. 247

²⁶⁰ Deane-Drummond. 247-257, especially 250-251. See Martha Craven Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership*, Tanner Lectures on Human Values (Cambridge, Mass.) (Cambridge, Mass.: Belknap Press : Harvard University Press, The Belknap Press : Harvard University Press, 2006).

²⁶¹ Deane-Drummond, *The Wisdom of the Liminal*, 2014. 255

anthropocentrically projects norms onto animals, ignoring their own distinct communal realities.

Here, Deane-Drummond returns once again to Aquinas's theology, this time to flesh out her own approach to other-creaturely ethics. Although limited by the monarchical political framework and broad anthropocentrism of his age, she argues that through his "inclusion of God's justice in theoretical and practical considerations of justice making... [Aquinas sets the] moral ideas higher than they would have been had they been based simply on an understanding of the experience of politics."²⁶² In his framework—which reflects the animal-human-angel continuum acknowledged by Deane-Drummond through the book—all animals exhibit "the natural tendency to justice as fairness that in human communities is capable of becoming abstract and politically institutionalized," while humans alone demonstrate "the grace-filled moral virtue of justice."²⁶³ Deane-Drummond notes that this "natural fairness" recalls Aquinas's position on animals' real if limited participation in natural reason and natural law. Nevertheless, she challenges Aquinas's attribution of kindness to non-human animals as being a matter of charity and not justice, the latter understood in the sense of rendering what is owed.²⁶⁴ Given our knowledge of the complexity of at least higher animal functioning and the porous and intercontextual nature of our own interior development, she affirms that humans *owe* kindness and responsibility toward animals as a matter of both distributive

²⁶² Deane-Drummond. 257

²⁶³ Deane-Drummond. 258

²⁶⁴ Deane-Drummond. 264

justice and—in light of our wanton ecological and planetary destruction—of restorative justice.²⁶⁵

Pushing back against Nussbaum and others, Deane-Drummond also advocates for an understanding of a stronger continuity between the theological and natural virtues in Aquinas's thought, arguing that their assertion of a radical discontinuity between the two renders the natural virtue of human and non-human animals irrelevant in the final calculus. Turning again to Jean Porter, she stresses that

the significance of Aquinas's scheme is that grace and nature are given their respective authority, not in the sense that there is 'pure nature,' but in the sense that *safeguards* the importance of nature as intelligible on its own terms, so that the distinctiveness of grace safeguards the witness of nature to divine wisdom....

[Moreover] The context of "nature" provides the illumination through which the language of grace starts to make sense, so "we have reason to believe that God's grace will be continuous with, or at least not a perversion of, God's creative goodness."²⁶⁶

Building on Porter, Deane-Drummond affirms both (1) that non-human animal participation in natural law and natural virtue has an enduring relevance, even in the order of supernature, and (2) that humans, uniquely situated in relation to grace and nature, have an enduring obligation to the rest of nature as a matter of *both* justice and charity. Linked to non-human animals horizontally through the obligation of justice, and

²⁶⁵ Deane-Drummond. 267-268. Interestingly, she also notes here that Aquinas does not have an account of what the poorest human members of a society are owed as a matter of distributive justice, implying that Aquinas's thought has had to be opened up along similar lines in recent years.

²⁶⁶ Deane-Drummond. 274. Compare with Jean Porter, *Nature as Reason: A Thomistic Theory of the Natural Law* (Grand Rapids, Mich.: WBEerdmans PubCo, 2005). 378-400.

vertically through the exercise of charity realized through an awareness of the presence of the Holy Spirit, Deane-Drummond sums up her relational anthropology by adverting to “the special virtue of practical wisdom... refining what it means to be human... in the light of practical issues of ecological and creaturely ethics.”²⁶⁷

In focusing her anthropology on practical wisdom, Deane-Drummond suggests that “theological anthropology cannot be separated from our theological ethics [since] the two act together in dynamic interrelationship, a hermeneutical circle in which our acts inform who we become, and vice versa.”²⁶⁸ Thus, not only do past choices become ontologically relevant for human self-understanding in the present, but, in the act of reflectively constituting this identity, we allow “ourselves to be exposed to the possibility of human encounter with *other creatures*... [thus sharpening] up once again the more specific role of human beings in the overall theo-drama; in other words, in encountering other animals we become more human.”²⁶⁹

In the closing pages of the book, Deane-Drummond offers a number of brief intimations at her larger theology of grace as operative in this text:²⁷⁰

It seems reasonable to suggest that the potential for receiving knowledge and love of God is likely to be more perfect in human beings than in other animals, even alloprimates. An unanswered question is how and in what sense the grace of God could be said to work in human beings compared with other creaturely kinds. But with the emphasis put on the action of God and the capacity to receive God’s grace,

²⁶⁷ Deane-Drummond, *The Wisdom of the Liminal*, 2014. 280

²⁶⁸ Deane-Drummond. 302-303

²⁶⁹ Deane-Drummond. 308

²⁷⁰ Deane-Drummond. 306, FN 80: As she notes earlier in the book as well, “Such a question presupposes a more developed account of pneumatology, which is outside the scope of this book.”

the possibility of at least a weak form of image bearing existing in some other animal kinds is not ruled out.

Wary of over-identification between human experiences of grace and whatever may unfold in the non-human world, she suggests that, rather than frame their perfection or consummation in terms of the fraught language of *Imago Dei*, we may look for the “likeness” of God in non-human animals. This distinction aims both to protect the legitimate and, in some sense, mysterious otherness of non-human animals from ourselves, but also to acknowledge that only humans

are capable of an awareness of their active role in their performance and in this sense are capable of using their minds to adapt to new possible futures. Inasmuch as other animals are not yet perfect, they are still capable of being transformed into a more perfect divine likeness, but this is through the work of grace in eschatological hope rather than in an expectation for present reality.²⁷¹

Nevertheless, she strongly affirms that there needs to be some accounting of grace in relation to animals in order to answer some of the most important questions about our past, present, and future as entangled with them.

Reflecting back on Haught, Johnson, and Edwards, Deane-Drummond’s work brings many unique contributions to the table. Like Johnson and Edwards, she favors a modified or expanded form of Thomism to scaffold her theology and her metaphysics, and she remains wary of the process approach to both. She also shares with them a distinctive Christological turn and an inclination toward Wisdom Christology. However, partially on account of the influence of Balthasar and Bulgakov, Deane-Drummond is

²⁷¹ Deane-Drummond. 307

more sanguine about the possibilities of bringing the fruits of Wisdom Christology into dialogue with Logos Christology, and develops these possibilities further than Edwards.

Deane-Drummond's strong criticisms of natural theological approaches and her deep commitment to Theodrama also distinguish her from Edwards and Johnson, whose works, while not obviously fitting the mold of strict natural theology, have been more inclined to begin from the facts of evolutionary science and to strongly coordinate their theological and metaphysical accounts with them. Favoring what she terms a "convergence model" between theology and science, Deane-Drummond provides a compelling account of divine love as operating electively and selectively in creation as part of the larger Theodrama, which defies neat circumscription. Taken in conjunction with her attention to contemporary animal studies, Deane-Drummond has laid an important foundation for understanding sin and grace in the relation to non-human creation.

However, by eschewing more methods of direct correlation for indirect convergence, Deane-Drummond also opens herself up to critical questions about the adequacy of her epistemological and metaphysical framework. Although the liminal metaphysics that she evokes offers a framework for her concrete and productive engagement with the data of multiple fields of inquiry, therein developing a non-essentialist and deeply relational account of metaphysics that is only gestured at in Edwards' works, it is far from obvious how these are to be reconciled with her more explicitly theological claims. In this sense, Deane-Drummond's approach may have more in common with some post-liberal thinkers, who are more content to let the narrative—or in this case, the dramatic—integrity of scripture exist in its own intelligibility rather than

bring it to bear across multiple disciplines. Thus, while she challenges the overreaches of sociobiology, evolutionary psychology, and post- and trans-humanism, she may not have the epistemological and metaphysical resources to sustain these critiques.

2.6 Where Do We Go from Here?

In treating these four thinkers together, we have tried to demonstrate the need for a more robust theology of grace in relation to non-human creation. Any viable account of grace will have to avoid the over-psychologizing and spiritualization of grace, which tends to ignore the enfleshed characteristics of grace as it exerts a downward causality on the world at every level. In this sense, grace must be understood not only in relation to the elevation of humans to the absolutely supernatural realm in mystical experience and the beatific vision, but it must also be understood in relation to its effects in the relatively supernatural elevation of creatures throughout evolutionary history, and in relation to the interdependent communities or niches within which they exist and from and within which humans emerge and develop.

Each of the thinkers treated above brings important insights to the table, and any further attempts at building out a theology of grace must be forwarded in light of these contributions. John Haught is the clearest of these four thinkers in advocating for a model of engagement between theology and science and for framing that engagement around a clearly defined metaphysics. Although we do not believe that process thought, at least as he presents it, can be made to dialogue amiably with the larger Catholic, theological project or with the sciences in their own genuine pursuit of truth, Haught's conviction regarding the need for an explicitly metaphysical component to evolutionary theology

resonates with our own approach, which is grounded on the critical realist metaphysics of Bernard Lonergan.

I find much fertile reflection in both Johnson and Edwards as well, who are both concerned with relating contemporary evolutionary theology back to Aquinas's speculative synthesis while pushing back on some of the most problematic misreadings. Through their deep dialogue with Rahner, they work to bring out the best of the Catholic theological tradition to articulate God's love and compassion, bestowed on creation through an immanence that is itself the result of God's perfect transcendence. At the same time, they are clear about the genuine challenges raised to traditional accounts of both creation and redemption, and they commit to thinking both orders together in pursuit of a more adequate account of the place of humanity in relation to the rest of creation. Moreover, they recognize a more positive role for natural theology in the development of evolutionary theology, and present some helpful foundations upon which we intend to build.

Finally, Celia Deane-Drummond offers an important critique of some more natural-theological approaches insofar as they may foreshorten the elective and selective action of God in history. While we question Celia Deane-Drummond's stated impulse to keep theology and science separate (if convergent) in order to address this tendency, it seems to me that the liminal metaphysics in her later works suggests a closer relationship between theology and science than her critiques expressly endorse. Functionally, she models the deep engagement between theology and science that must ground any systematic approach to ecological and evolutionary theology if it will affect the kind of largescale theological reorientation called for by *Laudato Si'* and by the multiple

challenges facing the world today. Moreover, she goes the furthest in thinking about the scope of grace in relation to material creation, in part because of her concomitant commitment to thinking about sin and moral agency in relation to at least higher animal species.

Building on these insights, we will turn in the next chapter to the early works of Bernard Lonergan in order to clarify his positions and contributions in the ongoing appropriation of Thomas's thought in Catholic theology and metaphysics. Our aim is not so much to critique the approaches treated in the foregoing as to clarify the unique contributions that Lonergan's thought can make to the larger reorientation of theology within an evolutionary worldview. In particular, we hope to demonstrate that (1) his careful attention to the theoretical distinctions and the synthetic achievements of Thomas's theology of grace; (2) his transposition of Thomas's theoretical metaphysics into a critically and interiorly grounded metaphysics; and (3) his engagement with the state of modern science specifically in light of its focus on the contingent, developmental, and relational; all position his thought to build on the best of each of these thinkers and move the state of the question forward.

3. CHAPTER THREE: LONERGAN'S EVOLVING THEOLOGY OF GRACE

This chapter examines Bernard Lonergan's potential contributions to a more thoroughly evolutionary theology of grace in the world. As suggested at the end of the previous chapter, Lonergan's transposition of Thomas's theoretical metaphysics into a critical, heuristic metaphysics based on a critical epistemology and a phenomenologically verifiable cognitional theory offers a sapiential framework for distinguishing the tasks of various sciences—natural, social, human, and theological. At the same time, it also clarifies the relationship between those fields such that the results of each discipline may raise new questions for understanding in others. Beyond these philosophical achievements, we will also consider Lonergan's theology of grace, which first recovers and then begins to transpose Aquinas's synthesis on grace and nature and which has much to offer an evolutionary theology seeking greater understanding of God's healing and elevating action in our world. Unlike the thinkers treated in the previous chapter, though, Lonergan does not have an evolutionary turn in which he engages the genuinely new and difficult questions posed by the Extended Evolutionary Synthesis. Rather, as a contemporary of both Rahner and Balthasar, Lonergan's work is situated in both a historically and perhaps conceptually prior stage in the development of evolutionary theology, though we maintain that his thought might be developed quite fruitfully in relation to a number of extant challenges in the contemporary conversation. Like both

Balthasar and Rahner, though, there remains a prior task of clarifying the precise contributions of Lonergan's project on its own merits. In this chapter, we will draw these out by adverting to three different stages of his career.

The first phase is comprised of Lonergan's apprenticeship to Thomas Aquinas. Beginning with his doctoral studies, Lonergan's earliest works focus especially on Aquinas's theology of grace and, subsequently, the unthematized yet performative psychology and implicit epistemology that Lonergan discovered as grounding Aquinas's metaphysics. These early works thus contain both Lonergan's interpretation of Aquinas in light of Twentieth Century theological and philosophical questions as well as the nascent form of Lonergan's own later contributions in these fields. Lonergan's study of Aquinas is comprehensive both with respect to Aquinas's own works and the history of interpretation and commentary in the centuries that follow, as Lonergan worked to resolve some of the unresolved disputed questions that gave rise to opposed or problematic readings. Lonergan's work during this period includes his dissertation on *gratia operans*, which he revised for publication in five articles in *Theological Studies*, and an additional five articles pertaining to *verbum* or "word" or "idea" in Aquinas's mature analogy for the Trinity based on the intelligible processions. During this same period, he also produced numerous articles and unpublished course texts and notes containing a number of original theological contributions. Though many of these texts figure prominently in Lonergan's theology of grace, they tend to be occasional treatments of particular issues raised by specific theologoumena rather than a synthetic elucidation of the whole of Aquinas's theology. Nevertheless, all of these works emerge out of a synthetic grasp in Lonergan's own thought, which carefully elucidates Aquinas's thought

and corrects the mistaken Baroque interpretations that had governed theological discourse on these topics for centuries. These studies provide clarifications of a series of perennially relevant insights that need to be integrated into any modern systematic formulation—issues such as (1) the differences between grace as (a) habitual and actual, and as (b) operative and cooperative; (2) the meaning of operation or motion; (3) the meaning of divine transcendence; (4) the meaning of the universal instrumentality of creation under divine providence; (5) and the meaning of the nature of human will and freedom.¹ Our treatment of these earliest works will depend greatly on Michael Stebbins' magisterial work, *The Divine Initiative*, which presents the underlying synthesis elaborated in Lonergan's otherwise more diffuse and occasional writings on grace.²

The second phase of Lonergan's work to which we will attend is characterized especially by his masterwork, *Insight*, which presents an explanatory account of the intelligibility of reality in a philosophical register—though not one which rules out the

¹ In his recently completed dissertation, Jonathan Heaps deals specifically with the question of the relationship the Scholastic theorem of the supernatural, high-pointed in the work of Thomas Aquinas, and the question of the supernatural in contemporary authors, especially Maurice Blondel and Jean-Paul Sartre. As Heaps summarizes in his abstract, "The recent debate over the supernatural has proved intractable in part because of a failure to distinguish two irreducible-but-linked problems of the supernatural, one medieval and one modern. The first is a metaphysical problem concerning the cooperation of humans with God. Bernard Lonergan's retrieval of St. Thomas Aquinas's solution to this problem indicates that a grasp of divine concursus is integral to a theory of nature and grace.... [Second,] there remains a modern problem of the supernatural. It cannot be reduced to metaphysics, because its appearance depends on a solution to the medieval problem. Still, an effort to answer the modern problem by metaphysical means offers two important determinations of the modern problem. Because human freedom is rational, human actions emerge from a process of deliberation and are formally constituted by meaning. Thus, discerning what God is doing in human action is a diachronic and hermeneutical task. Taking the full scope of human enterprises, the modern problem of the supernatural calls out for a theological hermeneutics of culture." See Heaps, "The Ambiguity of Being: Medieval and Modern Cooperation on The Problem of the Supernatural." Heaps's analysis underscores the significant difference between the way that the term "grace" functions in theoretical and philosophically-grounded causal accounts (the medieval problem of the supernatural), on the one hand, and at the level of interpreting our existence in a friendly universe at apprehended at the level of interiority, on the other. While Heaps's analysis does not move to explain the effects of grace in the flesh and in non-human creatures, this chapter presumes a similar distinction as regards the transposition from theory to interiority.

² J. Michael Stebbins, *The Divine Initiative: Grace, World-Order, and Human Freedom in the Early Writings of Bernard Lonergan*, Lonergan Studies (Toronto; Buffalo: University of Toronto Press, 1995).

real effects of grace in a universe characterized by emergent probability. In *Insight*, Lonergan transposes his studies on Aquinas's critically grounded theoretical metaphysics that formed a common language for the Scholastics into a modern frame of reference that reflects an awareness of historically situated and conditioned subjects, as well as the rise of specifically modern science. Rather than attempting to eradicate metaphysics altogether, as do many of his contemporaries, Lonergan excavated the prior philosophical layers of cognitional theory and epistemology that undergird a critically grounded metaphysics as the total and basic horizon, which offers a general heuristic structure as an explanatory science. Much ink has been spilled in interpreting and communicating Lonergan's thought in *Insight* in the decades since its first publication, and we will neither seek to review those works nor to add yet another interpretation here. Instead, we will employ the work of Patrick H. Byrne—who, besides being a highly-regarded and dependable Lonergan scholar, is also a philosopher of science—to focus on how *Insight* transposes the pre-modern concept of nature. Still, while the final chapters of *Insight* touch on grace as the “divine solution to the problem of evil,” Lonergan does not fully explicate all the situations and manners in which grace functions.

If *Insight* retrieves the concept of nature as relevant to the achievements of both modern science and historical consciousness, many of Lonergan's works in the decades following its publication point towards a reorientation of his earlier theology of grace in the context of nature as relevant not only to the external and sensible phenomena but also the internal data of human interiority. Thus, we identify as the third stage of Lonergan's development the period that spans the years leading up to and following the publication of Lonergan's *Method in Theology*. During this stage, Lonergan's specifically

foundational methodology turned more fully towards the problems raised by Twentieth century issues regarding philosophical and theological hermeneutics; and his theology during this period emphasizes more strongly the antecedent need for God's grace in transforming the dialectical human situation. Crucially, Lonergan also made more explicit how this transformation occurs in human beings as embodied, socialized, acculturated persons, and thereby laid a foundation for significant development and expansion of these ideas by his students. The transposition of grace Lonergan effected in these works remains somewhat preliminary, however. Moreover, the idea of expanding a theology of grace to talk about God's action beyond the strictly human order of being seems to have been entirely beyond Lonergan's horizon. Thus, while we will provide a sketch of the foundations Lonergan laid for such a transposition during this period, we will not attempt an exhaustive summary of Lonergan's later theology of grace to complement Stebbins' treatment of his early years, however much such a work is surely needed.

3.1 Foundations in the Tradition: "Reaching Up to the Mind of Aquinas"

Lonergan's earliest and most sustained engagements with theologies of grace stem from his early apprenticeship to Thomas Aquinas. When Lonergan began his doctoral studies, his director, Charles Boyer, S.J., suggested that Lonergan examine the problem of operative grace in relation to human freedom, focusing particularly on a few hotly contested and inadequately understood articles in the *Prima Secundae*.³ Lonergan's

³ Bernard J. F. Lonergan, *Grace and Freedom: Operative Grace in the Thought of St Thomas Aquinas*, Lonergan, Bernard J. F. Works. 1988 v. 1 (Toronto; Buffalo: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2000). xviii

resulting dissertation—*Gratia Operans: A Study of the Speculative Development in the Thought of Thomas of Aquin*—began his lifelong engagement with Thomas’s thought.

The dissertation assumed a diachronic view of Aquinas’s theology of grace, tracing a number of developments and turning-points in order to more clearly identify Aquinas’s successive insights on the way to the synthesis achieved in his *Summa Theologiae*. In addition, Lonergan sifted through the reception of Thomas’s ideas in subsequent centuries—paying particular attention to the complicated debates between the followers of the Dominican Domingo Báñez and those of the Jesuit Luis de Molina—in order to resolve an apparent impasse that had arisen between these interpretive traditions. Discovering that both of these dominant, interpretive streams had misunderstood Aquinas, Lonergan retrieved Thomas’s position by “[going] beyond [Thomas’s] words and phrases” in order “to grasp questions as once they were grasped” and to “follow through successive works the variations and developments of his views.”⁴ Reflecting on these earlier studies in the epilogue to *Insight*, Lonergan describes how this work of interpretation entailed both a subjective and objective component:

After spending years reaching up to the mind of Aquinas, I came to a twofold conclusion. On the one hand, that reaching had changed me profoundly. On the other hand, that change was the essential benefit. For not only did it make me capable of grasping what, in the light of my conclusions, the *vetera* really were, but also it opened challenging vistas on what the *nova* could be.⁵

⁴ Bernard J. F. Lonergan, *Insight: A Study of Human Understanding*, 5th ed., rev. and aug., Lonergan, Bernard J. F. Works. 1992; 3 (Toronto; Buffalo: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 1992), 769.

⁵ Lonergan. 769.

Unlike Schleiermacher's hermeneutical theory of virtually entering into the mind of the author, Lonergan's method aimed at retrieving the dynamic of the questions which motivated the author through successive investigations and statements of his findings. This helps clarify not only the historical context in which the question arose and evolved, but it also promotes the raising of these questions anew in respect of contemporary issues.

Following the completion of his dissertation, Lonergan reworked the text for publication, ultimately yielding five articles that were published in series in *Theological Studies*.⁶ These writings mark Lonergan's longest sustained writings on the topic of grace, though they are supplemented by a several other works which Lonergan composed between 1941 and 1946 as his Latin textbook for his seminary classes at the Collège de l'Immaculée Conception in Montreal, including *De Ente Supernaturali* and his *Supplementary Notes on Sanctifying Grace*.⁷ During this period, Lonergan also produced a number of important articles that provide further insight into his theology of grace and his understanding of world processes and orders.⁸ Reflecting on Lonergan's achievement across these works, Michael Stebbins remarks that:

⁶ Lonergan completed the dissertation itself in 1940, only about seventeen months after he began the project. However, given the outbreak of war in Mussolini's Italy, Lonergan had to leave the Gregorian University before he could defend his thesis. As the war dragged on, Lonergan was eventually allowed to defend the thesis in Montreal in 1943. However, it would still be 1946 before his degree was officially conferred back in Rome. See Lonergan, *Grace and Freedom*, 2000. xix-xxi. The articles that Lonergan published in *Theological Studies* have been collected and reprinted in *Grace and Freedom*. 3-149.

⁷ Bernard J. F. Lonergan, *Early Latin Theology*, Lonergan, Bernard J. F. Works. 1988; v. 19 (Toronto: University of Toronto Press, 2011).

⁸ These include "Finality, Love, and Marriage" (1943), "On God and Secondary Causes" (1946), and "The Natural Desire to See God" (1950), all of which have been subsequently reprinted in Bernard J. F. Lonergan, *A Second Collection*, ed. John D. Dadosky, Second edition, revised and augmented, vol. 13, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto by University of Toronto Press, 2016).

His singular understanding of the relation between the natural and supernatural orders, which draws on the analogy of the dynamically interrelated levels of being within the cosmos, allows him to reject the extrinsicism of the ‘two-story universe’ so justly criticized by Henri de Lubac, Karl Rahner, and others, while retaining a clear distinction between the two orders and avoiding an appeal to a ‘supernatural existential’ to account for the human person’s receptiveness to grace.⁹

Despite Lonergan’s achievement, Stebbins laments that some of Lonergan’s readers take these early investigations as “another relic of philosophically naïve scholasticism,” thus obscuring the critical link between these early works and Lonergan’s later, phenomenologically verifiable, critical, heuristic metaphysics as laid out in *Insight*.¹⁰ The unbroken line of Lonergan’s thought running through the set of articles published after Lonergan’s dissertation and before *Insight* were collected under the title *Verbum: Word and Idea in Aquinas*.¹¹ Here, Lonergan carefully and methodically demonstrates that Aquinas understood the intimate connection among human cognition, epistemology, and metaphysics, even if the interrelationships are only expressed by Aquinas in the terms and conventions of the faculty psychology proper to the theoretical metaphysics employed by medieval scholars after the gradual assimilation of the works of Aristotle by Latin Christians. While some of Lonergan’s readers have theorized a kind of break between his earlier, more historical investigations into Thomas’s theology and philosophy and his later works based on the data of consciousness (and resulting in a nuanced critical realism, theory of interpretation, and a functionally specialized

⁹ Stebbins, *The Divine Initiative*, 1995. xviii

¹⁰ Stebbins. xviii

¹¹ Bernard J. F. Lonergan, *Verbum: Word and Idea in Aquinas*, Lonergan, Bernard J. F. Works (Lonergan Research Institute) 2 (Toronto: University of Toronto Press for Lonergan Research Institute, 1997).

theological method), this position seems to be the result of misconstruing the hermeneutical approach that already had characterized his early retrievals of Aquinas on grace and the analogy of trinitarian processions. The reading that we offer in the remainder of this chapter reflects our conviction in a unity among central elements developed throughout Lonergan's *opera omnia*, beginning with an overview of Lonergan's early theology of grace that becomes compatible with the critical metaphysics that integrates the account of generalized emergent probability in *Insight*. We intend to present an account of Lonergan's theology of grace formulated in properly metaphysical terms inspired by the conviction that these have something important to contribute to both the retrieval of the concept of nature worked out in *Insight* and to the theology of grace set forth in the following chapter.

3.2 *The Divine Initiative*: Understanding Lonergan's Early Theology of Grace in its Theoretical Framework

Michael Stebbins' book *The Divine Initiative* presents a systematic account of Lonergan's theology of grace as developed between the beginning of Lonergan's doctoral work in the 1930s and the completion of *De Ente Supernaturali* in 1950.¹²

Lonergan's early writings on grace were both occasional and supplemental: *occasional* in the sense that they were written to answer relevant questions, such as those raised by the historic disagreement between Báñez and Molina; and *supplemental* in the sense that these writings also offer a critical commentary on the larger tradition of

¹² Stebbins, *The Divine Initiative*, 1995. xix. This latter date represents a convenient point of demarcation between Lonergan's early studies on Thomas Aquinas and the later, more well-known *Insight*, which he began writing in 1949.

Thomistic theologies of grace extant during Lonergan's days as both a student and a teacher—the legacy that passed down by the standardized education for priests and theologians during the first half of the twentieth century. Stebbins' book offers a compelling clarification of Lonergan's writings on grace during those years by contextualizing and synthesizing a larger view of the whole within the *via doctrinae*.

Stebbins notes that *De Ente Supernaturali*, Lonergan's most comprehensive and explanatory account of the order of grace vis-à-vis nature, begins with the principle of grace understood as “the created communication of the divine nature... [which] is the synthetic, explanatory principle of the economy of salvation.”¹³ Lonergan breaks this principle down into two related theses. First, “[1] There exists a created communication of the divine nature, that is, a created, proportionate, and remote principle whereby there are in a creature operations by which God is attained *uti in se est* [as God is in Godself].”¹⁴ And second, “[2] This created communication of the divine nature exceeds the proportion not only of human nature but also of any finite substance whatsoever, and therefore is strictly supernatural.”¹⁵

3.2.1 The Created Communication of the Divine Nature

First, then, a created communication of the divine nature is realized in two distinct phases, namely, the infusion of the habit of charity and the beatific vision.¹⁶ This thesis is rooted in an account of properly human operations, analyzed within the framework of theoretical metaphysics. By “proportionate,” Lonergan means that grace operates in

¹³ Stebbins. 34

¹⁴ Stebbins. 35. Quoting Lonergan, *De Ente Supernaturali*, 19

¹⁵ Stebbins. 35. Quoting Lonergan, *De Ente Supernaturali*, 19.

¹⁶ Stebbins. 47-48

human beings in ways that correspond to the kinds of beings that they are. In more technical language, we speak of “the parity of relations (*paritas habitudinum*) between substance and existence, accidental potencies and operations,” a parity commonly expressed in various metaphysical formulae, such as “(1) Accidental potencies flow from substance. (2) Operation follows act of existence. (3) Act of existence is received in substance and is limited by it. (4) Operation is received in accidental potency and limited by it.”¹⁷ In brief, by affirming that grace is “proportionate,” Lonergan affirms that humans are the sorts of creatures that, by their very created nature, are open to grace, and in such a way that this reception of grace “has the character of congruence, similitude, fittingness, proportion.”¹⁸ This is important so that the reception of grace does not annihilate or undermine human nature. The human potential to receive grace is specified by our formal nature, (by the *kind* of being we are), which is in turn specified by our act of existence, or the kind of being with which we were bestowed in God’s act of creation. Despite the technical language of potency, form, and act, Stebbins argues that this is not the parroting of “some esoteric doctrine,” but that “the proportion of nature is simply the theoretical counterpart of the common-sense insight that a thing does what it does, and has the properties it has, because of what it is.”¹⁹

¹⁷ Stebbins. 35-36. Quoting Lonergan, *De Ente Supernaturali*, 6

¹⁸ Stebbins. 37

¹⁹ Stebbins. 47. While we cannot now discuss in depth this question, we must note here that Stebbins argues this point through an example Lonergan gives regarding the inability of oxen to receive at least the kind of intellectual and voluntary effects of grace proper to humans: “‘If an ox were to understand and will, you would say that it had not only acts of understanding and willing, but also a possible intellect and a will; and consequently you would further infer that the ox’s body was informed by an intellective soul’ (DES: 12). Why, in fact, does an ox not think or will? It is because of such operations are of a higher grade of being than any operation that has its remote principle in an ox’s essence. The natures of an intellectual being and of an ox are entitatively disproportionate—that is, they possess different degrees of perfection and so occupy different levels within the cosmic hierarchy.” As we will argue, this does not forestall the possibility that the ox may be caught up in other forms of transformative grace, potentially including, but not limited to, the transformation or engagement of intellective and voluntary capacities that are more

As Stebbins explains, Lonergan's theorem of the proportion of nature functions analogously as a set of related terms that illuminate by contrast the intelligible relations constituting the order of grace: "Just as substance grounds potencies which in turn give rise to operations, so the created communication of the divine nature grounds the light of glory and the habit of charity, which in turn are the proximate principles of operations that attain God *uti in se est*."²⁰ The need for an of analogy of proportion is needed in order to gain an imperfect understanding of the irreducibly divine mystery to which naturally finite humans participate by the unmerited gift of God's grace. It is important to be clear about the scope and limits of Lonergan's proposal here. First, Stebbins emphasizes from the beginning of his book that Lonergan's writings on grace are intended to be an exercise in speculative theology. Lonergan is not, therefore, arguing for the "acceptance of a new doctrine; instead, he is engaging in the purely speculative project of presenting a theoretical unification of doctrines already known with the certitude of faith."²¹ Moreover, Stebbins goes on to say, this is not meant to suggest that we grasp "the relation between the created communication of the divine nature and its attendant habits and operations... [especially given that] the divine nature is not communicated as a substance."²² Simply put, the created communication of the divine nature refers to the

complex than those considered by Lonergan or Stebbins but which may be more clearly explored and charted by contemporary animal behaviorists, zoologists, etc.

²⁰ Stebbins. 51

²¹ Stebbins. 51

²² Stebbins. 51. In fact, Stebbins points out that Lonergan suggests a resonance between what Lonergan means regarding this created communication of the divine nature and the Patristic accounts of deification. See *De Ente Supernaturali* 16. Stebbins draws further parallels between these two created communications and Lonergan's now much-discussed remarks on the four real divine relations (paternity, filiation, active spiration, and passive spiration) and their created counterparts (Christ's *esse secundarium*, the light of glory, sanctifying grace, and the habit of charity), which have become generally known as Lonergan's "Four Point Hypothesis." For the original reference of this in Lonergan's Trinitarian theology, see Bernard J. F. Lonergan, *The triune God: systematics*, Lonergan, Bernard J. F. Works. 1988 12 (Toronto [Ont.]; Buffalo [N.Y.]: Published for Lonergan Research Institute of Regis College, Toronto by University of Toronto Press, 2007).

way in which the infinite and infinitely good God indwells human hearts in such a way that humans are empowered to be the acting subjects of supernatural acts of love disproportionate to finite human nature. It is the communication of a divine person in relation, not the communication of some discrete datum.

3.2.2 Absolutely Supernatural

Lonergan's second thesis focuses on the gift of sanctifying grace specifically as supernatural and, therefore, as wholly gratuitous: "This created communication of the divine nature exceeds the proportion not only of human nature but also of any finite substance whatsoever, and therefore is strictly supernatural."²³ This thesis is based on a distinction between two meanings of supernatural—as both relative and absolute. In the first sense, "Chemical compounds are relatively supernatural with respect to subatomic particles, plants are relatively supernatural with respect to chemical compounds, and so on. In the cosmic hierarchy, any higher grade of being is relatively supernatural in comparison to any lower grade."²⁴ In this sense, the relative supernaturality of a thing is understood with respect to the natural, hierarchical beings or properties that emerge in the process of the increasing complexification of the universe. By contrast, to say that God's self-communication to human beings in grace is absolutely supernatural is to affirm the infinite difference between God's uncreated, divine Being and humanity's enjoyment of good, created being (*ens commune*). In other words, while the chemical order may be "naturally" receptive to the biological under the right conditions, no created being was, is, or ever will be *by its nature alone* disposed to the emergence of an absolutely

²³ Stebbins, *The Divine Initiative*, 1995. 35. Quoting Lonergan, *De Ente Supernaturali*, 19.

²⁴ Stebbins. 55

disproportionate divine nature—save through the gratuitous gift of God’s grace.²⁵ This understanding of the relationship between grace and human nature is referred to as the “theorem of the supernatural.”

3.2.3 Aquinas’s Synthesis: Efficacious Grace and Effective Freedom

Lonergan stresses that the original articulation of the theorem of the supernatural—first by Phillip the Chancellor and later on by Aquinas—marked a major theological breakthrough. Previously, theologians had recognized the healing function of grace in relation to sinful, fallen creation in a far less differentiated manner; however, in recognizing the absolute supernaturality of the gift of grace as God’s self-communication, scholastic theologians came increasingly to understand grace as both healing (*sanans*) and elevating (*elevans*).²⁶ Lonergan describes how Phillip rediscovered the goodness proper to the natural order, noting that, since knowledge follows love, and since human knowledge of God derives from both faith and from the natural light of reason, then there must be *some* natural capacity to know and love God in human beings. Thus, “What Philip the Chancellor systematically posited was not the supernatural character of grace, for that was already known and acknowledged, but the validity of a line of reference

²⁵ As Stebbins points out, Lonergan argues not only that the self-communication of God in grace is entitatively disproportionate to humans and all other created beings in existence, but that, in fact, it is absolutely supernatural with respect to all *possible* created beings. This line of argument challenges the theologies of a number of commentators, including both the theology of the seventeenth century Spanish theologian Juan Martínez de Ripalda as well as the even more radical position of sixteenth century Flemish theologian Michel du Bay, often referred to by his Latin name, Baius. For a summary of this, see Stebbins. 59-66. Regarding the “naturalness” of the move from physics to or from chemistry to biology, in the next chapter, we will argue that this, too, ought to be understood as a disproportionate jump that we might only expect within a world characterized by a graced dynamism, though we would not seek to erase the qualitative difference implied by the unique transformations of the capacities of knowing and loving that Lonergan identifies with the dialectical difference in humans.

²⁶ Stebbins. 71

termed nature' (GF: 16)."²⁷ By distinguishing the healing and elevating orders of grace, Phillip freed theological speculation from an overemphasis on a psychological account of the operation of grace as healing intellect and will damaged by *sin* and reveals the way in which grace transforms human persons ontologically as they stand in potential to ongoing divinization.

Aquinas's thought developed Phillip's insights into an explanatory speculative theology, though Aquinas's real genius lay in his ability to synthesize these various understandings of the function of grace "to distinguish human freedom precisely as belonging to the realm of nature, and ... as having an immanent intelligibility... in its own right."²⁸ Lonergan summarized Aquinas's account of human freedom as requiring

(A) a field of action in which more than one course of action is objectively possible; (B) an intellect that is able to work out more than one course of action; (C) a will that is not automatically determined by the first course of action that occurs to the intellect; and, since this condition is only a condition, securing indeterminacy without telling what in fact does determine, (D) a will that moves itself. (GF:95; cf. GO:177)²⁹

Aquinas recognized that the human will is not termed free on voluntarist grounds, "for the will does not move itself to that act,"³⁰ but, rather, the will is free to the extent that all four of these conditions above are met with respect to the willing of some particular means:

²⁷ Stebbins. 79

²⁸ Stebbins. 84

²⁹ Stebbins. 86

³⁰ Stebbins. 87

Human freedom is not absolute. The will's sphere of efficacy is limited by the very nature of the will itself: it cannot select its ends, it cannot escape the restrictions of psychological continuity, it cannot ever choose the good once and for all. Hence, when grace operates to cause the will's willing of ends, to change its spontaneous inclinations, to ensure its perseverance, it does not intrude in freedom's proper domain...³¹

The value of Aquinas's speculative synthesis is therefore revealed to lie in its ability to describe how God's grace may efficaciously transform human hearts—taken in the sense of that which they love above all else—without undermining the reality of human freedom and self-determination, such as it exists.³²

This may also be extended to those acts informed by the grace received, as Stebbins describes Lonergan's move from grace in relation to virtues or habits to grace in relation to other particular acts of individual conscious persons.³³ In brief, Lonergan notes that every rational act may be understood according to both a formal object *quo* (which) and a formal *object* *quod* (by which), and that the former is principally based on (though not reducible to) the latter.³⁴ Thus, humans may be moved to act according to a supernatural object *quod*—the gift of charity poured out in our hearts by the indwelling of the Spirit—without the object *quo* itself being an object of supernatural love. Moreover, these acts may still be considered as being “vital acts”—in the sense of being the proper

³¹ Stebbins. 89

³² While beyond the scope of this dissertation, there are obvious parallels here with the argument offered in a somewhat different register in Maurice Blondel, *Action: Essay on a Critique of Life and a Science of Practice* (Notre Dame, Ind.: University of Notre Dame, 1984). See also Heaps, “The Ambiguity of Being: Medieval and Modern Cooperation on The Problem of the Supernatural.” 141-158.

³³ Stebbins, *The Divine Initiative*, 1995. 94. Interestingly, Stebbins also points out how this move in a work dedicated to interpreting Aquinas already “anticipates Lonergan's later call for theology to move from a theoretical to a methodical mode.”

³⁴ Stebbins. 102

acts of the given human agent—even if they depend on a supernatural object *quod*: “We remain the ones who love God with the love of charity, who believe in God with the assent of faith, and so on. Nonetheless, the potencies in which they occur are the recipients of those operations rather than their efficient causes.”³⁵ Against some modern commentators, Lonergan argues that Aquinas clearly rejected the idea that all “vital acts” need to be produced by their subjects, as both the will and the intellect passively receive their proper objects as *pati*, as things undergone or suffered.³⁶ The mere fact that a human actor receives an insight or a spontaneous desire or a supernatural love does not disqualify that insight, desire, or supernatural love as being properly from or of that human actor. This clarifies how God acts efficaciously in the world, including through the morally virtuous acts of free human agents: “[M]otivated by supernatural love for God and the supernatural hope of attaining intimate union with God in the beatific vision, one elects to perform the just, temperate, and fortitudinous acts necessary for attaining that particular good.”³⁷ In this way, Lonergan clarifies how human actors may be caught up in the supernatural workings of grace while the dignity of their particular nature, along with the integrity and intelligibility of its lower manifolds, is maintained.

For Lonergan, our theology of grace in the world hinges on our affirming the real and discernible effects of grace as they actually obtain. Grace does not operate in the background of history through helpless actors, but it transforms the consciousnesses of persons across the whole range of their conscious activity. In the context of human beings, the effects of grace are neither solely psychological nor solely ontological. As

³⁵ Stebbins. 107

³⁶ Stebbins. 109

³⁷ Stebbins. 118

Stebbins argues, “At this early stage Lonergan already maintains that there is a basis in our conscious experience for differentiating between natural and supernatural acts.”³⁸

However, while Lonergan posits grace as experiential and efficacious, he locates the activity of grace solely at the level of conscious interiority, stopping short of affirming “external” actual grace. As Stebbins relates, the notion of actual grace as “external” refers to

an external event—hearing a sermon, falling sick, witnessing some pious act or good example, and so on—that comes about under the guidance of ‘special’ divine providence and, by providing the intellect and will with some appropriate object, leads to the occurrence of salutary acts in the person who experiences it. This designation of certain purely natural events as ‘grace’ has a basis of sorts in some of Aquinas’s earlier writings on the manner in which God prepares sinners for conversion, but it would seem to be excluded by his more mature view... Hence, in *De ente supernaturali* and his other writings on grace Lonergan concentrates his attention on internal actual grace, that is, on actual grace as ‘received in the higher potencies of the soul, not inasmuch as these potencies are moved by objects, but inasmuch as they are governed immediately by God’ (DES:157).³⁹

Stebbins comments here suggests that, while the “more mature” Aquinas and Lonergan both eschew these “external” graces from their theologies, Lonergan’s principle motivation for this narrowed focus on internal actual grace is perhaps less about deliberately excluding external grace than about positively affirming the experientially and intelligibly available experience of internal grace for human beings as we are moved

³⁸ Stebbins. 125

³⁹ Stebbins. 129

to act towards goodness and ultimately towards God.⁴⁰ In emphasizing grace as experienced in interiority, Lonergan meant to combat those theologies of grace that held that grace determines human activity externally without moving them as the particular kind of experiencing, thinking, feeling beings that we in fact are. Thus, Lonergan rejects that grace may save human beings the way it might save an inanimate sack of rocks. While this does not undermine Lonergan or Aquinas's particular exclusion of "external" grace from their theology, it clarifies what Lonergan thought was at stake in his own theological position.

3.2.4 Grace, Finality, and Obediential Potency

In the final pages of his chapter on "The Supernatural Transformation on Human Activity," Stebbins stresses that, despite the focus on individual human experiences of grace as interior, Lonergan does not suppose grace or salvation to be wholly internal in the sense of private affairs. To demonstrate the more communal and interpersonal vector of Lonergan's theology of grace, Stebbins turns to Lonergan's essay, "Finality, Love, Marriage," which was published in 1943, the same year that Lonergan defended his dissertation in Montreal. In this essay, Lonergan reflects on the ends of marriage in relation to three different trajectories or finalities—absolute, horizontal, and vertical—where finality is understood as a "relation of a thing to its end, where the end motivates an appetite or orients a process precisely because the end is good."⁴¹

⁴⁰ See especially Stebbins. 135-138

⁴¹ Stebbins. 56. Citing Bernard J. F. Lonergan, "Finality, Love, Marriage," in *Collection*, 2nd ed., rev. aug., Collected Works of Bernard Lonergan ; v. 4 (Toronto: Published by University of Toronto Press for Lonergan Research Institute of Regis College, 1988), 17–52. 19

Absolute finality describes the orientation of all things to God, who, as essentially Good, is both the origin and telos of all that is. Horizontal finality concerns the specific goods proper to each individual thing according to their particular essence. In beings as complex as humans, Lonergan notes that there are multiple horizontal ends proper to humans as humans: the relatively invariant ends of human nature in relation to their biological and sensitive life; the more historical and progressive end of “the good life” as sought individually and communally through the dynamic applications of reason; and, their third and highest end, “eternal life, which is sought and attained via the operative and cooperative activity of grace.”⁴²

In addition to absolute and horizontal finality, Lonergan describes what he calls vertical finality, which represents his greatest innovation with respect to the Thomist teleology he inherited.⁴³ Lonergan defines vertical finality as an orientation of a thing to “an end higher than the proportionate end.”⁴⁴ As Stebbins describes, Lonergan stresses that “the transformation [grace] brings about is more than a personal event, for the primary recipient of grace is not an individual but a community, the mystical body of Christ.”⁴⁵ Stebbins underscores that, through his account of the diachronic unfolding of vertical finality in and between communities over time, Lonergan avoids the much maligned “two-story universe” theology of grace that, though perhaps an accurate depiction of the “run-of-the-mill scholastic position, ... has little to do with Lonergan's recognition that the supernatural harmonizes with, rather than violates, the cosmic

⁴² Stebbins, *The Divine Initiative*, 1995. 139

⁴³ In the next chapter, we argue that Lonergan’s notion of vertical finality provide perhaps the most important foundation in his work for broadening his account of grace in relation to the entirety of the created world.

⁴⁴ Lonergan, “Finality, Love, Marriage,” 1988. 20-21

⁴⁵ Stebbins, *The Divine Initiative*, 1995. 138

order.”⁴⁶ Lonergan’s theorem of the supernatural describes the relationships obtaining in a hierarchically ordered world in which, because of the distinct and irreducible intelligibilities of higher order beings and functions, there results a universe that is “full of discontinuities.” However, “Lonergan wishes to stress that distinctions between the various grades of being or perfection are not to be taken as outright separations, for lower grades of being can, and regularly do, participate in higher grades. He discusses this aspect of world-order in terms of the notion of vertical finality.”⁴⁷

The perfections proportionate to human nature and described according to their horizontal finality are conserved even as they are taken up into the higher levels through vertical finality:

[Grace] takes over both nature and reason. The purely rational pursuit of philosophy is made into an instrument as the handmaid of theology; reason itself as reasonable faith is elevated to the level of grace; virtuous living is transformed into merit unto eternal life; repetitive preaching becomes the space-time multiplication of a unique revelation; repetitive doing is elevated into sacraments and liturgy. Inversely, the distinctive eternity of the order of grace is submitted to human progress inasmuch as grace sets up a human society or a human science or human advance in virtue; and it is submitted to natural repetitiveness inasmuch as it embraces even the recurrent aspects of human existence.⁴⁸

Thus, while Lonergan observes a separation between the relatively supernatural elevation of lower strata of creation and the absolutely supernatural elevation of human beings

⁴⁶ Stebbins. 56

⁴⁷ Stebbins. 56

⁴⁸ Lonergan, “Finality, Love, Marriage,” 1988. 40

through grace, he has a clear conception of how one and the same grace leavens the lower levels and elevates them along with the higher, even though this is often prevented from happening in a world marked by the flight from attention, intelligence, reason, and responsibility.⁴⁹

Lonergan distinguishes four forms of vertical finality—instrumental, dispositive, material, and obediential—though he devotes most of his time to “obediential potency,” since it most clearly pertains to the account of interior grace with which he is concerned:

First, a concrete plurality of lower activities may be instrumental to a higher end in another subject: the many movements of the chisel give the beauty of the statue.

Second, a concrete plurality of lower activities may be dispositive to a higher end in the same subject: the many sensitive experiences of research lead to the act of understanding that is scientific discovery. Third, a concrete plurality of lower entities may be the material cause from which a higher form is educed or into which a subsistent form is infused: examples are familiar. Fourth, a concrete plurality of rational beings have the obediential potency to receive the communication of God himself.⁵⁰

Focusing predominantly on obediential potency, Stebbins again emphasizes the conservation of lower levels in the elevation to the higher, even though the elevation of human nature to the absolutely supernatural represents an infinitely disproportionate excellence with respect to our creaturely existence: “One does not exhaust the

⁴⁹ Stebbins, *The Divine Initiative*, 1995. 140

⁵⁰ Lonergan, “Finality, Love, Marriage,” 1988. 20-21. Though Lonergan declines to provide examples of the material form of vertical finality here, at least one common example would include the millions of Krebs cycles underpins the unified functioning of a living organism. We will see additional instances of this and other forms of vertical finality in the next chapter.

intelligibility of the cosmic hierarchy simply by differentiating various grades of being within the concrete whole and adverting to the excellence of higher grades in comparison to lower. One must also grasp that higher grades incorporate lower, in the sense that lower grades provide the materials that higher grades integrate.”⁵¹ Lonergan identifies obediential potency as the potential that finite substances like individual human persons would require in order to receive God’s self-communication in grace. Obediential potency is passive (it is a potential to receive, not act), essential (it pertains to first acts of our existence and not to second acts we might perform), and remote (though a potency in us, we cannot activate it on our own).⁵² Lonergan distinguishes the human, intellectual and volitional form of inclination to the good from the merely natural (plants and inanimate objects) and the sensitive (consciously directed toward goodness, but not to goodness as known), and notes that the human intellectual desire is both for proportionate knowledge desired through rational inquiry and disproportionate knowledge, which may only be obtained in the beatific vision.⁵³

Lonergan rejects the arguments of Thomas Cajetan and others that a natural desire for a supernatural end results in a frustrated creationary order and may even render grace a requirement instead of a gift, noting that the supernatural fulfillment in the blessed meets both the natural and supernatural desires (since supernature conserves and perfects nature) and that nature—taken in the sense of the whole world-order—is hardly frustrated by those who fail to attain the beatific vision because “unfulfilled natural desires are

⁵¹ Stebbins, *The Divine Initiative*, 1995. 142

⁵² Stebbins. 148

⁵³ Stebbins. 150-157

elements of the concrete world-order that God freely and lovingly wills into existence.”⁵⁴

Lonergan argues that the perceived problems are resolved by moving out of a static essentialism that views “individual, finite natures [as] logically and ontologically prior to the world-orders that relate them to one another.”⁵⁵ Moreover, Lonergan challenges that this essentialism places a limit on God’s creative activity, since it only allows for a God who creates through discrete conceptual additions, thereby reducing the reality of a dynamic and interrelated world to a finite set of abstract, individuated entities.

Contrary to the conceptualist and essentialist view, Lonergan emphasizes God’s creation of the whole world-order through the dynamism of perfect understanding. As a result, he argues that “the exigences of any finite nature do not count as a kind of absolute claim on the order of the universe... as evidenced by the fact that our own world-order permits the extinction of species and the occurrence of physical evils.”⁵⁶ Lonergan thus rejects

that the supernatural order is “another essence or nature” that is “at once parallel to and utterly distinct from nature,” as the essentialists contend. Since there is no split in the existing world-order, Lonergan can conceive the supernatural “as some approximation to an existentialist communion of man with God as He is in

Himself, and so at once the act and perfection of natural aspiration; it is man's, yet

⁵⁴ Stebbins. 168. Stebbins also points out later in the chapter that, in relation to De Lubac, Lonergan’s solution obviates many of the most controversial points. As Stebbins notes, “For Lonergan, however, the idea of a world-order without grace is a possibility only in the negative sense that it involves no internal contradiction. It is compatible with, but not in any sense required by, divine omnipotence, divine liberality, and the gratuity of grace.’ Within this perspective the possibility of a state of pure nature is a theorem, not a doctrine; as such it may prove to have its uses for theological speculation;’ but it can have no more than a marginal significance.” For more on this, see the section “The Speculative Role of Pure Nature,” in Stebbins. 178-182.

⁵⁵ Stebbins, *The Divine Initiative*, 1995. 171

⁵⁶ Stebbins. 176

utterly beyond natural right, desert, or achievement, for it is with God as He is God.” ...Hence, the natural and the supernatural orders are intrinsically related parts of a single cosmic order.⁵⁷

In Lonergan’s view, because of their fundamental misunderstanding of what human knowing is, the essentialist also suffers from a consequent misunderstanding regarding vertical finality and the dynamism of the real world-order. Suggesting implications beyond solely human concerns, Stebbins notes that “the fundamental units of physical evolution are not individual organisms but rather populations in interaction with their environments,”⁵⁸ and thus grace is better understood in aggregate, communal contexts as all persons are made part of the mystical body of Christ in grace. In this, Stebbins makes a strong case for reading Lonergan’s theology of grace even in his earliest works as profoundly communal and expansive.

3.2.5 The De Auxiliis Controversy

In the rest of the book, Stebbins demonstrates how Lonergan’s theology of grace provides a compelling solution to the *de auxiliis* controversy in relation to the question of grace and human freedom. This issue was still very much in question when Lonergan was writing, and Stebbins describes Lonergan’s contemporary, Reginald Garrigou-Lagrange, as “the dean of twentieth-century Báñezians” therein.⁵⁹ At the heart of the debate is the notion of divine concurrence, or the way in which both God and free human subjects may be said to be the cause of a given, human action:

⁵⁷ Stebbins. 176

⁵⁸ Stebbins. 177

⁵⁹ Stebbins. 199.

[The] disagreement [was] about what constitutes the essence of actual grace. The Molinists conceive of divine concurrence as affecting not the created potency itself but only the act that the potency produces; moreover, they reject the notion that God in any way predetermines the will to its deliberate acts. As a consequence, they define actual grace as constituted by supernatural, vital, indeliberate acts, which are jointly produced by God and the created intellect or will. But the disciples of Báñez contend that divine concurrence affects the created potency directly by moving it to its activity, even when that activity is free. Actual grace, therefore, is thought to consist in the premotions that cause the potency to produce its supernatural vital acts, deliberate as well as indeliberate.... The problem that the Báñezians must meet is that of explaining how the will remains free from necessity despite the predetermination it receives when God applies it (by the second of the two premotions) to its deliberate act. The Báñezians base their response on the fact that an efficient cause can only 'give' of what it already 'has,' or, to use the more classical formulation, that every agent produces an effect similar to itself (*omne agens agit sibi simile*) (DES:63).⁶⁰

Lonergan also treats two other groups, the semi-Báñezians and the Suarezians, the latter of whom he treats as largely similar to the Molinists. The Báñezians and semi-Báñezians criticized the Molinists and Suarezians for undermining divine sovereignty in trying to protect human freedom by their assertion of undetermined, future, contingent acts stemming from created wills; Garrigou-Lagrange summarized his critique as, “*Dieu déterminant ou déterminé*” (“Either God is determining or determined”).⁶¹ At the same

⁶⁰ Stebbins.197-198

⁶¹ Stebbins. 206

time, Lonergan describes how the Báñezian position problematically “gives the impression that, though God does not cause the sinner's sinning, He does make it impossible for him to do what is right.”⁶²

It would take us too far afield to try to recreate the nuance of Lonergan’s larger narration of this argument or of Stebbins’ excellent commentary, but suffice it to say that Lonergan’s theology had few sympathies with either position. Rather, he asserted that both of their answers were based less on a coherent systematic synthesis than on the context of a post-Tridentine defense of human freedom in relation to the Protestant Reformers stress on divine omnipotence and the irresistibility of grace.⁶³ Lonergan argued that the real solution to this problem lay in the notion of divine concurrence, or “divine efficient causality with respect to effects which are produced both by God and by a creature.”⁶⁴ Thus, while Lonergan affirms the validity of the critiques that each level at the other, he notes that the root of the conflict lies in a series of problematic, shared propositions: “Both sides presume (1) that vital acts are the effects of self-moving potencies; (2) that first act (form) is the efficient cause of second act (operation); (3) that efficient causality involves an influx that passes from agent to patient; and (4) that in all divine concurrence, God acts without the use of any created intermediary.”⁶⁵ In sum, then, the Báñezians' and Molinists' espousal of the theory of vital act leads them to affirm that supernatural acts must necessarily be produced by the finite subjects in which they occur and that, as a consequence, no supernatural act can occur in a finite subject unless the subject is made proportionate to the production of the act.

⁶² Stebbins. 209

⁶³ Stebbins. 184

⁶⁴ Stebbins. 185. Quoting Lonergan. *De Ente Supernaturali*. 100.

⁶⁵ Stebbins. 212

The requisite elevation is provided either permanently by the presence of an infused virtue, or transiently by the conferral of actual grace.... [On the contrary,] Lonergan distinguishes the conditions for the reception of supernatural acts from the conditions for the production of supernatural acts... In order to account for the reception of a supernatural act, he says, it is generally unnecessary to posit any condition other than the fact of the subject's obediential potency, which, as it turns out, is only extrinsically distinct from the subject's intellect and will considered precisely as natural, essential, passive potencies. Anyone who requires some prior, preparatory elevation of the potency ends up in one of two indefensible positions (*DES*:85, 99).⁶⁶

If the subject is required to be made proportionate to the supernatural act that they receive in grace, then this begins an infinite regress, for they would first have to be made proportionate to whatever supernatural act prepared them to receive that prior, preparatory act, and so on. Thus, Stebbins clarifies Lonergan's conditions for the possibility of human's receiving a supernatural act:

If the acts are received and transient, then obediential potency alone suffices. If the acts are received and habitual, then to obediential potency one must add the corresponding infused virtues. Finally, if the acts are produced by the finite subject, then besides obediential potency (and, in the case of habitual acts, infused virtues) one must posit in the subject a received supernatural operation that functions as the efficient cause of the acts.⁶⁷

⁶⁶ Stebbins. 214

⁶⁷ Stebbins. 218

This provides a clear-cut explanation of the way in which passive, obediential potency may be activated by a supernatural act, but it remains to address the meaning of God's efficient causality in the divine concourse, particularly as regards the notions of operation and cooperation.

This takes us back into the discussion of primary and secondary causality, which was the basis of the accounts of God's action in the world for both Johnson and Edwards in the previous chapter. Lonergan discusses this in the context of instrumental efficient causality, which considers how God may make use of secondary causes in order to bring about some end(s). Lonergan notes that there are two kinds of efficient cause: "[O]ne kind is 'principal inasmuch as the perfection of its form either equals or exceeds the perfection of the effect'; the other is 'instrumental inasmuch as the perfection of its form is exceeded by the perfection of the effect' (DES:63)."⁶⁸ From this it is clear that the only principal efficient cause is God, since "God is the only being that exists through the perfection of its form."⁶⁹ But how is it that this principal, divine causality is received in the proximate agent? Both Báñez and Molina referred to this effect of causality as an "influx," an efficient causality received in the proximate agent, but Lonergan rejected this as a gratuitous multiplication of terms, arguing instead that efficient causality is not the passing of some *tertium quid* between terms but is a real and intelligible relation of dependence of effects on causes.⁷⁰ Just as God created the possibility of being in the sense of *ens commune* and therefore created the possibility of all further creation, God also created causality, such that all causes are principally and even primarily dependent

⁶⁸ Stebbins. 220

⁶⁹ Stebbins. 220

⁷⁰ Stebbins. 224

on God's will in this way. Thus, while Lonergan recognizes the way that God's causality is mediated through secondary causes, he rejects the assertion that God as somehow "spatio-temporally remote" is a cause in only a nominal sense; as he colorfully suggests, "the person is more the cause of the stab wound than the sword they employ."⁷¹

Lonergan takes particular aim at the Báñezian position, here, since only Báñez asserts that God's mediate causality entails the notion of a physical premotion, or "a 'physical entity,' a 'physical impulse,' an incomplete being,' or 'motion' that is received passively by the operative faculty and causes the faculty to 'emit' its operation."⁷² Báñez introduced this concept to protect both the primacy of God's causality as "first mover" and to explain how finite beings who have the power to act (*potentia agendi*) are able to move from mere potential into action (*actu agere*). However, Lonergan notes that Báñez's perceived need to protect the efficacy of God's action stems from an insufficiently theoretical understanding of the predication of metaphysical terms and relations: rather than grasping how these name intelligible relations, Báñez tries to *imagine* these relations, and, therein, he converts them from intelligibilities grasped into imaginative pictures that necessarily implicate God in the spatio-temporal framework in problematic ways. Lonergan admits that Aquinas does talk of premotion in places, but he argues that his account of premotion differs from Báñez's in that (1) Aquinas only intended to explain why events happen in sequential fashion, rather than all at once, given the singularity of God's creative action as "the unmoved mover," and (2) that account "means nothing other than premotion in the Aristotelian sense," of the temporal effects of

⁷¹ Stebbins. 228

⁷² Stebbins. 195. It should be noted, however, that Báñez himself only ever attributed physical premotion to vital acts, but, in thinking through questions of divine concurrence, later Bannezians expanded this to include a much larger range of acts. See Stebbins. 230

heavenly bodies (planets, stars) on sublunar ones.⁷³ While Aristotle and Aquinas's physics and cosmology are obviously outdated and inaccurate, Lonergan underscores that their sole purpose was to explain the mediation of God's efficient causality through space and time, not to "heighten the ontological perfection of a being already endowed with active potency," as the Báñezians would have it.⁷⁴ Understood correctly, then, "efficient causality is [revealed] as a real relation of dependence of an effect on its cause, and not some third thing in between them, [and] then the apparent difficulty of understanding divine concourse in terms of mediate efficient causality vanishes."⁷⁵

As regards this efficient causation in the course of divine providence, Lonergan notes that Aquinas deemed the limited, Aristotelian sense of premotion which he appropriated to be insufficient on its own. Aristotle's first mover is the *causa per se* of both the celestial realms and their motion, and of the resultant world process, broadly conceived, but is only the *causa per accidens* of world events that stem from that initial motion. To explain God's providential guiding of all events, however minute and contingent, Aquinas supplements Aristotle's account with the Platonic view of causation the participation in the absolute idea. While Aquinas rejects Plato's notion of a "noetic heaven," he adopts this understanding of universal causality: as God is *ipsum esse*, *ipsum intelligere*, *ipsum bonum*, and *actus purus*, all other things only have being, intelligibility, goodness, and motion as a participation in God's being. Here, Aquinas introduces the notion of *virtus instrumentalis*, the "power of the instrument" insofar as the secondary causes in the world operate as instruments of God's plan:

⁷³ Stebbins. 237

⁷⁴ Stebbins. 237

⁷⁵ Stebbins. 235

[What] is it about the instrument that allows it to produce effects more perfect than itself? Since the entire effect does in fact proceed from the instrumental efficient cause, then ‘if the instrument is to operate beyond its proper proportion and within the category of the higher cause, it must receive some participation of the latter’s special productive capacity’ (*GF*:81; cf. *DES*:64). This participation pertains not to the instrument’s form as such (for by definition, its form is less perfect than that of either the principal cause or the effect) but to its operation. What makes the chisel proportionate to the sculpting of the statue is not the form of the chisel but rather the precise pattern caused by the artist, without which the shape of the statue would never emerge from the piece of stone. This participation of the instrumental cause in the proportion of the higher cause, this active potency of the instrument as such, is called ‘instrumental power’ (*virtus instrumentalis*).⁷⁶

Lonergan notes that Aquinas’s use of *virtus instrumentalis* may be more clearly understood in relation to the parallel notion of *intentio* that he employs in *De Potentia*: “[The] natural power conferred on natural things at their inception is in them as a kind of form whose existence is firm and settled in nature. But that which God brings about in a natural thing, that by which it actually acts as an agent, is [in it] only as an intention [*intentio*], and its act of existence is, as it were, incomplete...”⁷⁷ What differentiates Lonergan’s—and, he argues, Aquinas’s—meaning from that of the Báñezians is that, for Lonergan, world-orders precede individuals. Thus, created things operate as secondary causes of divine providence because they were created as part of a whole world-order,

⁷⁶ Stebbins. 220-221

⁷⁷ Stebbins. 241. Lonergan draws this connection to clarify the enduring importance of one of Aquinas’s uses of *virtus instrumentalis*, noting that the meaning of *virtus instrumentalis* in Lonergan’s writings is somewhat muddled by various occultisms.

not because some additional quality is added to them. They thus have their being, goodness, intelligibility, and agency as a function of their being part of a deeply interconnected whole which participates in God's being. From the perspective of the world, this quality may be called *intentio* or fate; from the perspective of God as Creator, it is called providence. The participation of each thing in fate or providence refers not to a quality in the agent or their action, but in "the seriation, the arrangement, the pattern of the instruments in their movements' (*GO*: 150) through which a disproportionate effect is produced."⁷⁸ As Stebbins concludes from this, "created being, in all its multiplicity and dynamism, is in fact a work of art, a cosmic symphony proceeding efficaciously from the mind of God, sounding forth the word of divine understanding and love."⁷⁹

This instrumentality pertains no less to human will than to the rest of the created order. Not only does God will the circumstances within which we choose and act, but, as noted earlier, God also guides the soul's willing of ends, all of which are forms of premotion in the sense Lonergan explains. For the possibility of our willing anything at all is dependent on our willing the good as such, and this fundamental orientation towards goodness—no matter how deformed it may be in any person or persons—results from God's moving our will through God's love, which, critically, is the result of God's *immediate* causation in human hearts.⁸⁰ Stebbins identifies a whole series of premotions by which God moves the will towards the willing of particular goods: by setting our wills towards goodness as an end, through the "counsel of intellect" that specifies the act of

⁷⁸ Stebbins. 244

⁷⁹ Stebbins. 244

⁸⁰ Stebbins. 246-247

willing the means, the objects of choice by which the will is particularly confronted, and the “psychic and biological determinants that effect the will’s inclination.”⁸¹

So pervasive is divine efficacy in human acts of willing, then, that Aquinas asserted that “God [is] more a cause of the will’s act of choice than the will itself.”⁸² The strength of this formulation would seem to call the meaningfulness of human freedom into question. However, to say that “God is *more* a cause than the will itself” is not the same as saying the will plays no role whatsoever. In critiquing both the Molinist and Báñezian positions, Lonergan affirms the efficacy of divine will and action but also draws a distinction between ordinary and transcendent efficacy.⁸³ In short, God exists necessarily, but transcendentally, such that God’s existence does not imply any necessary effects in creation; God’s necessary existence doesn’t mean there will necessarily even be a creation. Rather, God creates freely and God may create effects that emerge either necessarily or contingently, “according to the divine plan.”⁸⁴ Lonergan posits this difference as “the theorem of divine transcendence,” which may be summarized as follows:

God knows with equal infallibility, He wills with equal irresistibility, He effects with equal efficacy, both the necessary and the contingent. For however infallible the knowledge, however irresistible the will, however efficacious the action, what is known, willed, effected, is no more than hypothetically necessary. And what hypothetically is necessary, absolutely may be necessary or contingent.⁸⁵

⁸¹ Stebbins. 247

⁸² Stebbins. 248, quoting *GF:97* (referring to *In I Sent.* D. 37, q. 1, a. 1 ad 4m; *In II Sent.* D. 28, q. 1, a. 4; *De ver.* Q. 22, a. 8; *CG* 3, c. 89; *ST*, 1, q. 23, a. 5 [cf. *CG* 3, c. 70]).

⁸³ Stebbins. 257

⁸⁴ Stebbins. 258

⁸⁵ Stebbins. 261

Lonergan's understanding of transcendence alleviates the perceived tension between God's efficacy and human freedom by debunking a commonsense notion of eternity as "an infinite amount of time."⁸⁶ Thus, while Lonergan can affirm with the Molinists that God knows the incalculable varieties of world-orders that might have been created and thus knows all the possible and actual outcomes of any convergence of events, Lonergan rejects the term "futurible" as applied to these events.⁸⁷

Given that God does, in fact, choose this particular world-order, there is a hypothetical necessity to this world-order, in the sense that whatever God wills to happen from all eternity—understood in the sense of real transcendence—does, in fact, necessarily occur.

However, this raises the question of whether God wills or authors sin in general and in particular instances. Following Aquinas, Lonergan clearly rejects this. He begins by distinguishing two aspects of sin in the world: (1) as a privation or a lack, and (2) as radical unintelligibility.⁸⁸ Sin as privation (or "the evil of natural defect") corresponds to Aquinas's *malum poenae*; it entails a privation according to a particular nature, but not a fault with the larger world-order. Thus, while being eaten by a lion is experienced as an evil (*malum*) on the part of the lamb, it does not, in this view, represent a true evil in the larger world-order as the predation contributes to the functioning of the whole system, lions included. Therein, it does not require the same kind of explanation, as it can be situated within the good of the whole world order and the real effects of the inherent finitude of creatureliness.

⁸⁶ Stebbins. 262

⁸⁷ Stebbins. 264

⁸⁸ Stebbins. 269

Lonergan distinguishes privation from the radical unintelligibility of *malum culpae*, or the evil of fault, which Lonergan recognizes as evil in the strict sense.⁸⁹

In short, although God knows that sin [*malum culpae*] is, God neither wills nor causes sin to occur. God does not will the occurrence of sin even indirectly, for the sake of some higher good: the highest good of creatures is to act in accordance with the intelligible and divinely governed cosmic order which is the manifestation of God's own glory, and sin is a deliberate withdrawal from that order. For God to will the repudiation of cosmic order in the interest of cosmic order would be a contradiction.⁹⁰

As regards this form of evil, the difficulty arises in relation to its persistence in a world created by an omnipotent, omniscient, and benevolent God. Lonergan draws on what he calls Aquinas's "Three-Lane Highway" approach, which he distinguishes from the Báñezian "Two-Lane Highway" and the Molinist "Four-Lane Highway." As Lonergan summarizes, for Báñez, "[Along] one lane is what God effects [by granting a premotion], and that must be; along the other lane is what God does not effect, and that cannot be' (*GF*:109). It follows logically that God is the author of sin. The only tactic left to the Báñezians is simply to assert that God is not the author of sin and that the reason why is a mystery."⁹¹ The Molinists end up in the same dilemma, for they suggest two lanes in the hypothetical order of futuribles and two lanes for actually occurring events in an attempt to ground both real human choice and God's knowledge of all possible

⁸⁹ Stebbins. 270

⁹⁰ Stebbins. 275

⁹¹ Stebbins. 278

outcomes including that actually chosen; nonetheless, they still posit a God who chose to create *this* order, which entails persons choosing to sin.

By contrast, Aquinas's "Three-Lane Highway" holds that: "God directly wills being to be; God wills non-being not to be, which includes the indirect willing of privation in the restricted sense; and God permits the privation of sin. Thus, formal sin represents a distinct category of being, a surd, a mere matter of fact that has no intelligibility of its own and cannot be reduced to any extrinsic cause."⁹² Moreover, Aquinas saw that the sin regards not the performance or non-performance of an external act, but the prior failure of the created agent to will the good. Thus, God's gracious operations upon the will and intellect of humans responds to the problem of true evil at its roots.

3.2.6 Enduring Achievements of Lonergan's Early Theology of Grace

In this, then, Lonergan suggests how Aquinas's speculative, theoretical synthesis, properly understood, avoids the problems that resulted from the failings of his later scholastic commentators. What is perhaps somewhat less clear to most modern readers, however, is how this theoretical account of grace developed in the scholastic style may be of direct use in the context of contemporary theology. At the end of his book, Stebbins offers his own account of the enduring achievements and values of Lonergan's theology of grace, which we reproduce here at length for the sake of clarifying the foregoing:

[Lonergan's account] begins from the notion of a created communication of the divine nature. This notion expresses a remarkably comprehensive synthesis: it

⁹² Stebbins. 279

suggests a link between the grace of union in Christ and sanctifying grace in us; it provides a way of relating the latter to the theological and moral virtues and to all salutary acts, whether these occur before or after justification; it accounts for the supernatural and hence the gratuity of grace; and it suggests that through grace we share in the life of God precisely as triune, since the interrelations of the divine persons are grounded in the uncreated communication of the divine nature from Father to Word, and from Father and Word to Spirit. Moreover, Lonergan's conception of the distinction between natural and supernatural orders is a far cry from the much-maligned 'two-story universe' of scholastic essentialism. The natural analogy upon which this synthesis draws is a theoretical analysis of the relation of finite natures to finite operations and of the hierarchy of natures that is a verifiable aspect of the created universe. Within this hierarchy, pluralities of beings at lower levels exhibit vertical finality, the potency that grounds their sublation by higher-order beings: as higher grades preserve the intelligibility of lower grades while incorporating it into a higher-order intelligibility (in the manner that biological processes incorporate chemical reactions, for example), so by analogy the supernatural order sublates the natural, not only leaving natural capacities intact but also enlarging and consummating them in an utterly mysterious manner that overcomes the effects of sin and explodes the limitations of creaturely effectuation. Thus, the supernatural realities of grace are not to be found in some realm that is wholly separate from the natural order, nor does their realization involve the suppression of that order; they reveal the human capacities to know and to love as obediential potencies for the emergence of the mystical body of Christ. Only this

reality, which culminates after death in a communal vision of the divine essence, can in this life undo the accumulated evils that have resulted from human irrationality and sin.⁹³

As this summary suggests, Lonergan's early theology has much to recommend it in relation to the project of this dissertation: namely, of working out an account of grace that might be extended to the whole of the created world. In addition to representing a coherent, systematic synthesis, it presents a metaphysics that is not mired by the problems of later scholastic commentators, and it offers precise accounts of how to avoid these misreadings and of why they emerged. In particular, by defending the priority of world-orders over particulars, Lonergan's account exonerates Christian metaphysics from the sweeping charge of essentialism that is so often leveled against it today, while providing a deeper explanatory significance to the framework of primary and secondary causality adverted to in both Johnson and Edwards. Moreover, it suggests how God acts efficaciously without damaging human freedom and without positing an interventionism akin to physical premotions. It also clarifies the links between natural and supernatural orders as well as the continuity and the discontinuity entailed in the move from relative to absolute supernaturality. Additionally, Lonergan elucidates how grace is not merely coordinated with the problem of sin, but how it is also the means by which God elevates human beings in the process of divinization. Finally, while Lonergan's account continues the tradition of reflecting only on grace in terms of its deification of humans and of focusing on internal grace, it seems to remain open to some expansion through a greater exploration of horizontal, vertical, and absolute finality.

⁹³ Stebbins. 292

In the Afterword to the book, Stebbins notes that, while Lonergan's appropriation of Aquinas's theology of grace represented a major advance over the misreadings and false dilemmas that preoccupied many of Lonergan's contemporaries, Lonergan's early theology remains limited by its somewhat "Aristotelian worldview," in the sense that it explains the orders of nature and supernature in terms of a theoretical metaphysics:

[This] approach proves insufficient when what Lonergan terms the 'third stage of meaning' begins to emerge.... [in which] the fundamental categories employed by theologians will be drawn not from a metaphysics but from a transcendental method, that is, from a method grounded in the theologian's verified grasp of the dynamic structure of his or her own conscious activity.... The key aspect of consciousness that, from a theological point of view, must be closely attended to is religious experience, which at its core is the experience of unrestricted, otherworldly love.⁹⁴

However, as Stebbins admits, Lonergan's later theology contains "no more than a few" hints at what his theology of grace might look like on the other side of the transposition from theoretical meaning to the realms of interiority as focused on the primacy of verifiable experiences of divine love in human lives. Any such transposition of "a comprehensive systematics of grace cannot do without metaphysics... [since only] in metaphysical terms can one conceive accurately the function of grace within the ordered totality of the created universe, since only in those terms can one conceive of the universe precisely as a cosmos, a *whole*."⁹⁵ While, as Stebbins suggests, Lonergan never offered a

⁹⁴ Stebbins. 296

⁹⁵ Stebbins. 298

fully revised systematic theology of grace, we will now turn to *Insight*, which will furnish our investigation with a transposition of the analogue of nature.

3.3 *Insight*, Emergence, and the Retrieval of Nature

While his earliest works retrieve Aquinas's understanding of nature, sin, and grace within a theoretical framework, *Insight* marks the beginning of Lonergan's transposition of the order of nature from metaphysical terms into the realm of interiority.⁹⁶ Unlike the Aristotelian metaphysical view of the sciences as branching out from philosophy, Lonergan's critical, heuristic metaphysics frames the various sciences in relation to the isomorphism that each particularly describes between the various levels of intelligibility in the world. Stebbins describes this shift as follows:

By 1949 Lonergan had commenced writing *Insight*, and from then onward his theological work begins to reflect his prolonged effort 'to move out of the Thomist context, replace Thomist language, refine the Thomist solution, and move fully into the 20th century.' In *Insight* grace makes its appearance in the context of an exclusively critical metaphysics and a sophisticated theory of history; in *Method in Theology* grace is spoken of primarily in terms of the experience of being in love with God. It seems clear, then, that the pre-*Insight* writings indicate a rounded but

⁹⁶ In fact, Lonergan also treats issues of sin (e.g. his treatment of bias in Chapter Six, "Common Sense and Its Subject" and Chapter Seven, "Common Sense and Its Object") and grace (e.g. the divinely instituted solution to the problem of evil in Chapter Twenty, "Special Transcendent Knowledge") in *Insight* as well, but these are treated as they arise in the context of a phenomenological examination of human experience. In treating *Insight* predominantly as a retrieval of Nature, we draw especially from Patrick H Byrne, "Insight and the Retrieval of Nature," *Method* 8 (1990): 1–59, which we will reference in some detail below.

initial phase and Lonergan's developing thought on the meaning of the doctrine of grace.”⁹⁷

While Stebbins described the limits of Lonergan’s earlier account of nature and grace within a theoretical and specifically Aristotelian framework, *Insight* marks an important turning point for the analogue of nature in particular.

Patrick Byrne argues that Lonergan’s *Insight* may be fruitfully understood as recovery and transposition of the concept of nature, ultimately in service of providing theology with the philosophical resources needed to meet the challenges of the modern era, many of which trace back to the “erosion of nature” that has occurred in the divided and divisive state of contemporary philosophy.⁹⁸ However, Byrne denies that this is some paean to “Nature,” understood in opposition to the “unnatural” innovations of modern times. Rather, Byrne suggests that this retrieval is rooted in Lonergan’s clarification of the phenomenologically verifiable and dynamic structure of human consciousness, which

⁹⁷ Stebbins, *The Divine Initiative*, 1995. xix

⁹⁸ Byrne, “Insight and the Retrieval of Nature,” 1990. 1. The theological challenge of operating without recourse to a common philosophical framework is similarly described by a number of contemporary thinkers, including Pope John Paul II: “Recent times have seen the rise to prominence of various doctrines which tend to devalue even the truths which had been judged certain. A legitimate plurality of positions has yielded to an undifferentiated pluralism, based upon the assumption that all positions are equally valid, which is one of today's most widespread symptoms of the lack of confidence in truth. Even certain conceptions of life coming from the East betray this lack of confidence, denying truth its exclusive character and assuming that truth reveals itself equally in different doctrines, even if they contradict one another. On this understanding, everything is reduced to opinion; and there is a sense of being adrift. While, on the one hand, philosophical thinking has succeeded in coming closer to the reality of human life and its forms of expression, it has also tended to pursue issues—existential, hermeneutical or linguistic—which ignore the radical question of the truth about personal existence, about being and about God. Hence we see among the men and women of our time, and not just in some philosophers, attitudes of widespread distrust of the human being's great capacity for knowledge. With a false modesty, people rest content with partial and provisional truths, no longer seeking to ask radical questions about the meaning and ultimate foundation of human, personal and social existence. In short, the hope that philosophy might be able to provide definitive answers to these questions has dwindled.... To bear witness to the truth is therefore a task entrusted to us Bishops; we cannot renounce this task without failing in the ministry which we have received. In reaffirming the truth of faith, we can both restore to our contemporaries a genuine trust in their capacity to know and challenge philosophy to recover and develop its own full dignity.” Pope John Paul II, “Fides et Ratio,” September 14, 1998, http://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_14091998_fides-et-ratio.html.

furnish the “normative basis... by which normative scientific achievement can be effectively and methodically differentiated from ideological extrascientific opinions which invalidly attempt to justify themselves by appealing to modern science.”⁹⁹

3.3.1 Aristotle’s Meaning(s) of Nature

Byrne’s article unfolds in two parts. In the first, he offers an interpretation of Aristotle’s understanding of nature and naturalness, which he summarizes as follows¹⁰⁰:

For Aristotle the notion of what is natural first involves a combination of “immanent nature” (form and matter, but principally form) with circumstance (constellations of efficient and final movers). Second, in human affairs the relevant immanent nature (form) has to do with habits of excellence (virtues) in thought, emotion, and action. Third, Aristotle emphatically distinguished in circumstances between “what happens always, or for the most part,” and what happens “rarely,” or by chance. Hence the patterns of change which ensue similarly divide, and there

⁹⁹ Byrne, “Insight and the Retrieval of Nature,” 1990. 3

¹⁰⁰ Byrne’s treatment of Aristotle may not seem immediately germane to either the task of clarifying Lonergan’s position or of developing a more broadly inclusive theology of grace, but it is important for three reasons. First, it helps to distinguish the proper meanings of metaphysical terms like “matter” and “form” from their all too common misappropriations in contemporary discourse, which often treats “matter” as something like Descartes’ *res extensa* and thus ends up in the inescapable quagmire of numerous dualisms. For our own account of this distinction in relation to the materialist philosophy of Owen Flanagan, see Benjamin J. Hohman, “Towards a More Eudaimonistic Scientia,” *Heythrop Journal* 57, no. 3 (2016): 599–609. Second, one of the greatest strengths of Lonergan’s critical, heuristic metaphysics lies in its focus on the world in its concrete and diverse intelligibilities and its manifold possibility; in this, it moves away from the pre- and early-modern scientific emphasis on necessity and law into a more robust recognition of contingency, probability, and dynamism. Thus, a clarification of Lonergan’s metaphysics necessarily entails a clarification of both its novelty in this regard and on its unique capacity to respond to contemporary philosophical and scientific exigencies. The third reason we have included this brief summary is that a great many modern philosophical and theological commentators (including John Haught) have been wary of any Thomist metaphysics on the grounds that it is supposedly shot through with an essentialism and a false naturalism that have been deployed against concrete persons and communities as an exercise of hegemonic control by those in power. While this claim is not without merit insofar as Aristotle and Thomas’s works are subject to the same abuse as those of any other thinker, because both Thomas and his reading of Aristotle are so instructive for Lonergan’s thought, we have deemed it important to include Byrne’s treatment here in order to forestall such an objection to this project.

is a tendency to regard ensuing patterns of change which happen “for the most part” as in accord with nature, while “rare” patterns of change seem less natural. Occasionally Aristotle referred to such patterns as due, not to relative frequencies of circumstance, but to differences in their immanent natures.¹⁰¹

Thus, Aristotle’s understanding of “nature” is actually a lapidary composite of a number of meanings that need to be distinguished. In his broadest usage, Aristotle uses of the term to refer to all of the changes that take place in the cosmic order: physical, biological, specifically human, etc. Given the diversity of elements which fall under this sweeping definition of “nature,” Byrne emphasizes that “the question of the principles of so diverse a field turns out to be difficult... [and even more so] insofar as an interpreter assumes that what is sought is but a single principle of Nature.”¹⁰²

Seeking to provide a much-needed differentiation of the concept of nature, then, Byrne begins by clarifying the function of form and matter in Aristotle’s account of nature, emphasizing the heuristic function of the term “matter”:

Aristotle’s “matter” simply cannot be imagined as hard, dense, extended, particulate “stuff,” as would become the case in the modern period. Rather, for Aristotle “matter” is “whatever is presupposed by.” If this leaves the reader at a loss as to how to picture this “matter,” that is precisely the point. Aristotle’s science of nature is radically different from the science of the seventeenth century, where picturable underlying matter played such an important role.¹⁰³

¹⁰¹ Byrne, “Insight and the Retrieval of Nature,” 1990. 6-7

¹⁰² Byrne. 8

¹⁰³ Byrne. 11

Byrne notes that “form” is similarly misunderstood by many, though this is partially a result of Aristotle’s use of both the technical, Platonic term *eidos*, or intelligible idea, as well as the commonsense term *morphe*, or shape, when talking about form. Despite his explicit definition of both terms as pertaining to the intelligibility “known through the formula of a definition,” this linking of these two words has been repeated throughout the history of philosophy. As a result, form has frequently been reduced to what is known by merely taking a look: “Galileo’s arbitrary preference for ‘primary qualities,’ Descartes’s for *res extensa*, and Hume’s criteria for impressions are all mistakes of this kind.”¹⁰⁴ Understood as the intelligible account of the object in question, form may provide for a much richer account of the distinctiveness of a thing than may be included in the naïve sense of “form as shape” known by “taking a look.”¹⁰⁵ Lonergan frequently criticized these ocular metaphors for knowing and the confusion they cause—seen, for example, in his criticisms of the inadequately theoretical grasp of metaphysics demonstrated by Molina, Báñez, and others.

Byrne draws a further distinction between two senses in which Aristotle uses nature: immanent nature and nature as a whole.¹⁰⁶ Immanent nature pertains to each particular thing in relation to its distinct form. As Aristotle states it, “Nature is a principle and a cause of motion or rest in that to which it belongs primarily.” (192b21-22) For example, the immanent nature of two different seeds may provide an account of why and how both develop into the same sort of plant, despite the differences in external

¹⁰⁴ Byrne. 11-12

¹⁰⁵ In fact, Byrne notes that describing the form of any single thing requires an enormous amount of observational and intellectual work, as evidenced in his comment that “... the ‘definition’ of a purple finch would probably take several hundred pages to formulate completely.” Byrne. 12, n7.

¹⁰⁶ Byrne, “Insight and the Retrieval of Nature,” 1990. 14

influences on each particular seed.¹⁰⁷ Far from the contemporary misunderstanding of Aristotelian natures or forms as static, Byrne clarifies that, “Form... is the fundamental determinant of change for Aristotle.”¹⁰⁸

This linking of the principle of immanent nature with immanent change is complemented by Aristotle’s second sense of nature, nature as a whole, in that Aristotle recognized that not all of the changes any given object may undergo are specified by this internal principle of motion and rest alone. The interactions between objects lead to a great variety of other, unexpected changes, and so this second sense of nature “provides an account of the objective reality of chance, without turning chance into a ‘cause,’” since the in-breaking event only appears to be due to mere chance “from the viewpoint of the earlier natural causal sequence.”¹⁰⁹

However, Byrne notes that Aristotle’s preoccupation with necessity and regularity led him infelicitously to ascribe some sense of naturalness to events in relation to their immanent natures and the disturbance of their chain of regularities in relation to external events. Quoting Byrne at length:

[The] classicist tradition has fostered a tendency to regard what “always” happens as most natural, what happens “for the most part” as more or less so, and what happens “rarely,” or by chance [understood from the perspective of the immanent nature of a given object], as virtually unnatural. Hence for Aristotle and the classicist tradition, the “natural” all too frequently amounts to the undifferentiated

¹⁰⁷ Byrne. 14-15. Byrne also notes here that Aristotle’s description of immanent natures according to formal and material causality in Book A of the *Physics* is intended to be complementary to the familiar account of the four causes laid out in Book B, where the latter “are in fact the same two principles taken from various viewpoints.”

¹⁰⁸ Byrne. 16

¹⁰⁹ Byrne. 17-18

combination of form and “other things being equal.” It is precisely the “other things” which the notions of “what always comes to be in the same way” and “what comes to be for the most part” imply as being the case. Clearly, “what always comes to be in the same way” and “what comes to be for the most part” for Aristotle were more natural than chance, so that occurrences which have high probabilities were taken to be more natural than those which have lesser probabilities. This lack of differentiation is the source of virtually all future distortions of the meaning of “nature.”¹¹⁰

As Byrne’s description suggests, this trajectory bears directly on the weaponized sense of the natural/unnatural distinction as applied by many commentators on human affairs today, who would enlist the cover of science to criticize human behaviors to which they object.¹¹¹ However, as Byrne clarifies, naturalness understood in relation to humans, who possess the potential to develop habits under the “guiding power of intelligence (virtues) or not (vices)... [and thus] they are natural just insofar as they are intelligent and reasonable.... There is no nonsense in Aristotle that there are deeds and ways of living which are either naturally right or unnaturally evil.”¹¹² Rather, on account of the diversity between people, cultures, etc., Aristotle affirms the need for *phronesis*, or practical wisdom, to define what is “the right time, toward the right objects, toward the right

¹¹⁰ Byrne. 20-21

¹¹¹ For two recent publications that build on Lonergan’s work to address this concern specifically in relation to questions of gender, sex, and sexuality, see Jonathan Heaps and Neil Ormerod, “Statistically Ordered: Gender, Sexual Identity, and the Metaphysics of ‘Normal,’” *Theological Studies* 80, no. 2 (2019): 346–369, and Benjamin J. Hohman, “Gender and Metaphysics: Judith Butler and Bernard Lonergan in Conversation,” *Theological Studies* 81, no. 1 (2020): 111–31.

¹¹² Byrne. 22-23. As Byrne notes, here, Aristotle’s linking of human naturalness with intelligence and reason is the groundwork for Aquinas, who “goes on to teach that the ‘natural law’ is participation in reason (*Summa Theologiae* IIa-Iae: Q90a1; 91a2).”

people, for the right reason and in the right manner” (1106b20-22).¹¹³ Thus, despite the problems occasioned by Aristotle’s preoccupation with necessity and regularity, Byrne reveals a dynamic basis for Aristotle’s understanding of both individual, immanent natures and nature as a whole.

3.3.2 Lonergan’s Transposition: Nature as Explanatory

After completing this initial task of interpreting and exonerating Aristotle’s concept of nature from many of the modern and postmodern charges leveled against it, Byrne directs his attention to clarifying Lonergan’s transposition of the Thomist-Aristotelian concept of nature. Byrne argues that the biggest shifts in this transposition pertain to the contemporary understanding of the natural sciences specifically as explanatory and to the diversity of modes of explanation there included:

I would like to suggest that the underlying puzzlement here has to do with the extraordinary cultural transformation condensed by Lonergan into the term, ‘explanatory.’ It is impossible to overestimate the range of cultural challenges which have flowed from the emergence of modern explanatory practices when, first, the question of explanation began to be put with a new urgency; second, there arose over the relatively short span of about one hundred years whole ranges of mathematical and scientific innovations which vastly clarified just what sort of answers the explanatory questions were seeking; and third, the modern ‘natural’ sciences discovered tremendously flexible and incisive analytic aids to finding answers to certain of these questions for explanation.¹¹⁴

¹¹³ Byrne. 23

¹¹⁴ Byrne. 27

Corresponding to this more differentiated understanding of science—freed from the earlier view of science as an offshoot of philosophy itself—Lonergan recognized that the comparatively undifferentiated term “nature” had to be similarly complexified. Thus, Byrne notes that Lonergan does not specifically employ the term “nature” much at all in *Insight*.¹¹⁵ However, he argues that Lonergan’s critical, heuristic structure demonstrates the two senses of nature described in Aristotle’s account as transposed into a metaphysics of interiority, grounded on his cognitional theory and consequent epistemology. Thus, for Lonergan, “the principal meaning of ‘nature’ is the intelligibility associated with explanatory classical correlations or functions.”¹¹⁶ He transposes immanent nature—the principle of motion or rest regarding a particular object— “into a context in which the normativity of explanatory correlations is taken seriously... (a) by showing how the terms and relations of an explanatory correlation can be assembled into ‘schemes of recurrence’; and (b) by showing further how such schemes themselves can be combined into ‘explanatory genera and species.’”¹¹⁷ Thus, “whereas Aristotle and his successors simply used ‘nature’ in an undifferentiated sense, Lonergan also introduced other terms such as ‘state,’ ‘emergent probability,’ ‘genetic operator and integrator,’ ‘immanent intelligibility,’ and ‘invariant structure of consciousness.’”¹¹⁸

Lonergan’s “notion of nature” suggests a heuristic function to the term, as “the notion of ‘nature’ guides and orients what Lonergan calls the ‘classical heuristic structure.’ The ‘notion’ of nature interrogatively intends what is to be understood by an

¹¹⁵ Byrne points to only one brief mention of the term in a section on the heuristic notions of modern science. While Byrne does not provide an exact reference, it is likely that he is either referring to Lonergan, *Insight*, 1992. 61-62 or perhaps 134-135.

¹¹⁶ Byrne. 25

¹¹⁷ Byrne. 25-26

¹¹⁸ Byrne. 27

explanatory classical correlation, an explanatory functional relation.”¹¹⁹ In other words, for Lonergan, since the “nature” of a thing is the aggregate set of explanatory accounts of how things act and interact with other influences around them, the “notion of a nature” is not a settled concept so much as a tool for framing questions for understanding about the object in question, which can only be settled by attending to the “specific sense data” regarding the object as considered by specialists across a range of disciplines. However, the results of these investigations yield only an indirect understanding of the object’s nature, since “our sense experiencings are selected and patterned in accord with our orientation, our de facto self-constitutions.”¹²⁰ While this does not undermine the possibility of coming to know a thing’s nature, it highlights that the results of human investigations suffer from the idiosyncrasies of those asking questions and the limits of their viewpoints:

[F]or Lonergan we would only be able to speak of anything's nature in the full sense if the orientation of our self-constitution were as unrestricted as the whole universe (Lonergan, 1959: 76-79). So in restricting ourselves to thinking about natures only descriptively or even heuristically, there is real danger that without realizing it, our idea of what is and is not natural is incorporated within the restricted horizon of our own practical interests.¹²¹

This then clarifies how Lonergan accounts for Aristotle’s second meaning of nature in relation to the whole, namely, the whole explanatory account. Principles of nature are not observations of sensory data but rather the intelligent formulation of specific functional

¹¹⁹ Byrne. 28

¹²⁰ Byrne. 28

¹²¹ Byrne. 28-29

correlations; Byrne thus traces the trajectories from Galileo and Boyle through Gay-Lussac and Van der Waal, demonstrating that the difference between the classical and the contemporary understandings of science involves the reorientation from ideal frequencies with “all things being equal,” to a deliberate attempt to specify all of the interrelated parts and how their functions are concretely intertwined in the world. As Byrne notes, “Lonergan’s explanatory notion of nature... is neither a thing nor the ‘immanent nature’ of a thing. It is also not Nature as a whole. It entails a wholly new differentiation of thinking, and this new differentiation is at the heart of the normative achievement in modern science.”¹²²

3.3.3 Classical and Statistical Correlations in an Emergent World

In *Insight*, Lonergan refers to this differentiation by distinguishing classical laws, like those developed by Galileo and Boyle, from the complementarity of classical and statistical correlations, the latter of which actually determine the frequencies of how often “all other things are equal” and how to deal with them when they (frequently) aren’t. Both classical and statistical correlations prove to be genuinely explanatory of the world comprised of both regularities and non-systematic deviations from norms, tracked through statistical methods. The notion of “chance” by which Aristotle was only able to describe a relative unintelligibility in sub-lunar events is made part of the explanatory system itself, as statistics furnish the possibility of explaining the when, where, and why of otherwise unexpected results in interrelated systems. As Byrne puts it, “By

¹²² Byrne. 34

determining these probabilities, statistical studies provide a first approximate explanatory transposition of Aristotle's "Nature as a whole."¹²³

By articulating the intelligibility of statistical relations as an irreducible part of reality, Lonergan provides an account of nature that is strikingly open to the "natural" emergence of highly unlikely but not impossible events, so many of which have been demonstrated to be at the heart of cosmic, evolutionary emergence. Moreover, through what he calls "schemes of recurrence," Lonergan provides an account for how the existing world-order nurtures the ongoing complexification of the whole. While statistics explain how "events 'conform to probable expectations' (Lonergan, 1958: 59) to 'an ideal frequency from which actual frequencies may diverge, but only non-systematically' (110)," Byrne notes that these systems also give rise spontaneously to systematically recurring events as well; as Lonergan puts it: "The notion of the scheme of recurrence arose when it was noted that the diverging series of positive conditions for an event might coil around in a circle. In that case, the series of events, A, B, C, ... would be so related that the fulfillment of the conditions for each would be the occurrence of the others (1958: 118)."¹²⁴ Byrne suggests, for example, the cycle of oxidative phosphorylation, especially as observed in the ATP cycle, in which obtains "a sequence of five chemical reactions, in which the last reaction produces one of the substrates required by the first reaction."¹²⁵ Moreover, as Byrne notes, this cyclic effect is not produced by the closing of the system. Rather the interrelations between a great many cells exchanging molecules, such that, though the law of very large numbers, there is *on average* a sufficient number

¹²³ Byrne. 37

¹²⁴ Byrne. 37

¹²⁵ Byrne. 39-43

of ATP cycles functioning to undergird the higher functioning of cellular aggregates.¹²⁶

As this example suggests, though, it is also possible for these schemes of recurrence to add together to yield higher things: Byrne suggests two in particular.

The first instance of schemes of recurrence combining to yield higher things is what Lonergan referred to as explanatory genera and species. Byrne writes that “[Explanatory] species are ‘higher systems which make systematic [in various ways] the coincidental aggregates’ of events.”¹²⁷ Returning to his example of the ATP cycle, Byrne thus notes that molecular biology describes not only the cycle itself, but also the other cellular cycles with which it interacts: “The overall way in which oxidative phosphorylation cycles and other cycles are added together results in the distinctive pattern of functioning of this or that ‘species’ of cell. Introduce different cycles, or combine the same cycles in different ways, and you will have a different species.” Explanatory genera, then, are the overarching fields under which these various, interrelated systems are investigated and which diverse investigations reveal “distinct sets of conjugates.” These genera make up disciplines that are irreducible to one another: physics, chemistry, biology, sensitive psychology, rational psychology, etc. Each of these provides an explanatory account of the phenomena they observe from a particular vantage point, and, as they examine related objects, they may identify multiple species of a more general phenomenon. Each explanatory account of a given phenomenon provides one “conjugate form,” all of which together account for the particular nature of the creature in question.

¹²⁶ Byrne. 43

¹²⁷ Byrne. 44

The second way in which schemes of recurrence may be added together to yield higher things is described by Lonergan's notion of emergent probability. Byrne summarizes this as "the generic process whereby temporally earlier schemes begin to operate. They thereby shift the probabilities for the emergence of a second order of schemes, which in turn shift the probabilities for later schemes."¹²⁸ Emergent probability explains how events that are relatively unlikely to occur may become more probable as new schemes of recurrence build upon each other. In this sense, "emergent probability is an explanatory notion. In part it provides an explanatory account of the supply of the naturally recurring conditions under which things function naturally.... [and] is the second approximation to the transposition of Aristotle's "Nature as a whole" into the context of modern explanatory science.

Lonergan's notion of emergent probability first appears in a chapter of *Insight* titled, "The Complementarity of Classical and Statistical Structures."¹²⁹ Lonergan argues that when our fundamental desire to know moves from descriptions of things-in-relation-to-us to explanations of things-in-relation-to-each-other (e.g. from relating the sun according to our visual experience of it as rising and setting, to relating it to the rotations of the Earth), our spontaneous questioning of the world employs both classical and statistical laws. Classical laws express systematic regularities in nature, all other things being equal, such as the formula, $F = ma$. Statistical laws explain non-systematic divergences from some norm by expressing an ideal frequency. For instance, statistical

¹²⁸ The following account of emergent probability is adapted from Benjamin Hohman, "The Glory to Be Revealed: Grace and Emergence in an Ecological Eschatology," in *Everything Is Interconnected. Towards a Globalization with a Human Face and an Integral Ecology*, ed. Joseph Ogbonnaya and Lucas Briola, First edition (Milwaukee: Marquette Univ Pr, 2019), 179–98.

¹²⁹ Bernard J.F. Lonergan, *Insight: A Study of Human Understanding*, Collected Works of Bernard Lonergan (CWL) 3, eds. Frederick E. Crowe and Robert M. Doran (Toronto: University of Toronto Press, 2005), 126-162.

analysis discerns the likelihood of heads or tails on a coin conforming more closely to 50/50 over an increasing number of flips, despite the unpredictability of any single flip. Simply put, classical laws express what will happen under the proviso of all the necessary circumstances obtaining (i.e. if A, then B, provided C is in place), and statistical laws express how often that proviso is met. Lonergan underscores that modern science acknowledges a complementarity between these two kinds of knowing, both as regards the cognitional operations of the human subject *and* as an objective complementarity “in the intelligibility immanent in the universe of our experience.”¹³⁰ Thus, humans know things-in-relation-to-each-other according to classical or statistical formulations precisely because reality itself is constituted by both formal necessity and actual contingency and so is isomorphic with our cognitive, heuristic anticipations of these distinct kinds of intelligibility. Furthermore, reality exists precisely through the combination of these intelligibilities.

Lonergan then turns to the complementarities in the realities known, describing the intelligibility of the world in its inherently developmental, evolutionary character as emergently probable. By “emergence,” Lonergan refers to the advent of something genuinely new in the world that did not exist or occur before. However, emergence does not occur *ex nihilo*. Instead, a new reality emerges from the conditions fulfilled by a concrete plurality of lower order phenomena already existing in the world. For instance, depending on the occurrence of suitable conditions on the level of physics, subatomic particles fulfill the conditions for the emergence of more complex elements and compounds operating on the distinctly chemical level. At the same time, these chemical

¹³⁰ Lonergan, *Insight*, 139.

compounds depend on the perdurance of realities whose intelligibilities are properly physical. In accord with schedules of probability, these lower order schemes of recurrence ground further schemes, from the genera of physics to chemistry, to biology, and to sensitive and rational psychologies.

The march of progress is often interrupted, and so Lonergan recognizes the possibility and reality of blind alleys in evolutionary processes. However, once a scheme of recurrence has emerged onto a new generic order, it tends toward the conservation of the lower order in a way that may lead to the emergence of even higher schemes. For instance, once living cells emerge from a chemical substrate, those cells promote the cyclical reproduction of lower order chemical processes such that the probability of the reemergence of those same life-giving chemical reactions is governed by the laws and probabilities proper to a newly emergent biological pattern of life. What was once highly unlikely to emerge becomes likelier to recur, which, in a developing universe, consequently supplies the condition for the emergence of new schemes. Thus, in his presentation of emergent probability, Lonergan again accounts for the observably intelligible and verifiably developing world-order.

This theory is especially important in terms of understanding how *Insight* may provide a transposed account of nature in relation to the theology of grace sought here. Lonergan's theory of emergent probability permits a larger revisioning of the dynamic world-order in line with an evolutionary worldview. This provides for a more careful and complete account of both nature and grace that does not fall into some of the pitfalls associated with some of the other reorientations of theology, as seen for instance in the theology and philosophy of Teilhard de Chardin. In a recent essay comparing Lonergan's

emergent probability with Pierre Teilhard de Chardin's highly imaginative teleology, Patrick Byrne highlights Lonergan's explanation of the universe as an "upwardly but indeterminately directed dynamism."¹³¹ For Lonergan, lower cycles set the conditions for the possibility of the emergence of more complex and irreducibly new phenomena, an emergence that does not depend on some act of special creation.¹³² The natural scientific account of the realization of an unlikely emergence depends squarely on time. Given enough time, the probability of something new and higher emerging increases according to both the statistical intelligibilities of their processes and the classical laws governing the lower schemes of recurrence, assuming the conditions are right. In this sense, Lonergan's more explanatory and scientific account has a distinct advantage over Teilhard's more descriptive and imaginative account. In accord with emergent probability, a seemingly lifeless physical universe can give rise to successive orders of emergence leading to life and beyond, all the way up to intelligent life as we know it.

3.3.4 Generalized Emergent Probability: Genetic and Dialectical Intelligibilities

This account of emergent probability illustrates how a wide range of correlations and probabilities interact to enable the emergence of an ever more complex universe. As Byrne explains, however, Lonergan argues that two other methods of inquiry—the genetic and dialectical—are needed to describe the ways in which human beings investigate and explain the knowable universe. These additional methods clarify the

¹³¹ Lonergan, *Insight*, 501, cited in Patrick H. Byrne, "The Integral Visions of Teilhard and Lonergan: Science, the Universe, Humanity, and God," in *From Teilhard to Omega: Co-creating an Unfinished Universe*, ed. Ilia Delio (Maryknoll, NY: Orbis Books, 2014), 100.

¹³² Though it does not rule out a creator. See Patrick H. Byrne, "Lonergan, Evolutionary Science, and Intelligent Design," *Revista Portuguesa de Filosofia* 63 (2007): 893-913.

unique place of humanity within creation. First, a genetic method of inquiry attends to the intelligibility of biological life, which is characterized by “embryological and other forms of development... [and] other forms of self-modifying processes.”¹³³ This includes the biological growth proper to organisms, but, in humans, it also includes the intelligent “growth of self-correcting understanding in individual human beings and in human communities as well.”¹³⁴ Second, with the emergence of intelligence arises an “endless source of intelligible, recurring schemes” of production, cooperation, learning, and valuing.¹³⁵ However, there also arises the possibility of human unintelligence.

Thus, dialectical method examines the interplay of beings who can act attentively, intelligently, reasonably, responsibly, and lovingly, but who frequently—and, ultimately, inexplicably—do not. To account for both the biological cycles of self-regulated growth (genetic) and the impact of the misuse of human intelligence (dialectical), we arrive at what Lonergan names “generalized emergent probability”¹³⁶ as an explanation of “the intelligible unity of the evolving universe.”¹³⁷ As Byrne argues, “This more generalized linking of developments and their natural conditions [which] Lonergan referred to as ‘generalized emergent probability’... provides the third and fullest transposition of Aristotle’s ‘Nature as a whole.’”¹³⁸

On the basis of this transposition, then, Byrne suggests that the description of anything as “natural” must entail a further specification as to “what is natural with respect to: (1) an explanatory correlation, (2) a scheme of recurrence, (3) an explanatory species,

¹³³ Byrne, “The Integral Visions of Teilhard and Lonergan,” 102.

¹³⁴ Byrne, “The Integral Visions of Teilhard and Lonergan,” 102.

¹³⁵ Byrne, “The Integral Visions of Teilhard and Lonergan,” 102.

¹³⁶ Lonergan, *Insight*, 533.

¹³⁷ Byrne, “The Integral Visions of Teilhard and Lonergan,” 103.

¹³⁸ Byrne, “Insight and the Retrieval of Nature,” 1990. 48

an ecology, (4) or the universe as a whole.”¹³⁹ As regards the fourth and broadest specification, Byrne notes that “every sequence of events which accords with generalized emergent probability is natural, [which] is indeed a vast range of occurrences, but by no means an arbitrary or unlimited range.”¹⁴⁰

Nevertheless, Byrne notes that the explanatory unity of even generalized emergent probability remains “imperfect” and “fractured” because disordered human choices against intelligent and loving action distort the range of probabilities within human consciousness and among the options for choice. From a theological viewpoint, this is the problem of evil: “Given that God is all-good, all-understanding, and all-powerful, the problem is that there has to be something more to the unity of the universe than has been envisioned so far in generalized emergent probability. Evil is the problem to which this ‘something more’ is the solution.”¹⁴¹ This “something more” is “supernatural” in the sense that it “does not emerge from the earlier stages of evolution” but is, according to Lonergan, “principally the work of God... [acting to bring about] a harmonious continuation of the actual order of the universe... [to realize] a new and higher integration of human activity.”¹⁴² Byrne concludes with Lonergan’s claim that the infusion of the “supernatural virtues of faith, hope, and self-sacrificing love... [to transform] the effects of evil into good” characterizes this higher emergence.¹⁴³ By acting in accord with these virtues in relation to all of creation, humans contribute to the redemption and consummation of the whole. While this formulation seems still to restrict

¹³⁹ Byrne. 48

¹⁴⁰ Byrne. 50

¹⁴¹ Byrne, “The Integral Visions of Teilhard and Lonergan,” 103.

¹⁴² Byrne, “The Integral Visions of Teilhard and Lonergan,” 103.

¹⁴³ Byrne, “The Integral Visions of Teilhard and Lonergan,” 103. The meaning of “self-sacrificing” does not entail self-destructive. For the most complete account of Lonergan’s ethics, see Patrick H. Byrne, *The Ethics of Discernment: Lonergan's Foundation for Ethics* (Toronto: University of Toronto Press, 2016).

the direct effects of grace to human minds and hearts, it nevertheless suggests God's gratuitous gift of grace may enter into the much larger redemption of a world marked by its openness to completion at a higher level.

3.3.5 Key Developments of this Transposition

Building on Byrne, we are now able to clarify how *Insight* functions as a retrieval of the concept of nature that was so important in the earlier, theological synthesis at the level of theory but which has become deeply problematic and problematized in contemporary philosophy and theology. Despite the limitations of this account with respect to the project of extending our thinking about grace towards non-human creation, the foregoing highlights a great number of the advantages to the concept of nature as transposed by Lonergan. First, Lonergan's transposed account of nature clarifies the multiple valences of the term "nature" and how each may be properly applied. Second, it explains how the remote possibilities of a statistical system are no less "natural" than any of the other more common occurrences, since both the more and less common occurrences flow from the same set of statistically explainable reality. Third, eschewing the last vestiges of the Aristotelian preoccupation with necessity, it clarifies not only how the world-order unfolds contingently in history, but also that the meaning of contingency is not plagued by the same baggage as the concept of mere "chance." Fourth, it elucidates how the more thoroughly differentiated modern sciences each take on their own role in describing nature, while at the same time showing how those various accounts are connected through an explanatory metaphysics, since each field (physics, chemistry, biology, etc.) explicates a particular, explanatory conjugate form in relation to a common object of

inquiry. Fifth, it reveals how Lonergan's critical metaphysics transposes the account of nature and grace into the realm of post-classicist theory and thereby provides an expansive, philosophical framework for organizing and interrelating the diverse fields of knowledge—each of which enjoys a relative independence from philosophy in the application of its particular, disciplinary methods and procedures. Therein, it furnishes a concept of nature that not only is well-suited to the theological challenge of an evolutionary re-orientation, but it also one that is philosophically robust enough to operate in the ongoing dialogues between religion or theology and science. This was demonstrated, for instance, in Lonergan's distinction between matter as it was understood in Aristotle and the modern misunderstandings of this term in Galileo, Descartes, Hume, Newton, etc., which mistakes have seriously contributed to the ongoing reductive scientism that continues in the work of many scientists-turned-philosopher today. Sixth and finally, through his account of generalized emergent probability, Lonergan accounts for both the intelligibilities of the world in terms of classical and statistical intelligibilities and their interplay in evolutionary processes, on the one hand, and the genuine newness that enters the world with the emergence of life (genetic) and of intelligent life (dialectical), on the other.

Taken together, then, all of these strengths of Lonergan's transposition of nature place his philosophy and theology as a powerful basis for the re-orientation of a theology of grace with respect to non-human creation. Having freed the concept of nature from the misunderstandings that have led to its being maligned or forfeited in some contemporary conversations, Lonergan arrives at an understanding of nature that once again furnishes a useful analogue for thinking through how God discloses Godself in love to God's

creation. While there remain some obvious limitations in this account with respect to the extension of these reflections to non-human creation, these are not insurmountable, especially since Lonergan's insistence on the heuristic character of his metaphysics specifically promotes just this form of revision in the light of so many conjugate forms. In the next and final section of this chapter, we turn to the question of how and to what extent Lonergan effected a similar transposition of his earlier theology of grace. While this falls short of attending to the unfolding of grace in relation to non-human creation, Lonergan's articulation of the groundwork for transposing grace into interiority provides an important foundation for our own attempts at constructing a theology of grace in the next chapter.

3.4 Grace, All the Way Down: Lonergan's "Augustinian Turn"

After the publication of *Insight*, Lonergan's thought on the interplay between nature and grace grew and developed in a number of instructive ways. There is no synthetic, summary account of Lonergan's later theology of grace that compares with Stebbins' authoritative treatment of Lonergan's earlier works, and we will not attempt even an outline of such a project here. Rather, in this section, we will identify a series of clues in Lonergan's later works that have proved helpful for his students in developing a more complete theology of grace and which will likewise prove productive for our own project.

The developments sketched below evince a more complete transposition of Lonergan's theological insights from the realm of theoretical metaphysics into the realm of interiority, the latter of which entails a greater emphasis on history and development in both persons and in the larger systems of relations in which they operate. Several

commentators have named the shift an “Augustinian turn” in Lonergan’s later works, in relative contrast with the overriding, intellectualist stress on the dynamic desire to know as a kind of *vis a tergo* in *Insight*.¹⁴⁴ By contrast, *Method in Theology* is more explicit about the prior role of God’s grace poured out in love in the hearts of human subjects, without which the possibility of overcoming the damage of sin that *de facto* obtains in all persons to varying degrees—both in their bias and meanness—is greatly diminished. In this sense, while *Method* is not explicitly focused on developing a new theology of grace, it suggests a shift in Lonergan’s intuitions about how to talk about grace in contemporary theological discourse.

This shift may be better understood in light of Lonergan’s view of theology as chiefly concerned with mediating between religion and empirical culture, the latter of which Lonergan defines as, “the set of meanings and values that informs a way of life. It may remain unchanged for ages. It may be in the process of slow development or rapid dissolution.”¹⁴⁵ Since theology’s task is specified by the theologian’s operative understanding of culture, Lonergan notes that this shift occasions a new theological task: “When a classicist notion of culture prevails, theology is conceived as a permanent achievement, and then one discourses on its nature. When culture is conceived empirically, theology is known to be an ongoing process, and then one writes on its method.”¹⁴⁶ The purpose of a methodical theology is thus to carefully facilitate the

¹⁴⁴ David Tracy notes that Lonergan’s early writings up through *Insight* reflect an intellectualist form of Thomism, where “intellectualist” functions not as a criticism but as a description highlighting the distinction between Lonergan’s position and the problematic conceptualist and idealist accounts against which he was writing, which, Tracy argues, places Lonergan’s position far more in line with Aquinas’s own. See David Tracy, *The Achievement of Bernard Lonergan*. (New York: Herder and Herder, 1970).

¹⁴⁵ Lonergan, *Method in Theology*, 2017. 3

¹⁴⁶ Lonergan. 3

transposition of the enduring theological insights of generations past into a form capable of speaking to contemporary questions.

In his own context, Lonergan understood these changes to entail primarily 1) the turn to the subject, as exemplified by Kant, and 2) a dynamic understanding of history as an ongoing process, exemplified by Hegel. While both Kant and Hegel's philosophical projects also introduced a series of "counter-positions" that are problematic, Lonergan recognized that they had shaped the modern discourse in such a way that, for theology to speak effectively to the larger cultural conversation, it had to move from the theoretical realm of meaning as exemplified in Aquinas's theology to the existential language of interiority that turns towards and appropriates the subject in relation to the dynamism of conscious intentionality. Where Thomas grounded his theological project on his appropriation of the Aristotelian theoretical-metaphysical worldview, Lonergan built on the basis of the structure of inner experience that is available to all persons and which he describes in detail in *Insight*. Therein, Lonergan develops a generalized account of the functioning of human intelligence in the world as driven by a deep desire to know expressed concretely in the spontaneous emergence of questions in relation to our experience and understanding.

If the same dynamic pattern of operations—experience, understanding, judgment—ground all acts that we call knowing, then knowing correctly means performing each activity intentionally and in a spirit of genuine inquiry. There results what Lonergan refers to as a "transcendental method," though this differs significantly

from the meaning of that phrase as applied to others, including the so-called

“transcendental Thomists.”¹⁴⁷ For Lonergan,

transcendental method is coincident with a notable part of what has been considered philosophy, but it is not any philosophy or all philosophy. Very precisely, it is a heightening of consciousness that brings to light our conscious and intentional operations and thereby leads to the answers to three basic questions. What am I doing when I am knowing? Why is doing that knowing? What do I know when I do it? The first answer is a cognitional theory. The second is an epistemology. The third is a metaphysics, where, however, the metaphysics is transcendental, an integration of heuristic structures, and not some categorial speculation that reveals that all is water, or matter, or spirit, or process, or what have you.¹⁴⁸

Lonergan’s transcendental method is distinguished from all philosophical usages that begin with the epistemological question without the grounding of an adequate phenomenology of interiority, without which it is difficult to distinguish any genuine epistemology from ideology. By beginning with an empirically verifiable account of the “that” in question in a cognitional theory—what we actually do when we think we are knowing anything at all—we may eliminate the notorious primacy of the subject/object split which emerges from these other philosophical approaches (e.g. Descartes, Kant, and many others).

¹⁴⁷ Without underwriting the application of this term in any instance, transcendental Thomism is often associated with Joseph Maréchal, Emerich Coreth, and Karl Rahner. While Lonergan is frequently also included in this list, neither he nor his students broadly or wholly agree with this classification.

¹⁴⁸ Lonergan, *Method in Theology*, 2017. 27

Lonergan's method explicates in contemporary terms the basis for Aquinas's claim that the world is intelligible precisely because of God's simple and single creation of the obtaining world-order, "an intelligible unity mirroring forth the glory of God."¹⁴⁹ Lonergan makes explicit the isomorphism of human intelligence with creation as intelligible precisely because he articulates what Aquinas meant when he affirmed that human beings share a created participation in the uncreated light of divine intellect. Though not explicitly stated at every point in these later works, Lonergan is building on his prior disclosure of the performative but not yet thematic psychological data pointed to by Aquinas's explicit statements regarding the conscious experience of understanding. In order to bring Aquinas's insights to bear on contemporary questions, Lonergan made explicit this underlying explanatory framework that transposes Aquinas's insights according to the realm of an up-to-date theoretical horizon, which make possible correct understandings of revealed truths in a renewed project of "faith seeking understanding" on the part of historical subjects functioning "at the level of their times."

It is within this regrounding the realm of explanatory theory by foundational methodology within the realm of interiority that Lonergan's later theology of grace must be discerned. Again, we wish here only to identify some of the most important points of emphasis here in comparison with Lonergan's earlier Thomist and utterly theoretical account of grace. To summarize these developments we note the following: (1) an emphasis on the mind as a dynamically functioning whole, in contrast with the earlier reliance on Thomist faculty psychology;¹⁵⁰ (2) a precise transposition of the metaphysical

¹⁴⁹ Bernard J.F. Lonergan, "The Natural Desire to See God," *Collection*, CWBL 4, ed. Frederick E. Crowe and Robert M. Doran (Toronto: University of Toronto, 1994), 85.

¹⁵⁰ While Lonergan used the standard, Scholastic nomenclature of "will" and "intellect," it is clear already in his earliest articles that he (1) has a clear sense of the dynamic functioning of human understanding in

account of the effects of grace as experientially verifiable in human consciousness;¹⁵¹ (3) a far more communal and interpersonal stress on the dimensions both of meaning and of value in relation to the transformative power of love; and, finally, (4) the suggestion that the movement of love from above downwards upon the dynamisms of conscious deliberating and evaluating enjoys a priority in terms of a reorientation and conversion in all spheres of human life and living.

3.4.1 From Faculties to Dynamic Conscious Operations

As regards the first of these, one of the most striking differences regarding Lonergan's theology of grace here in *Method* compared with his account in *Grace and Freedom* is the shift from the Scholastic idioms into the language of a phenomenology of conscious experience. This includes Lonergan's more profound account of values than that provided by *Insight*, as instanced in a revised account of both will and intellect, as transformed by a completely revised notion of desires and feelings by which persons become aware of the values they hold as well as the ways in which they are implicated in the dramatic pattern of human life.¹⁵² At the same time, persons' feelings in relation to their spontaneous scale of preferences can be more or less in line with a normative scale of values through an more holistic education no longer confined to specifying the proper objects of abstract and theoretical faculties. Lonergan notes that, in healthy and holy

conjunction with desire and (2) identifies the same insight in Aquinas's theology and philosophy as well. Still, the early works themselves remain in the idiom of faculty psychology since they are written in the theoretical mode. For Lonergan's early analyses of Thomist cognitional theory, epistemology, and metaphysics, see Lonergan, *Verbum*, 1997.

¹⁵¹ As noted earlier in this chapter and as Stebbins also argues, there is substantial evidence of this concern already in Lonergan's earlier works on grace, but the move from theory to interiority is more firmly rooted in the appropriation of one's own conscious experiences and operations and thus lends itself to a substantially more robust linking of grace with experience.

¹⁵² Lonergan, *Method in Theology*, 2017. 32

people, there may be “feelings so deep and strong, especially when deliberately reinforced, that they channel attention, shape one’s horizon, direct one’s life.”¹⁵³ Of course, as Lonergan notes, feelings may also arrest the proper functioning of the intelligence, especially by the distortions brought on by *ressentiment* as discussed variously by Friedrich Nietzsche and Max Scheler: “There are the mistaken endeavors to quiete an uneasy conscience by ignoring, belittling, denying, rejecting higher values. Preference scales become distorted. Feelings soured. Bias creeps into one’s outlook, rationalization into one’s morals, ideology into one’s thought. So one may come to hate the truly good and love the really evil.”¹⁵⁴

In light of Joseph de Finance’s distinction between horizontal and vertical liberty, Lonergan notes that one’s intelligence, reasonableness, and responsibility can be caught up into the self-transcendence of the whole person, who can only operate within the horizon accessible to them at any moment and who is charged with consciously intending to operate according to the intelligibilities, truths, and values discerned within the broadest and highest horizon.¹⁵⁵ The interdependence of these notionally distinct capabilities is further revealed insofar as the finitude of all individual human knowers and agents necessitates trusting and believing others both as regards our self-constitution and to navigate the complexities of the world around us. The possibility of the proper functioning of intelligence is thus dependent in part on the judgment of value as pertains

¹⁵³ Lonergan. 33

¹⁵⁴ Lonergan. 40. This emphasis on bias mirrors Lonergan’s earlier treatment of the topic, though it brings it more specifically into a theological discussion than the philosophical register of *Insight*. See, particularly, Lonergan, *Insight*, 1992. 214-231, 237-267

¹⁵⁵ Lonergan, *Method in Theology*, 2017. 41

to the credibility of the witness in question, a judgment that cannot be made aside from the discernment of values through feelings.¹⁵⁶

As a result of this shift into an understanding of the interpenetration of knowing and loving in the unity of a historical subject, some old theological problems are abrogated and some new ones come into focus. This is seen, for instance, in the “Technical Note” towards the end of Chapter Four, where Lonergan explains the effect of the shift from an explanatory account in metaphysical terms to the terms and relations of intentionality analysis:

Because its account of interiority was basically metaphysical, the older theology distinguished sensitive and intellectual, apprehensive and appetitive potencies. There followed complex questions on their mutual interactions. There were disputes about the priority of intellect over will or of will over intellect, of speculative over practical intellect or practical over speculative. In contrast, we describe interiority in terms of intentional and conscious acts on the four levels of experiencing, understanding, judging, and deciding. The lower levels are presupposed and complemented by the higher. The higher sublate the lower. If one wishes to transpose this analysis into metaphysical terms, then the active potencies are the transcendental notions revealed in questions for intelligence, questions for reflection, questions for deliberation. The passive potencies are the lower levels as presupposed and complemented by the higher. While these relationships are fixed, still they do not settle questions of initiative or precedence.¹⁵⁷

¹⁵⁶ Lonergan. 42-47

¹⁵⁷ *Method in Theology* 120

In the shift to interiority, the division between will and intellect is acknowledged to be inaccessible to one's conscious experience of self. This is not to say that the division loses all meaning; rather, its meaning is tied to the metaphysical account that begins by attending to the acts of a subject made thematic by focusing explicitly upon one's experienced operations as an object and then deducing their metaphysical conditions in potencies (faculties), habits, and souls. At the level of interiority, nevertheless, these logical abstractions will lead to dichotomies that do not correspond to the intelligibility verifiable in concrete experience, and this evokes a need for a radical solution:

Therewith, vanish two notions: the notion of pure intellect or pure reason that operates on its own without the guidance or control from responsible decision; and the notion of will as an arbitrary power indifferently choosing between good and evil... A life of pure intellect or pure reason without the control of deliberation, evaluation, responsible choice is something less than the life of a psychopath.¹⁵⁸

Hence, while we may be able to distinguish will and intellect conceptually in metaphysical terms, the meaning of human living, knowing, and deliberating, evaluating, and choosing cannot be adequately discerned through the language of separate faculties at the level of interiority.

3.4.2 The Experience of Grace as Phenomenologically Verifiable

This shift described above brings us to the second development, namely, Lonergan's emphasis on the effects of grace as an (at least potentially) experientially-verifiable phenomenon in the subject. As noted in our earlier treatment of Stebbins' *Divine*

¹⁵⁸ *Method* 121-122

Initiative, the conviction that grace affects human cognitional processes was already a guiding principle in Lonergan's approach to sorting through the evidently groundless conceptual multiplications in the Molinist and Báñezian systems in his early career. However, this principle takes on a renewed importance in the context of grace as understood in relation to interiority.

In the works that made up his Latin theological scholarship and relatively early systematic theology, Lonergan still operated in the realm of a Scholastic theoretical idiom; but this work was grounded in scholarship that heeded Thomas's clues. This in turn allowed Lonergan to realize that Aquinas's performative basis underpinning his metaphysical account of understanding and judgment amounted to a move from the metaphysics of the soul to the psychologically conscious subject. This distinguished his interpretations of St Thomas from the myriad Neo-Scholastic ones that were beset by the all the errors and misunderstandings of Aquinas's work that were rooted in naïve realist perceptualism and conceptualism due to the neglect of role of the conscious human subject. Thus, Lonergan was able to make distinctions between sanctifying grace and the habit of charity and relate them to both the active procession of the Son from the Father and the passive spiration of the Spirit from the Father and the Son, which was the condition of the possibility for the psychological analogy underlying the Trinitarian language concerning the consubstantiality of the really distinct divine persons and the missions of Son and Spirit from the Father.

Method, however, is the fruit of Lonergan's transposition from a theology based on a "metaphysical psychology" to one grounded in "intentionality analysis." This enabled him to give up faculty psychology in favor of the phenomenology of the generalized

empirical method that already had been the key to *Insight*. Then he could thematize the existential foundations for the explanatory terms and relations appropriate for God's gift of grace within religious experience.¹⁵⁹ This amounts to a profound shift in his theology of grace, as is clear in the following description of what was at stake in this transition:

The gift [of God's love flooding hearts that] we have been describing really is sanctifying grace but notionally differs from it. The notional difference arises from different stages of meaning. To speak of sanctifying grace pertains to the stage of meaning when the world of theory and the world of common sense are distinct but, as yet, have not been explicitly distinguished from and grounded in the world of interiority. To speak of the dynamic state of being in love with God pertains to the stage of meaning when the world of interiority has been made the explicit ground of the worlds of theory and of common sense. It follows that in this stage of meaning the gift of God's love first is described as an experience and only consequently is objectified in theoretical categories. Finally, it may be noted that the dynamic state of itself is operative grace, but the same state as principle of acts of love, hope, faith, repentance, and so on, is grace as cooperative. It may be added that, lest conversion be too violent a change and disrupt psychological continuity, the dynamic state may be preceded by similar transient dispositions that also are both operative and cooperative. Again, once the dynamic state has been established, it is filled out and developed by still further additional graces.¹⁶⁰

The consequences of this shift are manifold: While Lonergan recognizes that sanctifying grace and the habit of charity are distinct at the level of theory, he asserts that this

¹⁵⁹ Lonergan, *Method in Theology*, 2017. 270

¹⁶⁰ Lonergan. 103-104

distinction falls away at the level of interiority, which can appeal only to lived religious experience. At the level of interiority, then, Lonergan asserts that we should affirm only the “dynamic state of being in love with God,” which seems to elucidate the abstract remoteness of this distinction from lived religious experience.

3.4.3 Grace as Communal and Interpersonal

This brings us to our third development, namely, the new framework for Lonergan’s account of the communal and interpersonal dimensions of the experiential effects of grace on individual persons in relation to the meaningfulness of transformative love.

Human being as by nature social is specifically constituted in a particular way by being in relationships characterized by both spontaneous intersubjectivity and in the complexity of ongoing concrete relationships. To start with, for Lonergan, the notion of the human good itself in relation to the good of order of the community: “The human good, then, is at once individual and social. Individuals do not just operate to meet their needs but cooperate to meet one another’s needs.”¹⁶¹ This is irreducible to the social agreements or contracts entered into by beings that are originally constituted as individual and isolated monads: “Prior to the ‘we’ that results from the mutual love of an ‘I’ and a ‘thou,’ there is the earlier ‘we’ that precedes the distinction of subjects and survives its oblivion. It is as if ‘we’ were members of one another prior to our distinctions of each from the others.”¹⁶²

Scheler again helps Lonergan to describe how this prior ‘we’ constitutes us as subjects through various forms of felt or experienced intersubjectivity by way of the community of feeling, fellow-feeling, psychic contagion, and emotional identification. This

¹⁶¹ Lonergan. 51

¹⁶² Lonergan. 56

spontaneous, felt intersubjectivity underwrites the various ways in which humans then explore, make, and express embodied meaning through art, in symbolic mediations, in different languages, in the differentiations within any given language's fields of meaning, especially in the incarnate meaning communicated in an event or a person who embodies the significant meanings and values of a given community of persons.

Through the increasingly complex forms of making and communicating meaning, persons move from the infant's world of immediacy into the world mediated by meaning in which they orient themselves in relation to times past and future, persons and objects present and absent, and the values that may or may not match with the felt desires of the subject. Through the sharing of meaning, the notions of community, existence, and history emerge, expanding the boundaries of the world of human persons. However, this larger world is not a matter of unambiguous progress: "In this larger world we live out our lives. To it we refer when we speak of the real world. But because it is mediated by meaning, because meaning can go astray, because there is myth as well as science, fiction as well as fact, deceit as well as honesty, error as well as truth, that larger, real world is insecure."¹⁶³ Progress in the world mediated by meaning, then, depends on the authenticity of the subjects of that world, both as individuals (minor authenticity) and in terms of the knowledge, values, traditions, and institutions that they construct and pass on for better or worse over time (major authenticity/inauthenticity). While authenticity may thus yield progress, inauthenticity yields decline. Here, Lonergan differentiates nature,

¹⁶³ Lonergan. 75

which “unfolds in accord with law,” from history, which is caught up in the dialectical interplay of more or less authentic subjects and traditions.¹⁶⁴

The interpersonal and communal context of meaning also bears on the historical fact of God’s self-revelation in human history. As Lonergan describes it: “...God’s gift of his love has its proper counterpart in the revelation events in which God discloses to a particular people or to all mankind the completeness of his love for them. For being-in-love is properly itself, not in the isolated individual, but only in a plurality of persons that disclose their love to one another.”¹⁶⁵ In salvation history, the identification of particular moments of special revelation hinge on the communal recognition of God’s acting in their midst. The miraculous quality of these events has less to do with some suspension of the regularities of nature than with a communally verified experience in which persons “see” beyond the matrix of intra-mundane causality to recognize the concrete ways that God acts meaningfully and intentionally in history. This recognition thus manifests in and between persons in community, as they intentionally cooperate as mediators of divine love in the world.

3.4.4 Grace, the Priority of Love, and Conversion

This brings us to the fourth point of emphasis: namely, the priority of the love that moves the subject towards different kinds of conversion. As with each of the preceding principles, there is already some basis for this in Lonergan’s earlier works. Indeed,

¹⁶⁴ Lonergan. 78. While the theology of grace suggested in this dissertation seeks to suggest a greater interpenetration between nature and history than Lonergan acknowledges here, the distinction that Lonergan raises—which is largely concerned with taking seriously the differences resulting from the real emergence of consciousness and progressively higher and more complex beings capable of intentional forms of knowing and loving—remains both true and important in any subsequent theology of grace that would attend to the particular capacities of each creature, including but not limited to human creatures.

¹⁶⁵ Lonergan. 265

Stebbins identifies Lonergan's emphasis on the sheer, unmerited gratuity of grace as the central element on which Lonergan grounds the theory of the supernatural.¹⁶⁶ However, here, Lonergan underscores the in-breaking character of love, as reorienting persons towards God through a watershed, top-down, event:

That fulfilment [of our capacity for self-transcendence] is not the product of our knowledge and choice. On the contrary, it dismantles and abolishes the horizon in which our knowing and choosing went on, and it sets up a new horizon in which the love of God will transvalue our values and the eyes of that love will transform our knowing. Though not the product of our knowing and choosing, it is a conscious dynamic state of love, joy, peace, that manifests itself in acts of kindness, goodness, fidelity, gentleness, and self-control (Galatians 5.22–23).¹⁶⁷

While Lonergan emphasizes the self-transcending capacities of human beings in relation to their spontaneous orientation towards knowing all things and all values in their relation to one another, in *Method*, Lonergan distinguishes these forms of progressive self-transcendence from below with the self-transcendence realizing in persons on account of the influx of divine love:

Because the dynamic state [of being in love with God] is conscious without being known, it is an experience of mystery. Because it is being in love, the mystery is

¹⁶⁶ See, for one example, Stebbins, *The Divine Initiative*, 1995. 35. "Since the *ordo compositionis* begins with what is most comprehensive, the first thesis of *De ente supernaturali* posits the existence of the 'objective reality' that grounds Lonergan's explanation of the gratuity of grace: 'There exists a created communication of the divine nature, that is, a created, proportionate, and remote principle whereby there are in a creature operations by which God is attained *uti in se est* [as he is in himself]. ' The second thesis states the relevant property of that reality: 'This created communication of the divine nature exceeds the proportion not only of human nature but also of any finite substance whatsoever, and therefore is strictly supernatural' (*DES*: 19). Together, these two theses are the foundation of Lonergan's speculative treatment of the doctrine of grace."

¹⁶⁷ Lonergan, *Method in Theology*, 2017. 102

not merely attractive but fascinating; to it one belongs; by it one is possessed. Because it is an unmeasured love, the mystery evokes awe. Of itself, then, inasmuch as it is conscious without being known, the gift of God's love is an experience of the holy, of Rudolf Otto's *mysterium fascinans et tremendum*. It is what Paul Tillich named a being grasped by ultimate concern. It corresponds to St Ignatius Loyola's consolation that has no cause, as expounded by Karl Rahner.¹⁶⁸

This dynamic state of being in love with God is always received as a gift that is disproportionate to the potentialities of the lower manifolds of conscious intentionality, though the lower manifolds are themselves caught up in and transformed by that gift. Through the self-communication of God in love, surprising possibilities are realized in the lower manifolds that, in the reality of lived experience in a fallen world, might never have otherwise been activated. Thus, the massive importance of God's love to make actual the otherwise merely possible is revealed in striking clarity.

3.5 Conclusions and Looking Ahead

Although these four points neither exhaust Lonergan's theological development in *Method in Theology* nor provide an adequate account of how we may understand grace in relation to the larger scope of cosmic history, they indicate some of the ways in which Lonergan recognized a need to reorient the discussion on grace in order to advert more directly to the social, cultural, and religious realities that shape people's lives. His concern was practical and practicable, as these principles both draw our attention to our lived experiences of God's love and cause us to reflect on how we may live authentically

¹⁶⁸ Lonergan. 102

in its light. Through these four developmental emphases, a new trajectory for Lonergan's theology of grace emerges more clearly. We have tried to highlight the continuity with his earlier work, and we have framed the differences largely in terms of the effect of transpositions into a differentiated realm of meaning accessible to human interiority. Still, these transpositions entail more than just the translation of old language into a more contemporary idiom. It also involves the much larger reorientation of the task of theology from the explication of an explanatory, theoretical matrix—the most cherished of which, for many Catholics, remains the lasting achievement of Thomas Aquinas—to the careful listening for the genuinely new questions “at the level of our times,” which do not always fit neatly into more traditional frameworks.

As noted in the first chapter of this dissertation, in addition to Lonergan's own valuable transpositions, he also provides us with important resources for framing our own further transposition of grace into a more evolutionarily conversant horizon. As Lonergan relates, differences in horizon may be of three kinds: complementary, dialectical, or genetic. Complementary differences in horizon refer only to the necessary fact of specialization within an interdependent community, where there are some overlaps between specialties even as each recognizes its own area of expertise as well as its dependence on and orientation towards the domains of others. Dialectically opposed horizons stand in relations of contradiction to one another: “What in one is found intelligible in another is unintelligible. What for one is true for another is false. What for one is good for another is evil. Each may have some awareness of the other, and so each in a manner may include the other. But such inclusion is also negation and rejection.”¹⁶⁹

¹⁶⁹ Lonergan. 222

These contradictions arise from the relative presence or absence of the various conversions—religious, moral, intellectual, or psychic—and they are resolved only through the attending conversions to ever more profound self-transcendence.¹⁷⁰ Finally, genetically different horizons “are related as successive stages in some process of development. Each later stage presupposes earlier stages, partly to include them and partly to transform them. Precisely because the stages are earlier and later, no two are simultaneous. They are parts, not of a single communal world, but of a single biography or of a single history.”¹⁷¹ The transposition that we wish to effect is of this third kind, as we are advocating for an expanded understanding of grace proportioned to an enlarged view of our species within the single history of the world and the cosmos. The issue is not with a lack of conversion in Lonergan or (we hope) ourselves, but with the need for a more explicit differentiation of consciousness with respect to the data of cosmic and evolutionary history and to ecological interconnectedness.

While his work remains a vital foundation for theological work today, something more is needed in order to respond to the existential challenges of the ecological and the evolutionary crisis envisaged in this dissertation, which include both (1) the growing distrust of science and of theory across the board that Lonergan described as “general bias” and (2) the “disenchantment” of the world that has alienated people from recognizing God’s transformative offer of grace both in their own lives and in the flesh of the whole world.¹⁷² This is not to say that Lonergan was wholly unaware of these problems. As Lonergan expressed it:

¹⁷⁰ Lonergan. 232-233

¹⁷¹ Lonergan. 222

¹⁷² The notion of disenchantment in relation to the secularization and bureaucratization of the modern world was popularized in Max Weber, *The Sociology of Religion*. (Boston: Beacon Press, 1963), first published in

[W]hile for secular man of the twentieth century the most familiar differentiation of consciousness distinguishes and relates theory and common sense, still in the history of mankind both in the East and the Christian West the predominant differentiation of consciousness has set in opposition and in mutual enrichment the realms of common sense and of transcendence.¹⁷³

Regarding his own theological method, Lonergan noted that “the source of basic clarification [of theological categories was] interiorly and religiously differentiated consciousness.”¹⁷⁴ The realm of meaning proper to interiority is intended to sublate both those of common sense and theory. However, to meet the exigences of ecological conversion and of an evolutionary horizon, there is needed a further appropriation of the general categories specified by the evolutionary and ecological sciences and a corresponding correlation of these with a more robust grasp of the special categories of grace. The Scholastic, theoretically differentiated account of grace was coordinated to a world where human beings were created *ex nihilo* in their present form, where the impossibly small portion of history that humans occupy was yet unrealized, and where the scientific account of the universe was pinned to classical intelligibilities.

Lonergan recognized that changes in worldviews necessitate a changes in our general categories: “The explicit formulation of [general theological categories in generalized empirical] method are historically conditioned and can be expected to be

German in 1920. For a helpful treatment see Charles Taylor, *A Secular Age*, Gifford Lectures 1999 (Cambridge, Mass.: Belknap Press of Harvard University Press, 2007). Though he does not directly reference Weber there, Lonergan also treats similar issues in Bernard J.F. Lonergan, “Sacralization and Secularization,” in *Philosophical and Theological Papers, 1965-1980*, ed. Robert Croken and Robert M. Doran, 2nd ed. Edition, vol. 17, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2004), 259–81.

¹⁷³ Lonergan, *Method in Theology*, 2017. 249

¹⁷⁴ Lonergan. 264

corrected, modified, complemented as the sciences continue to advance and reflection on them to improve.”¹⁷⁵ However, he did not bring fully to light how these problems in general categories may truncate coordination of them with special categories and, therein, our understanding of the scope of the effects of God’s grace. This is precisely the task of a mediated theology, which must “pronounce which doctrines [are] true, how they [can] be reconciled with one another and with the conclusions of science, philosophy, history, and how they [can] be communicated appropriately to the members of each class in every culture.”¹⁷⁶ As we turn to the constructive phase of this dissertation in the next chapter, what will be required is a more complete appropriation of the theoretical differentiation of consciousness both with respect to the realms of science and of theory as each come to bear on an ecologically and evolutionarily differentiated worldview.

¹⁷⁵ Lonergan. 265

¹⁷⁶ Lonergan. 250

4. CHAPTER FOUR: THE IDEA OF GRACE AFTER LONERGAN

In this chapter, we will develop the framework for a more evolutionarily oriented theology of grace that considers God's creating and saving action in nature and history, in both human and non-human creation. While this shifts away from the more limited application of the word "grace" only to human capacities and contexts, it need not represent a rupture with that larger tradition. The historical emphasis on the surprising ways that grace heals human wounds and lifts and transforms our lives has been understandable, important, and fruitful, and there will remain an ongoing need to better understand how God transforms the dialectical intelligibilities that are uniquely proper to human societies. However, it is our contention here that this account of grace ought to be recognized as requiring an explicit and a broader view of grace as a flowering forth throughout the cosmos in countless concrete instances.

Laudato Si' emphasizes that an integral ecology cannot be treated as merely another area of Catholic Social Teaching. Rather, it must become a larger, holistic framework that highlights the deep interconnections between all of the areas in which we are called to better attend to, understand, know, and love creation in its entirety.¹ Francis warns against the assumption that the ecological crisis may be addressed through more

¹ See Lucas Briola, "The Integral Ecology of *Laudato Si'* and a Seamless Garment: The Sartorial Usefulness of Lonergan and Doran's Turn to Culture," *The Lonergan Review* 9 (2018): 31–48; and Vincent J. Miller, ed., *The Theological and Ecological Vision of Laudato Si': Everything Is Connected* (London: T&T Clark, 2017), especially Miller's essay, "Integral Ecology: Francis's Spiritual and Moral Vision of Interconnectedness."

and larger human intervention through the application of technology and industry unaccompanied by individual and communal conversion, calling us instead to cultivate an ecological spirituality that is marked by an attentiveness to God's good creation of which we are one important part. For the long-term success of Francis's prophetic vision, a new theological foundation is needed to illustrate the connection between our experience of God's love and our ability to recognize how God is already acting in creative and redemptive ways in our midst. One critical step is to surrender the exclusivity that Catholic theology has increasingly attached to its theology of grace.

Such a theological and spiritual reorientation requires an inherently collaborative effort over multiple generations of scholars, and the proposal in this chapter represents only one possible way to frame such a theology. It is the product of our engagement with the leading voices of the Catholic theological response to the ecological crises of the past decades and with Lonergan's brilliant steps toward the transposition of key elements from within the Catholic theological tradition into a framework better able to address the issues "at the level of our times." As will become clear in this chapter, this proposal makes use of a number of key developments of Lonergan's theology of grace by his students over the last several decades.

Lonergan and his students were largely concerned with correcting what they saw as an overemphasis on the exterior effects of grace, which often obfuscated or ignored the real, internal, apprehensible changes that occur in persons who are constituted in their consciousness as knowers and lovers. Though 20th century Catholic theology is marked by many efforts to attend to the more subjective pole of grace, Lonergan's lasting contribution lies in his identifying the pattern of operations transposed at the level of

interiority that continually and dynamically shape human conscious living. By attending to conscious acts of experience, understanding, judgment, and decision, Lonergan concretely identified the human operations that may be leavened and healed by grace. Therein, he revealed the concrete deficiencies of these earlier “milk bottle” views of grace, in which grace functions as a thing in the world that “fills” persons ontologically but which seems to leave them experientially and psychologically unaffected.² On the contrary, Lonergan spelled out what that ontological change means for human beings *as human beings*. What remains to bring his project full circle, though, is not a jettisoning of a view of grace as transforming the whole world in ways beyond our immediate apprehension, but a return to those questions in light of the convictions enabled by the appropriation of our conscious intentionality that initiates a new posture of attentive wonder toward the natural world and its broad history.

Of course, we cannot merely project onto the rest of creation those effects of grace that we observe in humanity—in whom there emerges a higher sublation and synthesis of the lower manifolds within psychic, intelligent, rational, and responsible dimensions of self-transcendence. The Thomist principle that has often guided our investigations into the reception of grace in human contexts—*Quidquid recipitur ad*

² Though we first heard this description during a course lecture given by John Baldovin, S.J., in his class, “Postmodernity and Sacramental Theology,” we have since encountered it in numerous works. See, for instance, Anne E. Patrick, *On Being Unfinished: Collected Writings*, ed. Susan Perry (Maryknoll, New York: Orbis Books, 2017). “...recalling two illustrations from the 1961 edition [of the Baltimore Catechism] for children in the middle grades of elementary school. The first illustration, which was sketched on countless blackboards across the nation, is designed to accompany a lesson on “Actual Sin.” It involves three glass milk bottles. The other two bottles are under the heading “Actual Sins Two Kinds,” and above the caption “We commit ourselves.” On the left is the image of Mortal Sin, which is another inverted bottle and the description “soul empty again of grace,” and on the right is the image of Venial Sin, a bottle standing upright, with images of “some spots in milk” to illustrate the fact that “grace stays in the soul.” This clear but reductive analogy conveys less of the mystery of sin and grace than would an example from interpersonal relations, such as Jesus employed in the parable of the Prodigal Son (Lk 15:11--32), and it may well have inhibited religious development in persons who took it too literally for too long.”

modum recipientis recipitur, or “whatever is received into a thing is received according to the mode of the receiver”—may also guide our thinking about the broader economy of grace in non-human creation.

4.1 A Brief Recap

Given both the length and the complexity of the matters laid out in Chapters Two and Three and their relevance to the proposal advanced below, allow me to offer a brief summary of them before proceeding. In Chapter Two, we introduced four important Catholic approaches to the evolutionary reorientation to theology, considering especially their contributions to clarifying the role that grace may play in the broader and longer scope of cosmic (as opposed to merely human) history. We then measured each in turn against three criteria characterizing the best of Catholic theologies of grace historically: (1) their attention to an explicit metaphysics as a necessary precondition for explaining grace as transcendent, immanent, and universal; (2) their engagement—positively or critically—with some form of natural theology; and (3) their attention to and emphasis on the effects of grace in both ontological and ontic terms.

We praised John Haught’s emphasis on the need for evolutionary theology as requiring first a clarification of the metaphysics of emergence and development, even though the following aspects of his approach render it ill-suited as a foundation for this project: (1) the failure of his reading of many of the most important thinkers in the Catholic tradition to do justice either to their positions or to recent scholarly works of interpretation; (2) the serious barriers to legitimate dialogue between science and religion erected by his “metaphysics of the future” that would hamstring any serious attempt at an

informed natural theology; (3) the way his dependence on process thought projects that same metaphysics back onto God; and (4) the inability of his account of sin in terms of unrealized development to account for the lack of intelligibility of sin as a surd in human operations, which diminishes the role of Jesus' life, death, and resurrection in the transforming the world.³ Yet Haught does make evident the need to reunite cosmic and human history in a common narrative.

We then appreciated the work of Elizabeth Johnson and Denis Edwards, whose foundations include a Thomistic metaphysics under the profound influence of Karl Rahner and suggest and which, therein, a more fruitful starting point by maintaining God's absolute transcendence without sacrificing the immanent effects of God on a dynamically evolving world. Throughout the nearly four decades of their careers, Johnson and Edwards have contributed many theological insights towards reorienting Catholic theology's growing awareness of ecological and evolutionary issues. Their distinction between primary and secondary causality avoids mistaken accounts of God's role in the network of created causes and provides a helpful approach to meaningful talk about God's action within the world. Both Johnson and Edwards call our attention to the hard questions that arise when we affirm how God's freely creating is not compromised by the fact of evolution with all its attendant suffering, death, and extinction. They insist on our paying deeper attention to the intrinsic value of each creature who stands in need of healing and comfort both in the midst of their suffering and in the fullness of time,

³ Despite these critiques, we have argued elsewhere that Haught's work has been of great value in the move toward a more evolutionarily oriented theology and that these problematic elements need not invalidate the enduring value of many elements of his project. See Benjamin J. Hohman, "Prolegomena to Any 'Metaphysics of the Future': A Critical Appraisal of John Haught's Evolutionary Theology," *Horizons* 46, no. 2 (2019): 270–95, especially 289–295.

since the flesh of each and all of creation is intimately bound up with Jesus-Sophia's incarnate flesh as crucified and glorified. Their work suggests the need for an expanded theology of the role of grace in evolutionary processes that overcomes restrictions to the psychic and spiritual dimensions of human interiority. Edwards also draws on Rahner's notion of "active self-transcendence" to suggest a view in which all of creation is integrally oriented towards God, even if realized in a special (but not exclusive) way in human consciousness. While both of them recognize the need to extend our theological reflections to include the rest of God's good creation, they avoid biocentric leveling by recognizing the unique contours of sin and grace in specifically human life.

However, some areas of their thought need additional attention and development. Though they beautifully describe the way that Christ is present to and with creatures in their suffering through an out-pouring of divine love in the Spirit, which beckons them into a yet indefinite future, neither Johnson nor Edwards develop a fully articulated account of grace's functioning in non-human creation. Edwards' sustained attention to these questions in *How God Acts* may go further in this direction than others, but his leveling of the distinction between general and special divine action remains questionable with respect to providing a theological account of the witness of scripture to God's love as both elective and selective. Moreover, Edwards' presentation restricts primary and secondary causality by eschewing the possibility of theologians' identifying unique manners of self-transcendence in the created world, which limits the possibilities for theology's substantive collaboration with the natural sciences.

Finally, Celia Deane-Drummond's work challenges the theological separation of sin and grace from the natural world, by demonstrating that human beings are more

deeply implicated in the mysteriously unfolding Theodrama of *cosmic* history; moreover, she calls into question the clear and bright lines often drawn between *Homo sapiens* and other species. Deane-Drummond also argues for a view of human persons as distinctly revealed in their performance beside and together with countless other co-actors in the unfolding drama of salvation history, raising additional challenges to the continued restriction of both sin and grace to the human realm alone. Still, as she points out, this need not entail a rejection of the genuinely empirical distinctiveness of human persons. Though her reliance on Balthasar's work leads her to challenge Johnson and Edwards both in their tendencies towards a form of panentheism and their use of natural theological techniques, Deane-Drummond's own scientific background is evident throughout her work as she carefully attends to the findings of evolutionary science, animal studies, and other disciplines. Perhaps the most important aspect of this is the way she offers a more complex account of the terms 'evolution' and 'natural selection' through her explication of "four-dimensional evolution" and Niche Construction Theory (NCT). Partially due to her engagement with Bulgakov's Sophiology, Deane-Drummond also brings into sharper focus both (1) the implications of sin and grace in fleshly realities (for instance, Mary's "hereditary holiness") and (2) the nexus between the flesh assumed in both the hypostatic union of Christ's two natures and the divinizing effects of grace on the rest of creation. Moreover, while she, too, draws deeply from the well of a Wisdom-Christology, she is more conservative on the legitimate and important contributions of a Logos Christology in and to the theological tradition.

In continuity with these several advances, we then went on to argue the further need for the development of an account of grace in relation to the whole of God's

creation that neither undermines the centuries of valuable theological reflection on grace in relation to human beings nor merely projects that account of grace in a short-circuited way onto non-human creation. By restricting grace only to those intellectual and spiritual capacities that appear uniquely in relation to strictly human sin and redemption—a liminal issue already blurred by Deane-Drummond and others—we would remain mired in a form of anthropocentrism now obviously objectionable for Christians, because it suggests a ‘God of the gaps’ who is only able to operate in relation to human minds in their immateriality. This unwarranted restriction diminishes our ability to understand the *kainê ktisis* (new creation as in Gal. 6:15, 2 Cor 5:17, and also Col. 1: 15-20, 21-23) and the ways that grace transforms humans specifically in their embodied and enfleshed nature. Of course, the needed framework for a renewed theology of grace must remain open and conversant both with the lasting achievements of the theological tradition and with the reorientation of human knowledge, taking into account both with the turn toward history and toward explanatory and methodical sciences. Thus, despite his relative neglect of both non-human creation and his focus on grace in humans, we explored Bernard Lonergan’s thought as a helpful foundation for this project in Chapter Three.

Lonergan’s apprenticeship to and development of the work of Thomas Aquinas suggests a more complete and more accurate appropriation of Aquinas’s thought, the integration of which with any theology of grace in non-human creation will prove crucial to the broader acceptance of this unitive framework within Catholic theology. Without this, it is hard to see how a theology of grace can ground the kind of broad restructuring of the whole envisioned by Pope Francis in *Laudato Si’*. Lonergan’s early work on Aquinas’s theology of grace clarifies—in a theoretical and metaphysical register—the

absolute gratuity of God's grace as well as the proportionate effects of grace as it heals and elevates creatures without undermining their freedom or the integrity of their particular natures. Lonergan's later casting light on the theorem of the supernatural through the notion of vertical finality demonstrated a path beyond metaphysics in contemporary systematic theology. He transposed the metaphysical account of grace into a four-dimensional account based on emergent probability and demonstrating how the transposition of medieval theology remains an enduring resource for clarifying the efficaciousness of God's grace in restoring the genuine and effective freedom of those transformed and influenced by grace. Lonergan's more grounded interpretation of St Thomas's thought avoids the errors of its earlier ahistorical reception and rejects the needless multiplication of terms (e.g. Báñezian premotion). Moreover, his clarification of the meaning of relative and absolute aspects of the supernatural order is aimed at an understanding of ontological hierarchy that is rooted not in power or honors but in the empirical verification of the concrete unfolding of each creature's capacities in order to offer an explanatory account of divinization or *theosis*. And, as we will explore further below, his explanation of horizontal, vertical, and absolute finality highlights the deep interconnections that always obtain between these levels.

Lonergan's retrieval of Aquinas's appropriation of the distinction between the natural and supernatural orders freed grace from the limitations of the older (yet still influential) framework proper to the sin/grace dialectic. And, while Lonergan's theology during this early period appears to be closed to the project of extending grace beyond human limits, Michael Stebbins has convincingly underscored Lonergan's resistance to the privatization of grace, as when humans are conceived as monads. Perhaps more

importantly, Lonergan's critical grounding of the explanatory power of Aquinas's metaphysics through an account of generalized empirical method provides a critical, heuristic metaphysics that offers invaluable ways of confronting the host of urgent contemporary questions already brought up in previous chapters.

Altogether significant is the clarification of the priority of world-order over individual essences, which illuminates the role of metaphysics as an epistemically-chastened enterprise that combats the static essentialism and false naturalism that bedeviled many Catholic theological and philosophical ways of trying to face the issues raised by the emergent intelligibility proper to creation. Therein, Lonergan provides a framework for resolving the endless "disputed questions" that marked the earlier, inadequate reception of scholastic metaphysics. Through his articulation of classical, statistical, genetic, and dialectical intelligibilities, Lonergan presents an explanatory metaphysics that furnishes an organized and connected account of world process that embraces a non-reductionist view of the distinctive intelligibilities investigated through various disciplines (physics, chemistry, biology, anthropology, psychology, theology, etc.). This explanatory framework cherishes the diverse explanations of the realms of contingent being without superimposing essentialist limits or any unverifiable necessities; it explains the interplay of statistical and classical laws in relation to the emergence of surprising new possibilities without consigning these contingent occurrences to mere "chance" or unintelligible randomness; and it explains the upward if indeterminately directed dynamism of the world without invoking problematic and inexplicable accounts of divine intervention.

Finally, although somewhat preliminary and compact, Lonergan's initial work in reframing his theology of grace in terms of interiority and its openness to the 'hermeneutic turn' gives theologians intelligent and verifiable ways of identifying the transformative effects of God's gracious, unmerited love both in relation to human beings and to the larger societal, cultural, personal, and religious structures that constitute us as a community of specifically distinct beings. Lonergan emphasized both the ontological and ontic effects of grace especially on human beings. He went on to emphasize the intersubjective and interpersonal dimensions of grace as it is actually experienced by conscious, historical human subjects. And he emphasized that, through the eyes of love opened by grace, we come increasingly to recognize the priority of God's love in transforming even those aspects of our lives influenced by the objective surd of sin. Still, he did not investigate those effects in relation to other-than-human natures on which ecological and evolutionary theologies have begun to focus, since they no longer could pass unrecognized. Thus, while we will draw widely from Lonergan's insights, in what follows, we will offer our own account of how an integral theology of grace may attend to God's healing and elevating presence as it leavens the whole of cosmic history.

In this chapter, we will explore how we might develop a more intelligible and integral theology of cosmic grace. In the first sections, we will rely on the advances by Lonergan's students as they have expanded and developed his thought in relation to their own projects; however, we will begin by returning to Lonergan's account of horizontal, vertical, and absolute finality, which holds, perhaps the greatest potential for expanding his thought in a manner most pertinent to this project. In the final sections of this chapter, we will explore how the most familiar context of grace—namely, in human lives—might

be transformed through this broader cosmic context. Therein, this chapter will also provide a heuristic guide for the next chapter, in which we will examine how this might ramify into the multiple animal, vegetative, and mineral realms: or expressed more broadly in relation to animals, plants, fungi, and other organisms, and finally, in pre-biotic matter.⁴

4.2 Vectors of Relationality: A Heuristic Account of Grace

While for Lonergan the term grace denoted the transformation of the interiority of human persons, his treatment of (especially vertical) finality and his theory of generalized emergent probability can be used to link the redemptive work of God's grace to the foundation of the world as characterized by an "upwardly but indeterminately directed dynamism."⁵

⁴ In a number of places in this chapter and the next, we have elected to continue using the ordinary language that recognizes the animal or plant kingdoms, although we are aware that this does not map neatly onto current taxonomic trends in the life sciences. The taxonomic system that has long been taught to students in the United States and some other countries—comprised of Kingdom, Phylum, Class, Order, Family, Genus, and Species—is not and has not been universally accepted as accurate. In fact, for decades, while schools in North America taught a six-kingdom model (animals, plants, fungi, protists, archaeobacteria, and eubacteria), many other countries taught only five kingdoms (eliding both bacterial kingdoms with the kingdom 'Monera'). Moreover, there has been a strong push among some scientists in recent years to throw off the "kingdom" approach altogether, in part because it does not actually reflect coherent, monophyletic trajectories of emergence. Numerous alternative proposals have arisen, of which perhaps the best known have been the "Three Domains of Life" and the "Eukaryotic Supergroups." Without prejudice to these new taxonomies, we have retained the more commonly used ordinary language because we believe it more closely corresponds to the distinctions that many of our readers might already draw between themselves and other creatures. As will become increasingly clear in this chapter and the next, our same arguments about the scope of God's grace in creation is applicable to these different taxonomies without needing to be seriously modified.

⁵ Lonergan, *Insight*, 501, cited in Patrick H. Byrne, "The Integral Visions of Teilhard and Lonergan: Science, the Universe, Humanity, and God," in *From Teilhard to Omega: Co-creating an Unfinished Universe*, ed. Ilia Delio (Maryknoll, NY: Orbis Books, 2014), 100.

4.2.1 “Finality, Love, Marriage”

Lonergan’s first and most sustained treatment of finality appears in his 1943 article, “Finality, Love, Marriage,” where he considers the multiple ends of the union of marriage along three vectors: horizontal, absolute, and vertical.⁶ Lonergan’s entry into the debate over the proper ends of marriage centered in part on the then-relatively-recent publication of *Casti Connubii* only 13 years previously.⁷ In his opening remarks, Lonergan argues that the chief clarification needed in relation to the proper ends of marriage was not so much doctrinal as biological, since it was the understanding of the sexual act and its probabilistically-governed procreative capacities that lay at the heart of the debate. As Lonergan helpfully summarizes,

[T]here emerges the problem of inserting the vertical up-thrust of love from sex to divine charity into the horizontal process from fecundity to offspring; and such insertion has to be made on the background of the general field of human process.

For it is only in the cosmic breadth of a simultaneous context of nature, history, and grace, that appear at once the justice and the assimilative capacity of the, on the

⁶ Lonergan, “Finality, Love, Marriage,” 1988. This treatment was complemented by a compact lecture given during the same period of Lonergan’s career, Lonergan, “The Natural Desire to See God.” In this text, Lonergan argues that there is no contradiction inherent in the affirmation that there is a natural desire for a supernatural end, and he rejects that such a desire diminishes the gratuity of God’s grace whatsoever. Rather, Lonergan critiques these concerns as stemming from the dual errors of a static essentialism and/or a closed conceptualism; the former of which conceives of the world in invariable terms by making individual essences prior to world order, and the latter of which “precludes the possibility of philosophy being confronted with paradoxes which theology can resolve” (84). We only treat this article in passing in this chapter, though its major points are contained in the first section of our Chapter Three in our treatment of Michael Stebbins and the first phase of Lonergan’s theology of grace. For a fuller treatment of this article in particular, see also Jeremy W. Blackwood, “Lonergan and Rahner on the Natural Desire to See God,” *Method: Journal of Lonergan Studies* 1, no. 2 (2010): 85–103. ; Brian Himes, “Lonergan’s Position on the Natural Desire to See God and Aquinas’ Metaphysical Theology of Creation and Participation,” *Heythrop Journal - Quarterly Review of Philosophy and Theology* 54, no. 5 (2013): 767–83, <https://doi.org/10.1111/heyj.12037>; and J. Michael Stebbins, *The Divine Initiative: Grace, World-Order, and Human Freedom in the Early Writings of Bernard Lonergan*, Lonergan Studies (Toronto ; Buffalo: University of Toronto Press, 1995), especially 142–182.

⁷ Pope Pius XI, “Casti Connubii,” 1930, http://www.vatican.va/content/pius-xi/en/encyclicals/documents/hf_p-xi_enc_19301231_casti-connubii.html.

whole, traditional view that the most essential end of marriage is the procreation and education of offspring but its most excellent end lies on the supernatural level of personalist development.⁸

In short, because the human animal is oriented both toward the fulfillment of natural and supernatural ends, it is necessary to consider how marriage is ordered toward the common realization of each.

Lonergan explains that finality may be of two kinds—“the response of appetites to motives, and the orientation of processes to terms”—but he denies that “the mere fact of response or of orientation... [constitutes] finality,” since the logical positivist may observe both forms and identify only “concomitance and correlation”; moreover, not all forms of causality are instances of final causality.⁹ According to Lonergan, then, there is final causality (alternatively called “finality”) “if, and only if, appetite responds because the motive is good; if, and only if, process is orientated because the term is good.”¹⁰ In the ontologically hierarchical world of God’s good creation of which we find ourselves a part, Lonergan affirms that all things are oriented toward God as “at once absolute motive and absolute term: ‘*omnia appetunt Deum*’; ‘*omnia intendunt assimilari Deo*.’”¹¹

However, while each and every existing thing is created as absolutely ordered toward God, the way or ways in which the effects of that orientation obtain in the creature and the creature’s mode of response is determined according to the limits of its particular

⁸ Lonergan, “Finality, Love, Marriage,” 1988. 19.

⁹ Lonergan. 19. For instance, Lonergan argues that, “If appetite responds because motive moves, if process is orientated because an intelligent agent envisages and intends a term, there is causality indeed; but it is efficient and not final.” However, while Lonergan maintains the importance of these distinctions in a causally-oriented theoretical metaphysics, he avers that, “No doubt, in the concrete, such efficiency is connected intimately with finality.”

¹⁰ Lonergan. 19

¹¹ Lonergan. 19. In the two Latin quotes, Lonergan is drawing from Thomas Aquinas, *De veritate*, q. 22, a. 2. 9 and *Summa Contra Gentiles*, 8, c 19, respectively.

nature and capacities.¹² This accounts for the distinction between what Lonergan calls “absolute finality” and “horizontal finality,” respectively, and he extends this analysis to the entirety of creation:

Finally, there are many grades of being, each with its defining essence and its consequent and commensurate mode of appetite and process; accordingly, one has to think of the universe as a series of horizontal strata; on each level reality responds to God as absolute motive and tends to him as absolute term; but on each level it does so differently, for the limitation of essence reappears in the limitation of the mode of appetite and response, of process and orientation.¹³

Framed in the language and conventions of metaphysical theory, Lonergan clearly affirms that each level of the universe is oriented toward God through a final and not merely an efficient causality, which, as noted above, entails the idea that it is moved toward God specifically as good. Each thing is—at least in line with its own nature and according to its own capacities and limitations—moved by an orientation toward goodness.

Beyond absolute and horizontal finality, Lonergan identifies a third form of finality, namely, “that of any lower level of appetite and process to any higher level. This we term vertical finality.”¹⁴ Lonergan elaborates the observable expressions of vertical finality in the world:

It has four manifestations: instrumental, dispositive, material, obediential. First, a concrete plurality of lower activities may be instrumental to a higher end in another

¹² Lonergan. 19-20. “But with regard to the formal constituent itself, it is necessary to distinguish between *qui* and *quo*, between the good thing which is motive or term and the mode of motivation or termination.”

¹³ Lonergan. 20

¹⁴ Lonergan. 20

subject: the many movements of the chisel give the beauty of the statue. Second, a concrete plurality of lower activities may be dispositive to a higher end in the same subject: the many sensitive experiences of research lead to the act of understanding that is scientific discovery. Third, a concrete plurality of lower entities may be the material cause from which a higher form is educed or into which a subsistent form is infused: examples are familiar. Fourth, a concrete plurality of rational beings have the obediential potency to receive the communication of God himself: such is the mystical body of Christ with its head in the hypostatic union, its principal unfolding in the inhabitation of the Holy Spirit by sanctifying grace, and its ultimate consummation in the beatific vision which Aquinas explained on the analogy of the union of soul and body.¹⁵

Based on the overview of Lonergan in the preceding chapter and of Lonergan's particular interest, here, with the question of the ends of marriage, it is unsurprising that he only identifies obediential potency specifically as pertaining to the economy of grace and that he limits his further discussion predominantly to this topic. Nevertheless, he clearly links all of these terms under the common heading of vertical finality.

For the most part, Lonergan attributes the relative neglect of vertical finality in the longer tradition of Christian thought to limitations of a worldview shaped by a metaphysics more adept at recognizing absolute and horizontal finality. However, he recognized the need to attend more directly to vertical finality, especially in relation to the worldview taking shape in light of the relative novelty of evolutionary science, the

¹⁵ Lonergan. 20-21

implications of which were only just beginning to be examined by Catholic thinkers in Lonergan's own time:

[V]ertical finality seems to operate through the fertility of concrete plurality. Just as the real object tends to God as real motive and real term, just as the essence of the real object limits the mode of appetite and of process, so a concrete plurality of essences has an upthrust from lower to higher levels. But just as this fact is shrouded in the mists of Aristotelian science..., so it is most conspicuous to one who looks at the universe with the eyes of modern science, who sees subatoms uniting into atoms, atoms into compounds, compounds into organisms, who finds the pattern of genes in reproductive cells shifting, *ut in minori parte*, to give organic evolution within limited ranges, who attributes the rise of cultures and civilizations to the interplay of human plurality, who observes that only when and where the higher rational culture emerged did God acknowledge the [fullness] of time permitting the Word to become flesh and the mystical body to begin its intussusception of human personalities and its leavening of human history.¹⁶

¹⁶ Lonergan. 21-22. Regarding the meaning of "the mists of Aristotelian science," the editorial notes to the critical edition of this article indicate that, while Lonergan had some ambivalence in relation to Aristotle—whom he came to directly only after his extensive prior studies of the works of Plato, Augustine, and Thomas Aquinas—his criticisms pertain predominantly to "(1) the content of Aristotle's science, [and] (2) Aristotle's notion of what science is," and specifically not to either Aristotle's "discovery of the act of insight... or the Aristotelian wonder which, he agrees, is the origin of all science and philosophy—as it is, likewise, of insight." See note "e" in Bernard J. F. Lonergan, *Collection*, ed. Frederick E. Crowe and Robert M. Doran, 2nd ed., rev. aug., vol. 4, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 1988). 260-261. We would also note that there remains some question as to the meaning of the phrase, "organic evolution within limited ranges," as it appears in this quote. It is possible that Lonergan simply meant that the plurality of reproducing organisms is modified and survive differently in different competitive environments (i.e. "limited ranges" means the randomly modified organisms only survive to reproduce in limited ranges, not everywhere). However, this may also represent his own awareness of the newness and the controversy that attended the theory of evolution at that time and of its largely unexplored theological consequences. For this latter view, see editorial note "f" in the critical edition of "Finality, Love, Marriage," in Bernard J. F. Lonergan, *Collection*, 2nd ed., rev. aug., Lonergan, Bernard J. F. Works (Lonergan Research Institute) 4 (Toronto: Published by University of Toronto Press for Lonergan Research Institute of Regis College, 1988). 261. "Lonergan's early views on evolution will have to be studied from the Archives, but the guarded language

As this quote suggests, Lonergan views the advances of modern science as representing a watershed difference for theology. Lonergan suggests that, in examining the patterns of events illuminated by modern scientific investigations, we come to notice how our own experience of grace is caught up in the same flow as the rest of the dynamically evolving world. Moreover, though Lonergan overlooks the incorporation of all creatures into the order of grace through the unfolding of vertical finality, his affirmation of all of these under the common heading of vertical finality also implicitly rejects that any of these are instances of only correlation, concomitance, or efficient or material causality with respect to God's creative and salvific plan for humans alone: as modes of vertical finality, each is responding to its absolute finality in God, as God as good.

Lonergan situates the three forms of finality in relation to one another and in relation to the realms of meaning—i.e. as related to consciousness operating according to various differentiations: commonsense, theoretical, interior, transcendent differentiations—as follows:

Absolute finality is to God in his intrinsic goodness: it is universal; it is unique; it is hypothetically necessary, for if there is anything to respond to motive or to proceed to term, then its response or tendency can be accounted for ultimately only by the one self-sufficient good. Horizontal finality results from abstract essence; it holds even when the object is in isolation; it is to a motive or term that is proportionate to essence. But vertical finality is in the concrete; in point of fact it is not from the

here may be a concession to the anti-evolution mentality still prevalent among Roman Catholics in 1943; see also the remark later in this chapter (43) on the 'measure of truth' in the theory of evolution. Lonergan's own theory, which will be worked out very thoroughly a decade later (1957a: Index, under Emergent Probability), is already forecast in his references here to modern statistical law and chance variation (22, note 16, and 85—the latter locus a brief reference to biological evolution). [22]"

isolated instance but from the conjoined plurality; and it is in the field not of natural but of statistical law, not of the abstract *per se* but of the concrete *per accidens*. Still, though accidental to the isolated object or the abstract essence, vertical finality is of the very idea of our hierarchic universe, of the ordination of things devised and exploited by the divine Artisan. For the cosmos is not an aggregate of isolated objects hierarchically arranged on isolated levels, but a dynamic whole in which instrumentally, dispositively, materially, obedientially, one level of being or activity subserves another. The interconnections are endless and manifest. Vertical finality would seem beyond dispute.¹⁷

From the unitive and (at least heuristically) explanatory viewpoint of interiority, Lonergan recognized the need to elaborate this account of vertical finality to account for the myriad ways in which the world is *always* thoroughly interconnected such that the various objects in the world operate and function co-constitutively. Moreover, it is their very potential for vertical finality—coupled with the concrete plurality of *this particular* material universe—that generates the possibility of still greater pluralities and of exponentially more complex realities, up to and including Christ's Incarnation and creaturely participation in the divine life.

Whether a creaturely existence is seen as unfolding at a higher or lower level of complexity with respect to any other, Lonergan emphasizes that each level is equally co-constitutive of the whole world order which is itself oriented toward God:

First, then, a horizontal end is more essential than a vertical end: for the horizontal end is the end determined by the essence of the thing, while the vertical end is had

¹⁷ Lonergan, "Finality, Love, Marriage," 1988. 22

only by escaping the limitation of isolated essence through the fertility of concrete plurality. On the other hand, a vertical end is more excellent than a horizontal end: for the horizontal end is on the lower level of being but the vertical on some higher level; and from the very concept of hierarchy the higher is the more excellent.

Inversely, one cannot say that the vertical end is nonessential or that the horizontal end is not excellent. For the vertical end, though it escapes the limitation of isolated essence and its abstract per se, nonetheless results from the same essence when in concrete combination with other essence. Again, though the vertical end is more excellent, still it is so only relatively; all finality is ultimately to the absolute good, and all is limited in mode of appetition or of process, so that the difference in excellence between higher and lower is never more than a difference in mode with respect to the absolute good.¹⁸

The recognition of an excellence in any given creature refers us to its particular, concrete, and demonstrable abilities in accord with the kind of being that it in fact is. However, taken as a creature in a universe that, down to the last atom, is dynamically ordered toward God as the absolute good, these excellences are revealed not as valuations of one or another being, but as real instances of the good of the whole attaining in a particular part according to its divine ordination.

4.2.2 Advancing the Position in “Mission and the Spirit”

The understanding of finality expressed in this early article reappears—at least implicitly—throughout Lonergan’s career. However, the connection that he draws

¹⁸ Lonergan. 23

between cosmic, evolutionary processes and the salvific work of Christ in “Finality, Love, Marriage” is subsequently more or less bracketed in his primary focus on the transformative effects of grace in human interiority.¹⁹ Still, this early mention ought not be written off as merely youthful exuberance or passing fancy. Near the end of his career, some 33 years after the publication of “Finality, Love, Marriage,” Lonergan published a brief article titled “Mission and the Spirit” that would revisit many of these same themes:

As man's [sic] being is being-in-the-world, his self-understanding has to be not only of himself but also of his world. So biblical writers not only employed Babylonian cosmology but also reinterpreted it. In similar vein Arabic philosophers [remodeled] Ptolemy's heavens, and in turn Aquinas reformulated their views on the order of the universe. Today with evolution naming the shape of things, Karl Rahner has written on “Christology within an Evolutionary View of the World.” Rahner prudently omitted from his account the long series of discontinuities reaching from subatomic particles to mankind. But the omission only makes the more prominent the greatest discontinuity of all, the transition from the natural to the supernatural. Indeed, for Rahner this transition is especially arduous, for he is committed to the anthropological turn and, on that view, nature gives way to spirit, the supernatural at its root is divine self-communication in love, and the obdiential potency of a formal ontology has to be translated into terms of consciousness....

¹⁹ Though we do not treat these texts here, Lonergan takes up some of these themes more fully in his discussion of the *totus Christus* in Chapter 20 of Bernard J. F. Lonergan, *Insight: A Study of Human Understanding*, 5th ed., rev. aug., Lonergan, Bernard J. F. Works. 1992 3 (Toronto ; Buffalo: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 1992); as well as in Bernard J. F. Lonergan, *The Incarnate Word*, Robert Mollot Collection (Toronto: Published for Lonergan Research Institute of Regis College, Toronto by University of Toronto Press, 2016) and in Bernard J. F. Lonergan, *The Redemption*, Lonergan, Bernard J. F. Works (Lonergan Research Institute) ; v. 9 (Toronto ; Buffalo (N.Y.): University of Toronto Press, 2018).

[T]he question I wish to discuss [is]... What in terms of human consciousness is the transition from the natural to the supernatural?²⁰

Loneragan underscores the relevance of science and cosmology in relation to the work of theology and in particular to the possibility of our understanding the theorem of the supernatural. He also specifically identifies both his and Rahner's approaches as omitting all preliminary cosmic history with respect to the emergence of humanity in a move that he names "the anthropological turn."

Though his work also demonstrates a similar anthropological turn, Lonergan emphasizes that the intelligibility of an evolutionary worldview cannot be attained "simply by acknowledging hierarchy and the instrumental and participative types of vertical finality. An evolutionary view is a view of the universe. It can be fully grasped only by attending to the cause of the universe."²¹ Thus, where the scientist describes evolution in terms of probability, the theologian may come to recognize that a fully explanatory account of an evolutionary worldview also requires some account of divine providence: "[The] omniscient and omnipotent cause of the whole universe does not operate blindly. He [sic] plans where men turn to probabilities. Nor does there come into existence, outside his planning, any agent that could interfere with his comprehensive design."²² The dynamic and cooperative unfolding of the world order is empowered by and through its relation to God. Probability is an integral element of the larger

²⁰ Bernard J. F. Lonergan, "Mission and the Spirit," in *Collected Works of Bernard Lonergan: A Third Collection*, ed. Robert M. Doran, John D. Didosky, and Frederick E. Crowe, Second edition, revised and augmented / edited by Robert M. Doran and John D. Didosky., Lonergan, Bernard J. F. Works (Lonergan Research Institute); v. 16 (Toronto; Buffalo; London: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2017), 23–34, 23. Previously published in Peter Huizing and William Bassett (eds.), *Experience of the Spirit: To Edward Schillebeeckx on his sixtieth birthday* (*Concilium*, Vol. IX, no. 10, 1976), pp. 69–78

²¹ Lonergan. 24

²² Lonergan. 25

intelligibility of the whole, but only humans encounter the [relative] unintelligibility of randomness and the non-systematic character of the universe. God knows the probability intelligibilities that are constitutive of the reality of the universe, knows these probabilities as norms from which concrete events deviate only non-systematically, and knows the full concrete intelligibilities of those events. Thus, while God knows the world as probable insofar as probability is a function of the intelligibility of the world, it would be a misunderstanding to project the language of “chance” onto God’s act.²³

Nevertheless, God’s creative and redemptive action in the world is achieved in part through God’s ongoing relationships with all the creatures, which Lonergan describes in terms of the technical meaning of finality.²⁴ Absolute, horizontal, and especially vertical finality are once again central to Lonergan’s presentation. For both Rahner and Lonergan, humanity’s vertical finality is toward the “threefold personal self-communication of divinity to humanity”—in the Incarnation, the entry into intra-Trinitarian life through adoption in the Spirit, and in the awaited final consummation in the beatific vision. In relation to the contingent unfolding of the life of God’s gift of grace, Lonergan stresses that vertical finality refers to the multivalent possibilities of and for self-transcendence of beings at every level of the hierarchy of beings. All creatures exist in a state of becoming such that the fullness of their existence is revealed over the course of their whole life:

²³ For more on the tension between these perspectives, and for the tension between the terms unfolding and unbreaking in talking about the emergence of the Kingdom of God, see our discussion of this in Chapter One. See also the longer discussion of this at the beginning of our Chapter Five.

²⁴ In describing God’s relationship as ongoing, we mean to emphasize that Creation is not identical with protology and that redemption is not limited to the discrete effects of Christ’s visible mission on Earth or its expression in the Christian church(es) in centuries since. In earlier chapters, we saw the “ongoing” character of God’s creative action suggested by the three notions of *creatio originalis*, *continua*, and *nova*. However, we would emphasize here that this ongoing character of relationship is should not be misunderstood to imply that God is in any way conditioned by space and time, but rather that Christians as historical subjects must attend to the present and not only the past in discerning God’s creative and redemptive activity.

When it has been realized in full, it can be known. When it is in process, what has been attained can be known, but what has not, remains obscure. When the process has not yet begun, obscurity prevails and questions abound. Is it somehow intimated? Is the intimation fleeting? Does it touch our deepest aspirations? Might it awaken such striving and groaning as would announce a new and higher birth? Vertical finality to God himself [sic] is not merely obscure but shrouded in mystery.²⁵

Here, Lonergan clearly echoes Saint Paul: “We know that the whole creation has been groaning in labor pains until now; and not only the creation, but we ourselves, who have the first fruits of the Spirit, groan inwardly while we wait for adoption, the redemption of our bodies” (Romans 8:22-23). For Paul and Lonergan both, the meaning and purpose of each creature intrinsically or extrinsically conditioned by space and time remains unclear not only until their own life has run its course, but also until the consummation of the whole world order in the fullness of time. At present, then, our limited knowledge of the intricacies of other creatures is a matter of our lack of knowledge about the beginning, end, and completion of time. On account of this obscurity, we can say that Lonergan ascribes a hermeneutical structure to our gradual understanding of the meaning and value of vertical finality in world process that, from the perspective of divine transcendence, is beyond both necessity and contingency:

Vertical finality enters into evolutionary perspective. It does so inasmuch as emergence, unfolding, development, maturity follow the analogy of evolutionary process. Such process is to be understood in accord with emergent probabilities and

²⁵ Lonergan, “Mission and the Spirit.” 26

under divine planning and action. By the analogy of that process is meant, not some basis for *a priori* prediction, but only a basis for *a posteriori* interpretation.

Here as elsewhere, things are known insofar as they are in act.²⁶

Our ability to recognize and name vertical finality has to depend on both reflection and communal discernment within a self-correcting process of learning as regards the flow of both individual and communal histories. It neither dissolves the surprising newness of what has emerged nor does it foreclose the mystery of what might yet come to be. This process of discovery does, however, suggest an anticipatory heuristic for attending to and comprehending the deep interconnections and the dynamic possibilities for self-transcendence, both with respect to relatively and absolutely supernatural realities.²⁷

A further advance in clarity regarding the meaning of the hierarchic arrangement of creatures is to be noted in Lonergan's position here as compared with the earlier "Finality, Love, Marriage." The lower levels not only provide a platform for the higher, but, as they perdure, they may be liberated in the emergence of higher manifolds in striking ways. In human life, for instance, he stresses that the lower manifolds of consciousness provide "the mass and momentum of our lives, the color and tone and power of feeling, that fleshes out and gives substance to what otherwise would be no more than a Shakespearian 'pale cast of thought.'"²⁸ At the same time, the higher manifolds

²⁶ Lonergan. 27

²⁷ For instance, as vertical finality describes the relation between both the relationship between (relatively supernatural) biological realities emergent from the chemical substrate and of the (absolutely supernatural) infused virtue of charity in relation to the natural virtues and, indeed, the lower faculties.

²⁸ Lonergan, "Mission and the Spirit." 30

sublate the lower, preserving them indeed in their proper perfection and significance, but also using them, endowing them with a new and fuller and higher significance, and so promoting them to ends beyond their proper scope. Further, when so understood, priorities lose their rigidities. One might accord metaphysical necessity to such adages as *ignoti nulla cupido* and *nihil amatum nisi praecognitum*. But while they assert the priority of knowledge as one ascends from the lower to the higher, they tend to overlook the inverse priority by which the higher sublates the lower. It is in the latter fashion that orthopraxy has a value beyond orthodoxy. And surely the priority of the lower sets no rule that God must observe when he floods our inmost hearts with his love through the Holy Spirit he has given us (Rom. 5:5).²⁹

At least with respect to human persons, then, Lonergan emphasizes that the realization of the possibilities explained by vertical finality may exceed the limitations of the lower functions in surprising ways. In no uncertain terms, Lonergan links this treatment of vertical finality with “the economy of grace and salvation in an evolutionary perspective,” the unfolding of which he correlates with our growing awareness of a need for redemption, and with the new order made visible in the mission of the Son, and the invisible mission of the Spirit which transforms the world from the top down.³⁰

While Lonergan does not explore how this understanding of tripartite finality might transform our understanding of grace as pertaining to the whole creation, the closing lines of this article suggest possibilities for a more inclusive and holistic account of God’s redemption of the whole created order:

²⁹ Lonergan. 30-31

³⁰ Lonergan. 31-32

Experience of grace, then, is as large as the Christian experience of life. It is experience of man's capacity for self-transcendence, of his unrestricted openness to the intelligible, the true, the good. It is experience of a twofold frustration of that capacity: the objective frustration of life in a world distorted by sin; the subjective frustration of one's incapacity to break with one's own evil ways. It is experience of a transformation one did not bring about but rather underwent, as divine providence let evil take its course and vertical finality be heightened, as it let one's circumstances shift, one's dispositions change, new encounters occur, and—so gently and quietly—one's heart be touched. It is the experience of a new community, in which faith and hope and charity dissolve rationalizations, break determinisms, and reconcile the estranged and the alienated, and there is reaped the harvest of the Spirit that is "... love, joy, peace, patience, kindness, goodness, fidelity, gentleness, and self-control" (Gal. 5:22).³¹

Building on Lonergan's foundation but moving beyond his anthropological focus, then, how might we envision the expansion of this community to include the whole of graced creation?

4.3 A Brief Note on Method

The remainder of this chapter will draw out the implications of this thesis regarding each of the three finalities—absolute, horizontal, and vertical—in relation to human lives lived out in God's graced Creation. Then, in the next chapter, we will turn to a closer examination of grace in specifically other-than-human contexts. The account of grace

³¹ Lonergan. 32-33

expanded and developed here in this chapter is intended to be heuristic, and so it does not (because it cannot) circumscribe and explain all the myriad ways that grace unfolds in the world. What it can do is focus our attention on the various dimensions of this world and on God's transformative presence to it, and, by doing so, it can make us capable of being what Elizabeth Johnson called "sacramental beholders." Therein, this heuristic account of grace seeks to make possible a more differentiated sense of wonder regarding the presence of God's love in and for the world as it is in every moment approaches the consummation and completion of all in all.

Concern may be provoked on the part of some readers by the prospect of our searching for God's grace in these broader dimensions, arising from a fear that this will render the goodness and intelligibility of the category of "nature" vacuous, because of our emphasizing perhaps the most important effect of the theorem of the supernatural. However, this concern might be due to a conflation of two meanings of the word 'nature': on the one hand, the technical metaphysical definition of the immanent principle of movement and rest proper to a particular creature, and, on the other hand, the ordinary and commonsense meaning of nature as what we encounter in the wonders of God's creation, especially when it has been left unspoiled by human presence and action. Thus, while we affirm that there is no part of the cosmos left untouched by God's grace, we do not dissolve the goodness of particular natures and the particular excellences of creatures as specified by their natures.

We should reject the notion that we ever encounter this-worldly nature in a pure or ungraced state. Consider, for instance, Augustine's symbolic reflections on the natural world in his *Confessions*, which suggest his own encounter with nature as graced:

And what is the object of my love? I asked the earth and it said: ‘It is not I.’ I asked all that is in it; they made the same confession (Job 28: 12f). I asked the sea, the deeps, the living creatures that creep, and they responded: ‘We are not your God, look beyond us.’... [and] ‘We are not God’ and ‘He made us’. The inner man knows this—I, I the mind through the sense perception of my body... Animals both small and large see it, but they cannot put a question about it. In them reason does not sit in judgment upon deliverance of the senses. (*X. vi (9) – X. vi (10)*)³²

As the larger passage makes clear, Augustine notes that the evidence of God as Creator is at least potentially available to natural intelligence, at least for humans; creation reflects the goodness of the Creator in its very nature. As it happened, Augustine’s search for God leads him to turn from these external encounters toward the realm of interiority, especially as mediated through Christ, who is indispensable for preventing our misinterpreting the things of this world and so failing to experience them in their/our proper relation to God. For this reason, Augustine insisted on the need to be formed by the reception of the sacraments of the church and by the reading of scripture in order to become a properly sacramental beholder of natural reality as symbols of the divine.³³ However, this in no way takes away from the fact that every encounter with creation has the potential of disclosing both God as Creator and the creature as a beholder of its creator, even if the implications for non-human creatures are not entirely clear.

³² See Saint Augustine, *Confessions*, trans. Henry Chadwick, 1st edition (Oxford: Oxford University Press, 2009). 183-184.

³³ This is argued against overly optimistic accounts of nature itself as revelatory or as a sacrament in O’Malley, “The Hermeneutic Sacramentality of Augustine: Learning to Contemplate the Invisible Reality of God in the Visible Creation.”

We are invited, then, to discern the ways in which God's ongoing relation to all creation causes their upward dynamism, not only as pertaining to their absolute finality to the Creator God, but also as regards the fulfillment of their own unique, creaturely potential within their profound interconnections with the rest of creation on which their concrete existence depends. This does not and ought not imply (1) that we destroy the meaning of nature altogether, either in the sense of particular beings or of nature as a whole; or (2) that we simply say that all of nature is actually equivalent to grace; or (3) that, because there is always a mixture of grace with nature in all creatures, we affirm that it is impossible to discern a distinction between the two dimensions.³⁴ Rather, the heuristic framework developed here is intended precisely to aid the discernment of the manners in which grace is involved in any healing and elevating particular natures. Though all that exists through God's concurrence at every moment, by distinguishing more precisely how God's grace is at work in the dynamic world order, we propose to identify those moments when a creature or even a whole ontological stratum is drawn beyond its own limitations to participate in the unfolding Kingdom of God that was proclaimed by Jesus.

Moreover, this heuristic framing of the role of grace is meant to be eminently practical and practicable, inasmuch as it is also meant to help guide theology's engagement with other scientific disciplines. While the doctrines of nature, sin, and grace are partially developed from the truths received through revelation, they are also confirmed and enriched by human investigations. For instance, while Christians strive for peace and justice in their communal and political life, they also remain chary of utopian

³⁴ For the distinction between particular natures and nature as whole, both conceived of in metaphysical terms, see our Chapter Three discussion of Byrne, "Insight and the Retrieval of Nature," 1990.

technocracies that do not account for the pervasive effects of sin in the world. Any two-dimensional politics or philosophy cannot do justice to the manifold experiences of human beings resulting from the fact of sin, because they fail to discern, even though they cannot but experience, the irreducible and indissoluble unintelligibility of the surd of sin that challenges not only the well-being of humankind but also the integrity of non-human nature. For this reason, a revised theology of grace has to function heuristically in order to call our attention to how God is already working in and through the fabric of all the world—both in and beyond specifically human contexts—in both creative and redemptive ways. Theology must provide a substantive account of the intelligibility of the cosmos that—from the limited viewpoints of any particular physical, chemical, biological, or anthropological method—might appear to be a matter of mere chance or a fluke of nature.³⁵ By clarifying the real, observable effects of the concrete world order as a graced world order, theology has the opportunity to encourage, shape, and direct the attention, understanding, reasonableness, and responsibility of persons in the world. Later, we will consider how the sciences themselves may aid in identifying these loci of grace in nature under the headings of emergence, convergence, and cooperation, even though such an explicitly theological interpretation of the data of creation is beyond the scope of their investigations. First, though, our task is to clarify the specifically theological intelligibility in the variety of relevant contexts.

In line with the heuristic character of this speculative theology of grace, these explorations are structured according to an examination of what may be known first with

³⁵ By the same token, by articulating an account of how sin may also be observed in the natural world, theologians may be able to offer correlative inverse insights, or insights into the objective unintelligibility of certain phenomena in the natural world, at least as they affect the unfolding of the Kingdom of God in cosmic history.

respect to ourselves and not what ought to be regarded as first with respect to the world itself. For this reason, we will begin by offering an account of how grace may be considered anew in relation to human experience and affairs.

(Some readers may register an initial concern that this approach risks reinscribing the very anthropocentrism that this project seeks to resist. On the contrary, by explaining how these realities are mutually at stake and how they relate to each other in a way that does not prejudice human beings over non-human nature, we argue that this approach offers the best hope for guiding this investigation and those of any of our presumably human readers.)

As we move from humans to successively less familiar contexts, therefore, we do not envision a series of concentric circles or lower tiers expanding around a human center or summit. Rather, we will take the image of the expanding universe itself as our guiding metaphor. Modern physics tells us that, no matter where we “stand,” the rest of the universe appears to be expanding away from that point, as if it were itself the center of the universe. In a restricted sense, then, we propose to consider each creature in abstraction, as though it were the center of the graced universe. By abstraction, we do not mean something like an impoverished replica of reality itself. Abstraction adds to rather than subtracts from the intelligibility of the whole, for it enables further and more comprehensive understandings, judgments, decisions, and acts of love as it increases the number of questions we can ask and answer, as well as gives rise to new possibly relevant courses of action within our horizon. Once having arrived at a richer account of each particular creature through the abstractive process, we may also recognize how, through their vertical finality and the interconnection this entails, we further recognize

that these accounts may be reintegrated into a coherent whole that is more than only the sum of its parts. The ubiquity of grace in cosmic evolution and in relation to the many ways creatures mutually mediate each other's constitution through vertical finality demands an enormous expansion of our understanding of grace to encompass the expanse of the physical, chemical, biological, zoological, and human universe. God's grace, then, embraces the uncountable multitude of God's loving relationships with the total reality of the created universe.

4.4 Grace, Relationality, and Finalities in Human Contexts

Building on our understanding of grace as "God's created relationship of transformative love and care for all creatures that opens them up to ever deeper relationships with God and with each other," we may now turn our attention to particular creatures and creaturely kinds in order to identify the signs and the transformative effects of grace upon the whole of creation. Since the effects themselves are the result of grace, we are able to recognize the ubiquity of God's grace through an increased awareness of its real effects in the world: healing the wounds of sin, accompanying creatures in their suffering, empowering creatures to achieve their natural ends, while raising creatures both individually and collectively to a perfection that lies beyond their limited nature, opening new possibilities for life, and offering hope for the ultimate defeat of death in the general resurrection and the life to come.

In the first stage of Lonergan's theology of grace, articulated according to the metaphysical terms and relations that framed Thomas Aquinas's theology of grace, the relationship between grace and nature in human persons explained the healing and

elevation of human nature conceived of as the remote principle of operations in human persons. Precisely as human, though, nature is regarded as spontaneously self-transcending and, as transposed by Lonergan's generalized empirical method, as a structure of dynamically interrelated operations of conscious intentionality—namely, experience, understating, judgment, decision and action. These operations are driven by a spontaneous desire to know and love that orients human unrestricted questioning and our quest for God as the supreme good. The focus is less on human nature considered abstractly or remotely, as we come to emphasize how grace perfects and extends our native orientation toward self-transcendence—which in concrete living becomes undermined by the effects of both personal and social sin, yet is open to and needs God's gift of love or grace that sublates our natural wonder in love and by healing our psychic wounds. Through this transformative love, which flows from the gift that is the indwelling of the Holy Spirit, we are made holy and lovable as through grace we become adopted daughters and sons of God. Therein, the internal conversation that characterizes conscious and dynamic processes is united to the divine, intra-Trinitarian conversation. This mode of elevation is fitting for human beings specifically as intelligent, rational, and existentially conscious creatures, because love both builds upon and in some cases reanimates our naturally unrestricted wonder as the principle of our self-transcendence. As Jeremy Wilkins describes, "This open-endedness transposes the Scholastic concept of obediential potency. The open-endedness of our native wonder is transformed, enlarged, sublated by a love that is otherworldly, a love in search of meaning beyond the confines of this world."³⁶ We are moved by grace to participate in a divine love that carries us

³⁶ Wilkins, "Grace and Growth: Aquinas, Lonergan, and the Problematic of Habitual Grace." 729

beyond even the horizon of the whole intelligible world that is proportionate to our capacity to perceive and imagine when the gift of divine love becomes the new, unrestricted, supernatural ground of people's life and living making them more capable of a more "global attitude of generosity."³⁷

In relation to the four stages of conscious intentionality—experiencing, understanding, judging, deciding—Lonergan located the love born of grace at the highest levels; however, as the lower levels are sublated by the higher, the transformative effects may be observed in all the stages as a new life of love begins.³⁸ Lonergan described this love not as an event but as a state that introduces new schemes of recurrence by "linking the occurrence of classes of events to corresponding sets of probabilities."³⁹ That is, it is not known only according to an ontological change by which the natural order is sublated into the supernatural order, but the change is recognizable in the regular recurrence of new patterns of behaviors over time:

The data on being in love, then, are both data of consciousness consisting in internally related sets of operations and feelings—love, joy, peace, and the like—and data of sense consisting in external performance—patience, kindness, goodness, faithfulness, gentleness, self-control, turning the other cheek, taking up one's cross, bringing good out of evil.... Love may be a feeling, but its proof is in its love-motivated action, and it is by attending to the data over time that one finds a criterion for discerning between fine sentiments and genuine being in love.⁴⁰

³⁷ Wilkins. 731

³⁸ There has been extensive debate over both (1) whether and how strongly Lonergan actually advocated for this love as representing a fifth level of intentional consciousness and (2) whether the addition of a fifth level is wise. While the debate continues regarding the second point, the first has been definitively argued in the affirmative in Blackwood, *And Hope Does Not Disappoint*.

³⁹ Wilkins, "Grace and Growth: Aquinas, Lonergan, and the Problematic of Habitual Grace." 732

⁴⁰ Wilkins. 732

While grace in relation to human beings certainly includes the transformation of our interior, conscious life, we are ultimately able to identify the unfolding of grace in the external world only by attending to human histories and performances. As previously noted, in the third phase of his career, Lonergan placed special emphasis on love as a conscious feeling that is verifiable, while acknowledging the reality of love as intrinsically interpersonal. As such, the “state” of being in love is anything but static, inasmuch it is always manifest in the ongoing development of a person in love as they come to enjoy not only greater friendship with the Trinitarian God, but also a greater friendliness toward and friendship with all things in God. This extroversion of love may be seen clearly, for instance, in Bernard of Clairvaux’s fourth level of being in love with God, which we might summarize as, “Standing in the light of God’s love, I love all that God loves, including myself.”⁴¹ Thus, love is operative as the very principle of the open-ended state of development that constitutes human life.

If this all remains consistent with earlier theologies of grace, how are we to understand the human life of grace and its as yet not fully explored and newly enlarged

⁴¹ “Happy the man who has attained the fourth degree of love, he no longer even loves himself except for God. ‘O God, your justice is like the mountains of God.’ This love is a mountain, God’s towering peak. Truly indeed, it is the fat, fertile mountain.... When will flesh and blood, this vessel of lay, this earthly dwelling, understand the fact? When will this sort of affection be felt that, inebriated by divine love, the mind may forget itself and become in its own eyes like a broken dish, hastening towards God and clinging to him, becoming one with him in spirit.... If any mortal, suddenly rapt, as has been said, and for a moment is admitted to this, immediately the world of sin envies him, the evil of the day disturbs him, the mortal body weighs him down, the needs of the flesh bother him, the weakness of corruption offers no support, and sometimes with greater love than these, brotherly love calls him back. Alas, he has to come back to himself, to descend again into his being, and wretchedly cry out: ‘Lord, I suffer violence’ ... All the same, since Scripture says God made everything for his own purpose, the day must come when the work will conform to and agree with its Maker. It is therefore necessary for our souls to reach a similar state in which, just as God willed everything to exist for himself, so we wish that neither ourselves nor other beings to have been nor to be except for his will alone; not for our pleasure.... O pure and sacred love! O sweet and pleasant affection! O pure and sinless intention of the will, all the more sinless and pure since it frees us from the taint of selfish vanity, all the more sweet and pleasant, for all that is found in it is divine. It is deifying to go through such an experience” (X:27-28). Bernard of Clairvaux, *On Loving God*, trans. Emero S. Stiegman, Cistercian Fathers Series; No. 13B (Kalamazoo, Mich.: Cistercian Publications, Inc, Cistercian Publications, 1995), 29-30.

development to encompass the more thorough evolutionary worldview? Employing the tripartite heuristic elaborated above, we may begin by considering human finality as absolute.

4.5 Grace, Relationality, and Finalities in Human Contexts: Absolute Finality

In one sense, absolute finality is perhaps the most difficult of the three to elaborate, since, as Lonergan suggests, it is universally applicable insofar as any creature responds to a motive or appetite or term specifically as good, since God is the self-sufficient origin of all goodness. Given our assertion of the goodness of the whole world order as created by God, all things therefore enjoy absolute finality to God insofar as God wills their continued existence and insofar as their goodness represents their participation in God's goodness.

4.5.1 Absolute Finality and Eschatology

In this sense, absolute finality might initially seem to be identical for every creature. However, in addition to suggesting a common grounding of all creatures in this participatory metaphysics, we would suggest that our consideration of absolute finality should include not only this ontological dimension based on world order, but also the consummation and completion of all things as they return to God in the fullness of time. In this light, the absolute finality of grace can be theologically understood as the eschatological interruption of any given present. This is reflected in the eschatological formulation "already, but not yet," which holds in tension the continuity of the present order as good and the radical newness that characterizes Christian hopes for the future.

This principle of continuity is sometimes expressed through the notion that “the difference between grace and glory is one of degree and not kind,” insofar as our personal and communal completion are begun already in the unfolding of the Kingdom of God in grace in our midst.⁴² Taken in this sense, an evolutionarily-informed approach to absolute finality calls us to comprehend and surely to reimagine regarding the consummation of human longing as integrally linked to our pervasive interconnections with other creatures.

Following the broad tradition of Christian reflections on the final consummation of human life, we must consider how an evolutionary worldview reframes our thinking about two distinct aspects of our hopes for human fulfillment: the beatific vision and the general resurrection.

4.5.2 Absolute Finality and Eschatology: The Beatific Vision

The beatific vision refers to the ultimate fulfillment of our natural longing to “see” God face-to-face, to know God as God is in Godself. In many of our ways of talking about God—as Love (1 John 4: 7-8), as the infinite act of understanding, as Thomas’s subsistent being (*ipsum esse subsistens*), or as the one in whom Augustine’s “restless heart” finds rest—Christians emphasize the deep, human desire for a fulfillment beyond

⁴² Of course, Lonergan and his students would also suggest that the difference between grace and glory might be understood as distinct contingent predications in relation to the distinct Trinitarian relations, according to the “4-Point Hypothesis” (more on this below). According to this speculative theological account, grace and glory are not different stages of one kind of thing but different stages in the economy of salvation. Each stage is a contingent participation in a trinitarian relation. So they are really and not only notionally distinct. For the reason underlying this principle, see, for example, Aquinas in *ST* I, q. 94, art. 1, obj. 6: “We merit glory by an act of grace; but we do not merit grace by an act of nature.” According to Aquinas, humans are created in grace, though by definition, grace is not merited as natural, and, furthermore, in the fullness of time, grace is consummated in glory. The commonly-repeated and condensed formulation we invoke above is only recently starting to be emphasized. Nevertheless, the idea is found in a number of medieval authors, and is certainly implied by the phrase, “resurrection of the body (*resurrectionem carnis*)” in the Apostles’ Creed.

ourselves and the limited if real goods of our world. While, with God's grace, we may come to know that God exists, and through faith as belief (whether by special or general revelation) to know something that we could not otherwise affirm about God in this life, the grace of the beatific vision involves immediate encounter with God in Heaven. The beatific vision—made possible by “the light of glory”⁴³—features prominently in Lonergan's earlier theological writings on grace and supernatural being.⁴⁴ Like Aquinas, Lonergan uses the term to refer to the immediate knowledge of God given to the blessed after death, though Lonergan situates the term according to what has come to be called his “4-Point Hypothesis.”⁴⁵ In short, Lonergan argued that the creative and redemptive activity of the Trinitarian God in history is marked by the various aspects of God's relationship with creatures, especially with human beings, such that the four real relations in God—paternity, filiation, active spiration, and passive spiration—can be meaningfully mapped onto four contingent external terms that constitute the divinization of

⁴³ As Neil Ormerod explains, the beatific vision may be understood as the “that which is understood” while the light of glory specifies the “that whereby it is understood,” such that the former specifies the grace of glory as objective and the latter as the subjective dimension of glory as one and the same reality. See Neil J. Ormerod, “Two Points or Four? --Rahner and Lonergan on Trinity, Incarnation, Grace, and Beatific Vision. (QUAESTIO DISPUTATA),” *Theological Studies* 68, no. 3 (2007): 661–73, <https://doi.org/10.1177/004056390706800309>. 661–662, FN 3.

⁴⁴ Lonergan treats the beatific vision, sometimes called “the light of glory,” both in relation to Jesus' enjoyment of it and in relation to its place in the human participation in the life of grace and our anticipation of glory. See, for instance, Bernard J. F. Lonergan, “Christ as Subject: A Reply,” in *Collection*, 2nd ed., rev. aug., Lonergan, Bernard J. F. Works (Lonergan Research Institute) 4 (Toronto: Published by University of Toronto Press for Lonergan Research Institute of Regis College, 1988), 172–203; Bernard J. F. Lonergan, “De Ente Supernaturali (On the Supernatural Order),” in *Early Latin Theology*, ed. Michael G. Shields, Robert M. Doran, and H. Daniel Monsour, vol. 19, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2011), 53–255.; Bernard J. F. Lonergan, *The Ontological and Psychological Constitution of Christ*, Lonergan, Bernard J. F. Works (Lonergan Research Institute) v. 7 (Toronto: Published for Lonergan Research Institute of Regis College by University of Toronto Press, 2002), 179, 207, 289; Bernard J. F. Lonergan, *The triune God: systematics*, ed. Robert M. Doran and H. Daniel Monsour, Lonergan, Bernard J. F. Works. 1988 12 (Toronto [Ont.]; Buffalo [N.Y.]: Published for Lonergan Research Institute of Regis College, Toronto by University of Toronto Press, 2007), 471–473.

⁴⁵ There remains an active debate over whether the meaning and relevance of this 4-point hypothesis and its utility should be restricted to the second stage of meaning, namely, that of theoretical metaphysics.

humankind—namely, Christ’s secondary act of existence in the Incarnation (*esse secundarium*), the light of glory, sanctifying grace, and the habit of charity—respectively.⁴⁶ The characteristic of human divinization is our entry into the intra-Trinitarian life in specific ways; beyond the simple though widespread assertion that a Trinitarian faith emphasizes relationships or relationality as paradigmatic for human holiness, this hypothesis *explains* the distinct aspects of those relationships in human persons, and, if transposed into the terms of conscious intentionality, suggests an integral spirituality rooted in Trinitarian relationships.

Considered in the light of the broader theological orientation we are seeking to affect, we may speculate about how new understandings of the beatific vision include insights into an integral understanding of humanity’s place in the world. The ultimate destiny of humankind lies in God, the Lord of nature and history, but we do not take it for granted that we will be the only creatures involved. In *Laudato Si’*, Pope Francis reminds us that, “At the end, we will find ourselves face to face with the infinite beauty of God (cf. 1 Cor 13:12), and be able to read with admiration and happiness the mystery of the universe, which with us will share in unending plenitude. Even now we are journeying towards the sabbath of eternity, the new Jerusalem, towards our common home in heaven” (*LS* 243). Here, Francis’s remarks suggest a link between the “face to face” encounter of beatific vision with the mysteries of the larger universe; thus, our knowledge of God is also oriented to know the other creatures in the larger created world. This position is not novel, because Thomas Aquinas himself concludes that at least some knowledge of Creation is entailed by the beatific vision (ST IIIa Supp. q 92, a 3); and he

⁴⁶ Lonergan, *The triune God*, 2007. 471-473.

refers to numerous patristic and scriptural loci that support his claim.⁴⁷ Going further than Aquinas, Francis's remarks at various throughout *Laudato Si'* hint at non-human creature's endurance in the fullness of time, while roundly rejecting any notion that the "ultimate purpose of other creatures is... to be found in us" (LS 83). Rather, he claims that "the creatures of this world no longer appear to us under merely natural guise because the risen One is mysteriously holding them to himself and directing them towards fullness as their end" (LS 99). Given this everlasting character as well as, taken more broadly, the consummation of God's good creation, the knowledge of the rest of creation that we receive as a consequence of our immediate encounter with God may be construed in a new light. We do not merely know other creatures the way we might know possible realities that God chose not to create, but our knowledge of the rest of creation reveals more fully our relationships with other creatures, with whom we exist in a state of

⁴⁷ Aquinas does not claim, however, that we know all that God knows as a direct consequence of the beatific vision, since our knowledge of what God knows is proportionate to our knowledge of God. Furthermore, neither is it within the power of a created intellect to comprehend God's power fully. Even so, it is possible to advance in knowledge of God and all that God knows through the instruction of lower beings by higher, and he does at least acknowledge the possibility that all will come to know what God knows in the final state of things after the last judgment. However, where Aquinas did not link the knowledge of what God sees with the lasting of these other creatures in the fullness of time, we may raise questions about that here. This issue has been explored in part in relation to the theological category of memory/*anamnesis* in Denis Edwards, *How God Acts: Creation, Redemption, and Special Divine Action*, Theology and the Sciences (Minneapolis [Minn.]: Fortress Press, 2010). 162-164. "In Luke's version of the saying about the sparrow, Jesus states that not one sparrow is "forgotten before God" (Luke 12:6). It is held eternally in the divine memory. This concept of the divine memory provides the basis for an approach to the final redemption of other living creatures. The biblical and liturgical concept of memory offers an important resource. In the liturgy of the church, we remember the wonderful things God has done in creation and redemption. When we celebrate the Eucharist in memory (*anamnēsis*) of Jesus, we are dealing with a remembrance that not only brings to mind the past, but also acts powerfully in the present and anticipates an eschatological future. This experience of living memory may provide a pale analogy for God's redemptive memory. What is being suggested here is that God can be thought of not only as present with each creature in the Spirit, loving it and conferring on its existence and the capacity to act, but also as inscribing it eternally in the living memory and experience of divine Trinitarian life." Edwards refers to similar accounts of creaturely endurance in divine memory in both John F. Haught, *God after Darwin: A Theology of Evolution* (Boulder, Colorado: Westview, 2000), 43 and Alexander Schmemmann, *The Eucharist: Sacrament of the Kingdom* (Crestwood, N.Y.: St. Vladimir's Seminary Press, 1988), 125.

“splendid universal communion” more fully both in history and in the fullness of time (LS 220).

4.5.3 Absolute Finality and Eschatology: The General Resurrection

With perhaps even greater conviction, then we may hope and wonder about how the general resurrection may also extend to other creatures. The emphasis on grace in primarily psychic and spiritual dimensions of human life needs to be understood together with the doctrine of the general resurrection that has unfortunately fallen into relative desuetude, perhaps, in recent theological history. However, Deep Incarnational theologies—especially if Elizabeth Johnson’s call for an accompanying theology of deep resurrection is taken seriously—call our attention once again to the promise of the conservation, elevation, and transformation of the material world of which we are one part. Similarly, in *Laudato Si’*, Pope Francis also suggests broadening this doctrine, when he discusses our present hope for “the new creation, whose first fruits are the Lord’s risen humanity, the pledge of the final transfiguration of all created reality” (LS 237). This enlargement of our envisioning of the general resurrection is not merely an inclusive act that brings the rest of creation into fold together with human creatures; it also transforms our prior understanding of what it might mean for a human body to be transfigured in the general resurrection.

The teaching of the general resurrection refers to the Christian conviction that at the end of the world all human souls will be reunited with their bodies, thereby restoring us to the natural and fitting composite state proper to embodied humans. Aquinas teaches that, in the general resurrection, all souls will be reunited with their bodies in the fullness

of time, and that this will be brought about by the quasi-instrumental cause of Christ's resurrection (ST IIIa Supp. 75-76). He interprets the risen body to include that matter that is, in fact, constituted by the form that is the soul, such that even in our current life certain particles may come and go without dissolving the body or the self; therefore, in the fullness of time, we ought not expect that our risen bodies will be constituted by all of the particles that comprised it at one time or another in this life (ST IIIa Supp. 79); he even maintains that the particular ashes or dust of each person's body will supply part of the transformed material elements (ST IIIa Supp. 78). Moreover, Aquinas not only affirms that these bodies are necessary to our wholeness as resurrected persons, (i.e. as body-soul composite), but he also affirms that the resurrection of the body is wonderfully fitting for the fulfillment of our corporeal longing in the fullness of time. Just as human beings are partially constituted by their desires and longings in this life, so, too, in the fullness of time is God's promise of perfect happiness to include the fulfillment of these dimensions. Along with St. Paul, Aquinas affirms that our resurrected bodies will be impassible (not be subject to substantial change) while they will remain capable of sensation in accord with their natural perfections. The damned will sensibly experience punishment, in contrast to the senses of the just, who will enjoy the complete and enduring perfection of their fulfillment in harmony with the overflow of glory (ST IIIa Supp. 82). As regards especially the fate of the just, Aquinas goes on at some length about the perfect obedience or "subtlety" of risen bodies, in contrast to their earthly bodies over which we have only 'political control' (ST IIIa Supp. 83); the perfect agility of those bodies to move freely in accord with our will (ST IIIa Supp. 84); and, though we

will be able to appear and disappear bodily at will, there will exist a visible and corporeal radiance or “clarity” of our bodies (ST IIIa Supp. 85).

Many of Aquinas’s claims here remain valuable—especially his understanding of the permanent significance of the body-soul composite as proper to the existence of human beings both as terrestrial pilgrims and as blessed, whose very status as persons would be eliminated without their bodies. These insights may find new expression in contemporary theology insofar as they are transposed into a framework of conscious intentionality—which welcomes contemporary phenomenological insights into the body and embodiment to both broaden and deepen our understanding. The body is not merely the marker and material cause of individuation, but it is also a system of mutual presences and interactions. The body is a source of our delight and of our mutual delight, and it is through our bodies that we are capable of being present to others. Our bodies also are our biographies in non-trivial ways, as its strengths, weaknesses, scars, abilities, limitations, etc. tell the story of our person and constitute no small part of our self-understanding.

(For only one telling context, consider the insights attained by theologies of disability.)

While we might affirm that a resurrected body will not be a source of suffering or sadness, this ought not mean that our happiness in God entails the conformity of all bodies to either some hegemonic archetype or the erasure of the particular selves of which our flesh is constituted.

Though Aquinas and others previously have recognized how predation and consumption required flesh shared among diverse creatures, the emphasis on not only flesh in general, but on *this* flesh, *our* flesh, forms a central pillar of a more evolutionary theology, which emphasizes the ways in which the very shape and substance of human

flesh has been shaped by millions of years of co-existence and interaction. As Elizabeth Johnson avers:

“Every atom of iron in our blood would not be there had it not been produced in some galactic explosion billions of years ago and eventually condensed to form the iron in the crust of the earth from which we have emerged.” Poetically speaking, living creatures are composed of stardust, or in more prosaic terms, leftover products of nuclear explosions. It is life’s energized information that makes a transforming difference in this material. In an astonishing way, when living organisms arrive physical nature rachets up to a new level, while species remain connected to the cosmos in the cell of every member.⁴⁸

This conviction about the common origin of our flesh carries over into convictions about the common destination of all flesh and all matter. When we affirm that our bodies will be both restored and transformed in the general resurrection, we need to raise questions not about the preservation of our bodies as sources of private identity, but about the continuation of a distinctly creaturely way of being present to one another: Such must already be the case since we address saints and seek their intercession, and, since many prudently and piously believe that Mary has appeared to them. Our belief regarding bodily resurrection also raises questions about whether those creatures who contribute to our functioning and our sense of self endure, even without our being aware of its being the case. Think, for instance, of the trillions of microscopic organisms that inhabit each person’s gut biome and which exert demonstrable impact not only on our digestion but

⁴⁸ Elizabeth A. Johnson, *Ask the Beasts Darwin and the God of Love* (London; New York: Bloomsbury Pub, 2014), 114. Quoting Arthur Peacocke, “Theology and Science Today,” in *Cosmos as Creation*, Ted Peters, ed. (Nashville: Abingdon Press, 1989), 32

also on our psyches.⁴⁹ Would we continue to be or to be ourselves without these relationships that have constituted us over the course of our entire existence?

The image of human fulfillment in the fullness of time is dramatically altered through the lens of contemporary science and evolutionary theory as we increasingly recognize the way that we are not ourselves alone. Just as we recognize ways in which grace operates between and among persons and communities, we also recognize that our image of final glory ought to reflect this interpersonal and inter-creaturely reality.

However, eschatology does not refer only or even predominantly to some reality awaited in the future, but to the Kingdom of God that is now unfolding in our midst. While we experience effects of this ultimate orientation and destiny now, neither do we meet God face-to-face and immediately in this life, nor do we know precisely in what our ultimate union with God in the fullness of time will consist. Whether considered according to an ontological or eschatological finality, then, absolute finality plays out in human history according to both horizontal and vertical finality.

4.6 Grace, Relationality, and Finalities in Human Contexts: Horizontal Finality

Human horizontal finality calls us to attend to our proper ends according to our distinctive human nature—which Lonergan identifies as lying in our native human

⁴⁹ In fact, in the last few decades, scientists have discovered that the bacteria that coexist in our skin and digestive track outnumber our own cells at an astounding ratio of 10:1. While this has led some scientists to reductionistically overstate the degree to which our thinking is determined by the effects of these creatures upon the lower manifolds of human consciousness, the effects of our relationships of cohabitation and interaction with these creatures has an undeniable effect on our experience—and perhaps even our understanding, judgment, and decisions—of ourselves and our world. See Robert Martone, “The Neuroscience of the Gut,” *Scientific American*, April 19, 2011, <https://www.scientificamerican.com/article/the-neuroscience-of-gut/> and Andrew P. Allen et al., “A Psychology of the Human Brain–Gut–Microbiome Axis,” *Social and Personality Psychology Compass* 11, no. 4 (April 2017), <https://doi.org/10.1111/spc3.12309>.

wonder, as the desire to know all truths and values proportionate to the levels of *experience*, intelligence, reasonableness and responsibility. Far from a static essentialism, Lonergan's phenomenological account of the dynamic structure of human cognition combined with his attention to the historical and existential dimensions of human subjectivity explain human nature itself as a capacity for self-transcendence—understood both as a matter of fact and as an exigency. As a matter of fact, we have already begun a self-transcendent existence as we are formed by stimuli *in utero* and as we enter into a world that is constituted by meaning, even before the child is able to understand and appreciate those meanings, such that no human subject exists in isolation. As a matter of exigency, we note that human conscious intentionality involves operating in a world marked by sin and the unfolding of dialectical (as well as classical, statistical, and genetic) intelligibilities, and so humans are perhaps uniquely tasked with self-transcending and living lives that overcome this panoply of evil, as exemplified now by the ecological crisis. The desire and the imperative to live in the light of reason and love is natural to us as human persons as intrinsically oriented toward the good and, moreover, toward God.

Leaving aside the question of love, for the moment, the natural finality of human intellect toward understanding and knowledge is the condition of the possibility of the dynamism of our horizontal finality as the quintessence of a world characterized by its “upwardly but indeterminately directed dynamism”:

For it is not only our notion of being that is heuristic, that heads for an objective that can be defined only in terms of the process of knowing it, but also the reality of proportionate being itself exhibits a similar incompleteness and a similar

dynamic orientation towards a completeness that becomes determinate only in the process of completion.... Indeed, since cognitional activity is itself but a part of this universe, so its heading to being is but the particular instance in which universal striving towards being becomes conscious and intelligent and reasonable.⁵⁰

The whole natural order is oriented toward the possibility of ever higher realization, and, as with the whole dynamic order of non-human nature, so, too, with human nature:

Again, a man or woman knows that he or she is in love by making the discovery that all spontaneous and deliberate tendencies and actions regard the beloved. Now as the arm rises spontaneously to protect the head, so all the parts of each thing conspire to the good of the whole, and all things in all their operations proceed to the realization of the order of the universe. But the order of this universe is actual, and the orders of all other universes are possible, because of the completeness of the intelligibility, the power of the reality, and the perfection of the goodness and love of God. It follows that, apart from the surd of sin, the universe is in love with God; and good will is the opposite of the irrationality of sin; accordingly, the man of good will is in love with God.⁵¹

Lonergan recognizes the *de facto* role of grace in relation to the actuation of human nature especially in relation to the moral impotence, into which it becomes educated, socialized and acculturated, as the dialectical reality of human nature is played out in a world that is has been marked by both sin and grace. Inasmuch as we intend to develop a philosophical account of human nature that is not merely a theoretical

⁵⁰ Lonergan, *Insight*, 1992. 470

⁵¹ Lonergan. 720-721

abstraction but also a verifiable reflection on life as it is actually experienced, philosophy has to be sublated by theology:

An existential philosopher doesn't suppose himself to be in a state of pure nature... Similarly, the human sciences don't study the ideal family or the ideal state or the ideal type of education. They study the states, the families, the types of education, the forms of law that exist and function. Now, with regard to man as he actually exists, he is born in the state of original sin; he is born in a world in which he needs God's grace to observe the merely natural law *quoad substantiam* for any notable period of time; he has a need for grace, and grace is given him; God gives everyone grace in some measure, and he either accepts that grace or refuses it. The existential situation is penetrated by theological facts. A merely rational attempt to understand it is inadequate. But traditionally, Catholic philosophy, because it was in a classicist milieu, dealt with man insofar as he is naturally known.... [The possibility of being a methodologically-agnostic Christian philosopher] ... is not impossible, but it only goes so far. And insofar as it faces these further issues, then it is preparing the way for theology; it is raising questions which it cannot answer. You can explain the moral impotence of the human will without any theology, as I do in chapter 18 of *Insight*. But to find an answer for the moral impotence of the human will you need a theology and a religion, first the religion and then the theology.⁵²

⁵² Bernard J. F. Lonergan, *Early Works on Theological Method*, ed. Robert M. Doran et al., vol. 22–24, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2010). 347.

Given the fact of sin in our midst and the real moral impotence it occasions, human beings require God's grace even to meet their own natural ends.

Thus, we may ask how grace is involved in human life according to the aspect of our horizontal finality, insofar as God helps human beings in relation to their proper natural ends. While Lonergan emphasizes the importance of grace for overcoming moral impotence, there is a danger that this view of the efficacy of grace may be too restrictive. Even before their fall from grace, Adam and Eve already needed grace to live out their natural good. It is not our intention to treat the issue of sin in detail here, for it is not directly pertinent to this part of our argument.⁵³ However, both these religious truths in Genesis 2-3 and the evolutionary evidence for a pre-anthropoc creaturely competition, aggression, and selfishness suggest a need for God's grace to heal and elevate the human exercise of freedom.⁵⁴ The human ability to live up to our nature, to pursue goodness and truth and to live the good life in community both with one another and with the rest of creation depends on our being creatures who are receptive to grace from the moment of creation.⁵⁵

In a certain sense, this discussion leads us squarely into vertical finality. As the long quote from Lonergan above suggests, the neglect of vertical finality in pursuit of a putative "pure" or "horizontal" nature is rooted in an older abstract essentialist and

⁵³ For a recent treatment of this question from a multidisciplinary and ecumenical group of scholars, see William T. Cavanaugh and James K. A. Smith, eds., *Evolution and the Fall* (Grand Rapids, Michigan: Eerdmans, 2017).

⁵⁴ In suggesting that these pre-anthropoc conditions may also be included in what we hope to be redeemed in the New Creation, we are not suggesting that they are implicated in the hamartiological understanding of sin that implies agency or guilt. These issues will be addressed more directly in our treatment of grace in non-human animals.

⁵⁵ This emphasis an original state of graced nature prior to "the Fall" is born out in many theological interpretations, which reject that "pure nature" ever existed and argue that the Fall refers to a fall from sanctifying grace.

deductivist theology that was integral to the classicist milieu. Moreover, much of what we sketch here as horizontal finality presupposes its relationship to the fact of human beings as caught up in the great chain of relationships both in cosmic, evolutionary vertical finality of natural and human history and with respect to all of creation's absolute finality to God. However, we would have to insist that the move from a theoretically to an interiorly differentiated philosophy and theology does not imply the dissolution of horizontal finality, without which vertical finality makes no sense.

First, with respect to human nature, the identification of human beings as naturally disposed toward the good and the intelligible is grounded a critical realist metaphysics, which provides the necessary scaffolding for much of the dialogue between theology and other disciplines. As Lonergan argued, "vertical and horizontal finalities are not alternatives, but the vertical emerges all the more strongly as the horizontal is realized the more fully."⁵⁶

Second, with respect to other animal species, horizontal finality proves indispensable for recognizing the particularity and dignity of each creature, keeping us from merely projecting human standards onto other creatures as we seek to understand the role of grace in the non-human world. While all creatures do, in fact, live in a world that is always marked by dizzying networks of interconnections with other creatures, it has been all too easy for theologians to ignore and obfuscate the specificity of each creature. The insights garnered from our attention to this temporarily circumscribed

⁵⁶ Lonergan, "Finality, Love, Marriage," 1988. 46

particularity are always re-contextualized in a broader view of the whole and in a method that, as heuristic, remains always open to the appearance of something other or new.⁵⁷

In any case, let us turn now to the operation of grace as vertical finality pertains to human beings.

4.7 Grace, Relationality, and Finalities in Human Contexts: Vertical Finality

Vertical finality represents Lonergan's most original contribution to the discussion of cosmic teleology, inasmuch as Christian philosophy had previously in history focused more narrowly on what Lonergan terms absolute and horizontal finality. Both as a corrective to this narrow focus and in an effort to continue working out the shift from the realm of theory to that of interiority, Lonergan and his students have expanded especially his earlier account of grace with respect to the implications of the vertical finality of humankind. Thus, in "Finality, Love, Marriage," Lonergan emphasized friendship between husband and wife and vertical finality's ordering of both spouses, their union, and their offspring toward a further education in Christ and a greater participation in the mystical body of Christ. In light of this vertical finality, the ends of human union include the reproduction of offspring, but it also includes the more excellent end of marriage as a school of holiness. Lonergan's account of vertical finality describes the reality of marital

⁵⁷ Lonergan refers to this something more as the "empirical residue." Through an inverse insight, we may recognize that some aspect of a given experience is not relevant to the formation of a given insight. For instance, in recognizing that some creature is a butterfly, the mind abstracts the relevant data for the identification of the species "butterfly" from its location—on the branch, on a flower, on the window—since the data of location is not germane to the identification. Once we have recognized the creature in its particularity, we may then return to the larger situation with a renewed understanding and knowledge about the creature, but we also return with a renewed attention both to the creature and its interactions with its surrounding. Thus, the abstraction is part of a larger hermeneutic process, in which the empirical residue as regards the question of the species of this creature may become the focus of subsequent questions and insights. For Lonergan's own account, see Lonergan, *Insight*, 1992. 50-56, 87-88, 336, 527-543, 686.

union simultaneously as: an organistic union; a marriage contract ordered to the common societal good; and a sacrament conferring grace on the couple, their children, and the larger church and world communities. His account assimilated the traditional views of marriage—considered in light of its horizontal and absolute finality—more fully into a historically conditioned view of humans within a developing world order. Vertical finality thus serves to demonstrate how the various ends of each creature may be understood singly and taken together, suggesting a more coherent and cohesive picture of the intelligible world of nature and grace within what he would later call a “friendly universe.”⁵⁸ As previously noted, Lonergan explicitly affirmed therein a continuity between the ordered emergence of the cosmos, the material possibility for the Incarnation, and the events of Jesus life, death, and resurrection, thus paving the way for the divinization of human beings. While Lonergan stops far short of naming the whole arc of cosmic history as belonging to the economy of grace, he provides a solid basis for apprehending the continuity between God’s activity in the larger sweep of evolutionary history with those events that have long been considered part of salvation history in the Judeo-Christian tradition.

⁵⁸ The phrase “a friendly universe” is often connected with a remark likely misattributed to Albert Einstein: “I think the most important question facing humanity is, ‘Is the universe a friendly place?’” However, we are invoking the concept of a “friendly universe” as found in Lonergan’s *Method in Theology*: “Without faith, without the eye of love, the world is too evil for God to be good, for a good God to exist. But faith recognizes that God grants men their freedom, that he wills them to be persons and not just his automata, that he calls them to the higher authenticity that overcomes evil with good. So faith is linked with human progress, and it has to meet the challenge of human decline. For faith and progress have a common root in man’s cognitional and moral self-transcendence. To promote either is to promote the other indirectly. Faith places human efforts in a friendly universe; it reveals an ultimate significance in human achievement; it strengthens new undertakings with confidence.” See Lonergan, *Method in Theology*, 2017. 113-114. For Lonergan, the notion of the “friendly universe” offers a compact but nevertheless holistic shorthand for the worldview of a multiply-converted person through the eyes of faith. Obviously, given the aims of this project, we would seek to expand the scope of Lonergan’s meaning significantly to include the openness of the whole cosmos to actual transformation in grace.

The process by which lower manifolds in the world give rise to higher orders takes place within a graced universe and, moreover, contains moments that might be identified as the product of graced relations. In Chapter Two, we examined Celia Deane-Drummond's use of Sergei Bulgakov's Sophiology to describe a 'hereditary holiness' that accumulated in Mary's lineage "so that she was 'full of grace' even prior to the Incarnation."⁵⁹ In a similar way, we would argue that grace has consistently prepared a way for God's plan to unfold, even and perhaps especially in instances where it seemed unlikely or even impossible from the lower viewpoint. Through the graced relations that connect all creatures, remote possibilities became actualities and, in some cases, they inaugurate schemes of recurrence in a world trending toward greater complexity and, therein, toward ever greater possibilities. Though these graced connections will become clearer as we enlarge our consideration of God's grace in relation to other non-human creatures, we affirm from the start that the very emergence of human beings and of the upward and indeterminate nature of conscious intentionality proper to human existence are in fact the product of unthinkably long chains of graced emergence.

Where traditional theologies described humans as a "body-soul composite," vertical finality would illuminate a more complex and dynamic image of how the chemical, biological, sensitive, rational, and spiritual realities, through a process of mutual mediation, enabled the emergence and development of human existence. Each human person microcosmically manifests the possibilities of emergence and sublation that, all together, made possible the rise of our species in the first place. While many theological accounts have already focused on the graced transformation of the psychic,

⁵⁹ Celia Deane-Drummond, *Christ and Evolution: Wonder and Wisdom*, Theology and the Sciences (Minneapolis: Fortress Press, 2009). 113, FN 62

intellectual, moral, and spiritual domains of human life that German theologian, Karl Rahner, spoke of as ‘hominization’ as reaching a climax in the Incarnation, we might give a more inclusive account that encompasses the fact that the whole possibility of the transformation of these domains by grace is dependent upon the sublation of the lower manifolds of human existence into the higher.⁶⁰ Perhaps the clearest account of this may be found in the work of Robert M. Doran, a student of Lonergan’s who has long been one of the most prominent interpreters and developers of Lonergan’s thought.

4.7.1 Robert M. Doran: Psychic Conversion and the Dialectics of History

Throughout his career, Doran has drawn on Lonergan’s thought in an effort to move ethics and theology into a more global and interreligious paradigm that can address the expanding scope of effective human decision making, while avoiding the dangers he identifies with Hegelian, Marxist, or technocratic late-capitalist analysis.⁶¹ Lonergan’s

⁶⁰ See Karl Rahner, *Hominisation: The Evolutionary Origin of Man as a Theological Problem*, Quaestiones Disputatae 13 (New York: Herder and Herder, 1965).

⁶¹ Doran distinguishes both Lonergan’s and his own position from Hegel at Robert M. Doran, *Theology and the Dialectics of History* (Toronto: University of Toronto Press, 1989), 263-264: “The personal values that are required to ground and consolidate the crosscultural generation of genuine cultural values arise, we have said, from the explanatory self-appropriation of the crosscultural constituents of personal integrity: from bringing the operations of conscious intentionality as intentional to bear upon the operations and states of conscious intentionality as conscious. The process of the self-appropriation of the cognitional and existential subject is a mediation of immediacy by the meaning that constitutes interiorly differentiated consciousness. By way of a clarification through contrast, we may say that the project of mediation initiated by Lonergan, while world-historical in scope, differs from Hegel’s ambition in that it anticipates, not a mediation of totality, but the totality of the mediation of immediacy. Its goal is always at best asymptotically approached, even when the heuristic structure of its objective has been differentiated. That goal we may specify as a second immediacy, where cognitive and existential praxis proceed from the kind of self-possession that approaches rendering them equal to themselves.” His critique of Marx is more developed and appears throughout the book, though it is especially concentrated in Chapter 12, “Infrastructure and Superstructure.” The center of his critique of Marx builds on Lonergan’s own critique in *Insight*: “[Marx’s] confusing error ... was to lump together both progress and the two principles of decline ..., to grasp that the minor principle of decline would correct itself more rapidly through class war, and then to leap gaily to the sweeping conclusion that class war would accelerate progress” (235, cited in *Theology and the Dialectics of History*, 391). In short, Lonergan argued that, while Marx’s emphasis on material history revealed the selfishness, greed, and oppression that were built into political and economic systems erected on the basis of long-standing group bias rooted in class conflict, it also failed to identify the

notion of vertical finality has been especially important in his work, as he has couched Lonergan's analysis more strongly in the concrete histories of persons, communities, and cultures. In each case, Doran identifies a creative, dialectical tension, the navigation of which depends on an outpouring of God's grace.⁶²

Perhaps Doran's most important contribution has been his identification and subsequent development of the notion of psychic conversion, a concept which, though present, was never made adequately explicit in most of Lonergan's writings.⁶³ Doran's account of psychic conversion provides a significant complement to Lonergan's discussion of moral, intellectual, and religious conversion that makes possible a more complete account of the impact of the different conversions on human beings as

normative order of progress that becomes clearer only through the study of much larger historical narratives, and especially in the narrative of salvation history. Thus, while he was situated to address imbalances in the short term, his long-term solutions were too myopic to prevent the recurrence of those same group biases under new arrangements. As Doran then argues, "...Marxist analysis promotes general bias [in three ways]: (1) it elevates facts into norms or laws and seeks a solution at the level of these facts rather than at a genuinely normative level; (2) it ignores the dialectical counterpart of practicality that is spontaneous intersubjectivity, and thus turns praxis without remainder into instrumentalized technique; and (3) it neglects cultural integrity as the condition of the possibility of an integral social dialectic, and so adopts a viewpoint that would understand social reality exclusively 'from below.' On our view, if there is no reciprocal movement 'from above,' then biased intelligence is statistically almost inevitable" (*Theology and the Dialectics of History*, 410). Doran's critique of technocracy and late capitalism, though also developed much more fully throughout the course of the book, is deeply tied to his critique of Marxism: "'Marxist theory does not display an adequate sensitivity to the intersubjectivity that underpins, penetrates, and survives all social orders, and that provides a basic dialectical counterpart to the practical intelligence that institutes these orders. Moreover, sensitivity to the basic dialectic is what constitutes the difference between praxis and technique, and permits praxis to be conceived according to an artistic paradigm. Both Western technocracy and Marxism are in fact attempting - in vain, because of the inevitable resurgence of suppressed dialectical principles - to promote and implement an exclusively instrumentalized, technical orientation: an orientation that, as exclusive, would lead precisely to the world we know so well'" (*Theology and the Dialectics of History*, 390).

⁶² Regarding the dialectical character of each of these three contexts, Doran draws a distinction between a "dialectic of contraries" and a "dialectic of contradictories." In perhaps his simplest and succinct formulation of the difference, Doran writes, "Contraries are reconcilable in a higher synthesis, while contradictories exclude one another" in Doran. 10. Thus, while the human struggle to live in the tension between our own limitation and transcendence may be understood according to the heuristic of a dialectic of contraries, the struggle between good and evil or truth and lies represents a dialectic of contradictories.

⁶³ Doran first identified the concept while writing his dissertation, which would later be published as Robert M. Doran, *Subject and Psyche*, 2nd ed., Marquette Studies in Theology 3 (Milwaukee, Wis.: Marquette University Press, 1994). However, perhaps his clearest and most sustained treatment can be found in his magnum opus, Doran, *Theology and the Dialectics of History*.

embodied knowers who are subject to the flow of history. Lonergan's cognitional analysis in *Insight* describes intellectual conversion in terms of conscious intentionality to both the human orientation toward and commitment to knowing the truth, a process which becomes thematic in each person's self-appropriation of the acts of experiencing, understanding, and judgment as components of the self-assembling, self-constituting, and formally dynamic structure of human consciousness. As Lonergan moved from a cognitional analysis to the levels of deliberation and evaluation in his intentionality analysis in *Method in Theology*, he further clarified moral and religious conversion as well. Moral conversion refers to a person's commitment to make their choices on the basis of carefully deliberated upon and discerned values rather than on the basis of satisfactions to be attained by their own organisms and psyches. Religious conversion refers precisely to a person's falling unreservedly in love with God in such a way that their whole world is transformed by that love in top-down fashion.⁶⁴

Doran noted a number of places both in Lonergan's discussion of bias in *Insight* and in the patterns of existential consciousness and conversion in *Method* that indicate the way human beings need a fourth type of conversion, which (with Lonergan's enthusiastic encouragement and approval) he identified as psychic conversion. In his cognitional theory, Lonergan transposed the metaphysical accounts of Aquinas's expansion of Aristotle's theorem on knowing by an achieving an identity of subject and object as opposed to a confrontation of the subject *in here* with the object *out there*. This

⁶⁴ Here, "top-down" refers to the change brought about in human beings specifically as knowers and lovers, which explanatory account takes precedence over the other conjugate explanations of these changes in terms of brain states, neurochemical processes, etc. This is treated in more detail below in relation to Doran's account of the relationship between vertical finality and psychic conversion. It is also treated in greater detail later in this work in our discussion of emergence in the sciences and philosophy.

cognitional theory elucidates the process by which human beings receive insights into a given thing by stressing both (1) our native self-transcendence in wonder and (2) the expression of this in the spontaneous rise of questions for understanding and for truth that activate our capacity to form intelligible mental expressions of a virtually unlimited array of intelligibilities and matters of verifiable fact. Our understanding depends on the occurrence of insights into mental images or “phantasms.”⁶⁵ In a very real sense, then, the possibility of correct understandings, judgments, and decisions depend on the strength and flexibility of our ability to engage the world as sensible and imaginable. In a similar way, human moral decisions depend on our ability and skill in relation to identifying what values are at stake in any given concrete situation, a process which depends upon our discernment of and reflection on our feelings. However, these feelings are influenced by both the communal and individual histories of existential subjects, a great deal of which data is not explicitly accessible by them in their conscious performances. In both cases, then, human intellectual and moral conversion are concretely conditioned by the ability of the underlying psychic manifold to provide the necessary images, symbols, and feelings they depend on in their operating for better or worse.⁶⁶

It is here that Doran identifies both the role of and the need for psychic conversion, namely as “a transformation of the subject.... a reorientation of the specifically psychic dimensions of the censorship exercised over images and affects by

⁶⁵ For Lonergan’s treatment of “insight into phantasm” in relation to Aquinas’s cognitional theory and epistemology, see Bernard J. F. Lonergan, *Verbum: Word and Idea in Aquinas* (Notre Dame [Ind.: University of Notre Dame Press, 1967), especially 38-46.

⁶⁶ Doran links his initial insight into the need for what he came to call psychic conversion to the following passage from Lonergan: “Besides the immediate world of the infant and the adult’s world mediated by meaning, there is the mediation of immediacy by meaning when one objectifies cognitional process in transcendental method and when one discovers, identifies, accepts one’s submerged feelings in psychotherapy.” See Lonergan, *Method in Theology*, 2017. 75, cited in Doran, *Subject and Psyche*, 11.

our habitual orientations, a conversion of that dimension of the censorship from exercising a repressive function to acting constructively in one's shaping of one's own development."⁶⁷ Given the central role of these images and feelings for every human cognitional operation without exception, Doran has labored to explain the role of the psyche in our ongoing conversion as whole persons.

Doran turned to the field of depth psychology—especially as developed by Carl Jung as commented upon by Paul Ricoeur—in order to better understand how conscious human living is dependent upon and informed by the subconscious elements of our psyches.⁶⁸ In his own work, Doran defines the psyche as:

the sensitive flow of consciousness itself, the polyphony or, as the case may be, the cacophony, of our sensations, memories, images, emotions, conations, associations, bodily movements, and spontaneous intersubjective responses, and of the symbolic integrations of these that occur in, indeed are, our dreams. These data constitute the sensitively experienced movement of life, the pulsing flow of life, the psychic representation of an underlying manifold of neural functions that reach a higher organization in sensitive consciousness. We will call this set of data the psyche. By

⁶⁷ Doran, *Theology and the Dialectics of History*. 9

⁶⁸ Doran invokes Jung's thought in light of the questions raised by Lonergan's treatment of dramatic bias. Jung provides a framework for attending to the positive and negative roles played by the subconscious psyche, while Lonergan provides a larger framework of meaning, value, and ultimate value, which enable Doran to free Jung from an intramundane truncation: "Furthermore, though, a phenomenology of the psyche would show that Jung needlessly short circuits the teleology of the psyche, by reason of his epistemological confusion, and so ultimately traps psychic unfolding in an intrapsychic erotic cul de sac, in an eternal return, in a perpetually recurring psychic stillbirth. The absence of a clear notion of cognitional self-transcendence prevents Jung from vigorously accenting the dynamism to self-transcendence immanent in the psyche itself. There is a kind of love that is beyond the wholeness of the mandala. The psychology of Jung breaks down when the process of individuation invites one to surrender to such love. But so, perhaps, does all psychology unless psychic process is sublated into the movement of existential subjectivity to the authenticity of self-transcendence. It is Lonergan's invitation to this movement, then, that provides our total context." Doran, *Subject and Psyche*. 19.

the term psyche I mean precisely and only the complex flow of empirical consciousness, whether sublated by successively higher levels or not.⁶⁹

This account, then, holds the potential for transformation that emerges in the human psyche as “endowed with what Lonergan calls a vertical finality toward participation in the life of the spirit... [given that the] psyche's proportionate end is inner and outer sensation as a higher integration of underlying neural manifolds. But its vertical finality is toward participation in acts and terms of meaning and love.”⁷⁰ The upward force of the lower manifolds and the downward force exerted by the conscious, intelligent, and intentional reflection carried out in the higher manifolds require the mediation of the psyche. Even if its potential is unrealized, the psyche both stands as an emergent reality over and above the neural functions that undergird it, and it opens up, at least potentially, to a higher realization as taken up into human conscious and intentional life.

Human consciousness is integrally self-conscious, but precisely as implicitly and unthematically at work; but we may become explicitly aware of ourselves as caught up in the dynamic flow of history. We may recognize our capacity for “dramatic artistry,” a real if limited capacity for self-constitution through our choices, and, we thereby increasingly realize “the deepest desire of the human person, the desire whose fulfilment would bring one the greatest contentment with having had the opportunity to live at all, no matter what the cost in personal suffering, [namely] the desire to succeed in the drama of existence by finding and holding to the direction that can be discovered in the movement of life.”⁷¹ This existential project is a matter of the conscious and intentional

⁶⁹ Doran, *Theology and the Dialectics of History*. 46

⁷⁰ Doran. 47

⁷¹ Doran. 358

appropriation of our whole selves as body, psyche, and spirit, which are all implicated in this dialectical tension.

Human life is characterized by the lived and felt tension arising from our naturally-boundless desire to know and love and our spatio-temporally limited being as embodied. So constituted, our pursuit of the ethically “good life” must seek a balance between these poles:

The mystery of good and evil is experienced in the sensitive psyche precisely in its resolution of the opposites of spirit and matter. What is good is the achievement of a creative tension of spirit and matter; what is evil is the displacement of this tension in either direction. Good and evil thus qualify the process of negotiating the tension of matter and spirit.⁷²

Doran’s account of the psychic manifold makes clear that the effects of God’s grace in humans must transform fleshly reality if they are to truly represent a personal change.

The need for God’s grace to transform our psyches includes both the remedial and the elevating functions of grace. Given the censorship of the psychic censor and the pervasive reality of dramatic, individual, group, and commonsense bias, we stand in need of God’s grace to heal the scars on our minds and on our bodies, which are nothing less than scars on ourselves. At the same time, there is no divinization of the person without the divinization of the psyche and all the lower manifolds that come to expression therein:

[T]he imago Dei that human subjects are is to be located in human cognitional processes and in the procession of judgments of value and acts of love..., however,

⁷² Doran. 334

the body participates in the transformation of the person into an imago Dei, and this participation is sensitively experienced in the psyche and imaginally reflected in the psyche's symbols when the psyche has become, by God's grace, a sensorium of transcendence.⁷³

Our divinization is not the result of our overcoming our bodies, or transcending them in the sense of leaving them behind. Rather, it depends on our efforts to attend more fully to the reality of our flesh as its own vertical finality erupts into the psyche.

One of the most striking aspects of Doran's account of psychic conversion is the extent to which it directs us through interiority to the much larger world of meaning to which we are a part. While the work of self-appropriation and analysis necessarily involves solitary reflection, it is far from self-obsessed. Doran emphasizes how human life and development is inherently communal, and he draws from and develops Lonergan's notion of the normative scale of values in order to explain how various kinds of relationships function in the maintenance of human communities. This scale consists, in ascending order, of vital, social, cultural, personal, and religious values. In short, Lonergan argued that the needs and wants of the lower levels of the scale must be met in order to ensure the proper functioning of the higher; without security at the level of basic human necessities such as food, water, and shelter, humans are not able to develop higher social structures or cultures. However, breakdowns that occur within any given level must be addressed through interventions at the higher governing levels; if the social

⁷³ Doran. 345. The notion of the psyche as the "sensorium of transcendence" may also be found in the work of Eric Voegelin. See especially Eric Voegelin, "The New Science of Politics: An Introduction," in *Modernity Without Restraint: The Political Religions, The New Science of Politics, and Science, Politics, and Gnosticism*, ed. Manfred Henningsen, vol. 5, *Collected Works of Eric Voegelin* (Columbia, Missouri: University of Missouri Press, 2000), 75–241, 140–143.

structures that are enacted in order to provide for the administration of the vital goods of a society turn out to be ineffective and unjust, there is needed a cultural change in order to facilitate the transformation of those social systems in a comprehensive and lasting fashion.⁷⁴ In similar fashion, just cultures cannot be realized without personal conversion, which depends in turn upon the effects of grace, the mediation of which Doran describes as occurring through religious persons, communities, etc.

As Doran explains, both psychic conversion and the normative scale are critical to understanding the structure of history, which "...cannot be understood correctly if one prescind from the realities affirmed in the Christian doctrines of grace and sin, in the theological doctrines of the natural and the supernatural, and in the religious doctrines of radical evil and gratuitous redemption."⁷⁵ The values that human beings are able to discern are not merely projections onto reality. In fact, human history is largely the record of progress, decline, and redemption in relation to the apprehension of and action for or against these values, the effects of which are far reaching in either case. This allows for Lonergan and Doran's accounts of history to match and even exceed the breadth and

⁷⁴ This scale of values is treated in great detail especially in Chapter Four of *Theology and the Dialectics of History*. As Doran explains, "...the relations among the levels of value are isomorphic with those among the levels of consciousness, to which the levels of value respectively correspond. Thus from below, more basic levels are required for the emergence of higher levels, but they also set problems that only proportionate developments at the higher levels can solve; and from above, these proportionate developments are the condition of possibility of the appropriate schemes of recurrent events at the more basic levels." 95.

⁷⁵ Doran, *Theology and the Dialectics of History*. 6-7. In fact, Doran strengthens his argument as follows: "[Even] the philosophic component of the explicit foundations of the various disciplines that would make single contributions to an understanding of history is not self-grounding. If philosophy is, as it was for Plato, the articulate utterance of the eros for the world-transcendent measure of the good, then moments of genuine philosophy, so rare in history and even in the lives of those gifted with them, may themselves be a function of the grace of a revelation. Certainly such an eros, while natural to the human spirit, cannot be sustained or incrementally realized without what Christian theology has called grace; and so theology, by objectifying as best it can the ever elusive mystery of divine grace, functions foundationally in the understanding of the human."

explanatory power of either Hegel or Marx, while, at the same time, avoiding the problematic tendencies of those analyses.⁷⁶

What the language of progress, decline, and redemption may obscure in some cases, however, is that there also exists the surprising infusion of elevating grace that is not limited to a healing or remedial function but which may impact historical trajectories none the less. Doran's presentation underscores this elevating function by specifying how these higher and lower manifolds work in concert as both creating and redeeming in ways beyond grace's curative function:

It is not to be thought, however, that this vector from above downward goes into operation only when the vector from below has failed. Development 'from above downward' conditions the emergence of our creative capacities for insight, judgment, and decision... [I]n the life of an integrated adult, each vector complements the other. The source of the most important developments from above downward is grace, and grace is universally accessible and permanent....

Yet just as the creative process, when unaccompanied by healing, is distorted and corrupted by bias, so too the healing process, when unaccompanied by creating, is a soul without a body.⁷⁷

All of human history, as Doran sees it, is a history of the unfolding of grace in humans through attentiveness, intelligence, reasonableness, responsibility, and love. While Doran

⁷⁶ "Finally, then, where our analysis will differ from the Marxist position lies, first, in the more predominant role that we have assigned to the dialectical functioning of vital intersubjective spontaneity in the infrastructure; second, in the consequent subordination of all genuine practicality to the dramatic pursuit of life as a work of art; third, in the recognition of cultural integrity's responsibility for the infrastructural dialectic; and fourth, in the inclusion of the political as a dimension of the infrastructure." Doran. 105. Lonergan and Doran's account of historical process is perhaps even more strongly differentiated from Marx's account in light of the redemptive vector in history, the divinely originated solution to the problem of evil, which is elucidated as the just and mysterious Law of the Cross.

⁷⁷ Doran. 32

clearly recognizes the unique possibilities of the higher manifolds, his emphasis on the psyche as “the locus of the embodiment of inquiry, insight, reflection, judgment, deliberation, and decision” stresses also the continuity of the order of grace with the fleshly reality of which human beings are fully a part.⁷⁸

4.7.2 Robert M. Doran: The Scale of Values

While much has been written about grace in human relationships and communities, the extent to which human vertical finality is tied up with the other creatures has been explored considerably less. However, Doran’s thought contains important aperçus for how we might develop these links more fully. The realization of our own vertical finality in self-transcendence depends upon linking ourselves more thoroughly to the vertical finality of the lower manifolds both in ourselves and in creation as they reach out to a higher realization and liberation in human persons, for this is precisely what is involved in integrating the human unconscious as it sporadically makes itself known:

The unconscious itself, then, as all energy that is not present to itself, is known by the physical, chemical, and biological sciences, and not by psychology. What psychology knows are the higher integrations of psychic energy, which is by definition conscious and elementally meaningful. Energy reaches a higher integration under the dominance of sensitive, intelligent, rational, moral, and religious consciousness.... [T]he basic and elemental form of this higher integration occurs, not in the waking consciousness of an animal or a human being, but in their dreams. In the dream, the universe known by physics, chemistry, and

⁷⁸ Doran. 61-62

biology reaches toward an ulterior finality. In the dreams of a human being, the universe of proportionate being initiates something of an experiment with human intelligence, reasonableness, and responsibility. It enters into subjectivity, becomes subjective. The psyche, Jung said, is at bottom world, but it is world-for-itself, energy rudimentarily or elementally present to itself. It is the universe become the conscious partner of its own development. It is energy reaching toward a participation in the self-transcendent activity of the intelligent, rational, moral, agapic subject. The universe can become love in human consciousness, and its elemental entrance into this capacity, its expression of this finality, occurs in the dream. But the universe is at the mercy here of the human subject, for everything depends on what one does with the dream.... I can be completely oblivious of my dreams. I can reject them as insignificant. I can interpret them naively or superstitiously or projectively. Or I can live the dream forward intelligently, truthfully, deliberately, lovingly. I can sublate its elemental meaning into formal, full, and constitutive meaning. Then not just the subject but also the universe is promoted to a higher integration, to a fuller being. But if the dream is forgotten or rejected, ridiculed or denied, an evolutionary blind alley or false start or even complete breakdown and collapse has been suffered. The universe depends on the intelligent, reasonable, responsible subject to promote its upwardly but indeterminately directed dynamism, its finality, to elevate its merely elemental meaning to formal, full, constitutive, and effective meaning. Now that it has issued in human consciousness, its future depends on human consciousness: the world depends on the subject for its higher integration, for the determination of its

direction, the definition of its finality, and the execution of its desire. The science of psychology, then, deals not with the unconscious in itself, but with the higher integration of energy become psychic and therefore conscious.⁷⁹

In this long passage near the end of *Theology and the Dialectics of History*, Doran suggests that our responsibility to appropriate our psyche is about far more than merely our responsibility for ourselves or to our fellow humans. Our very conscious existence represents the upward dynamism of the whole cosmos as it moves toward greater complexity and toward ever-higher perfections. As free, conscious, intelligent, and moral beings, our existence is an invitation to cooperate with the liberation of the lower manifolds that began in the first evolutionary emergences and which brought us into (and maintains us in) existence. Viewed in this light, human beings stand in need of grace in order to live more fully into our role of elevating the lower, more essential manifolds of creation into a more perfect form of praise made possible by a universe become conscious and intentional. In the next chapter, we will consider the question of whether and how all of God's creation may be said to offer praise or prayer, each species of being in their own right. Regardless, though, we may affirm a special role for human beings as they are called to take up and amplify the voices of creation in our own prayer and liturgy.

4.7.3 Lucas Briola and “Doran’s Priestly Anthropology”

In a recent essay, Lucas Briola has suggested that Doran’s account of the dramatic artistry of human life is especially capable of grounding such a view of human beings.

⁷⁹ Doran. 666-667

Responding in part to Pope Francis's statement that "there can be no ecology without an adequate anthropology" (*LS* 118), Briola brings Doran's work into conversation with John Zizioulas, who has proposed to replace the "stewardship model" for human interaction with nonhuman creation with a more robust "priestly anthropology," which better highlights the ontological, religious, and not just the critical ethical dimensions of that relationship.⁸⁰ Briola argues that Zizioulas's suggestion is key to answering the strongly doxological call issued in *Laudato Si'*: "Rather than a problem to be solved, the world is a joyful mystery to be contemplated with gladness and praise" (*LS* 12). Without attending to the ways in which human beings are already constituted by their relationship to the rest of the created world, we fail to answer "the call to mediate creation's praise [which] affords [us] an opportunity to conform ourselves to Christ's own cosmic priesthood."⁸¹ Briola suggests that Zizioulas and *Laudato Si'* provide an evocative aesthetic counterpart to Doran's own account of the balancing act of human existence: "Conceiving humans as joining with and alongside all creation's praise of God maintains humans' belonging with creation (limitation). At the same time, conceiving humans as mediating and offering forth this praise to God maintains humans' unique role within the cosmos through their pursuit of meaning (transcendence)." Together, then, Zizioulas and Doran help to bring out the "mediatory value of a priestly anthropology" that avoids both the anthropocentrism and the biocentrism that Francis warns against in *Laudato Si'* (115-121, *passim*). Moreover, Briola's account of this priestly anthropology evinces the human

⁸⁰ John D. Zizioulas, "Proprietors or Priests of Creation," in *The Eucharistic Communion and the World*, 1 edition (London ; New York: T & T Clark International, 2011), 133-141. Cited in Briola, "Dramatic Artistry in Our Common Home: Robert Doran and the Doxological Anthropology of *Laudato Si'*."

⁸¹ Briola, "Dramatic Artistry in Our Common Home: Robert Doran and the Doxological Anthropology of *Laudato Si'*."

need for a grace both (1) to reach the perfection of the kind of creatures that we have evolved to be (*gratia gratum faciens*) and (2) for the sake of mediating and liberating the praise of the rest of creation in order to bring it to a greater perfection (*gratia gratis data*).

This priestly anthropology underscores the character of grace specifically as communal and relational with respect to the whole creation within an all-encompassing community. As we have already seen, Lonergan described grace as the created ground of our relationship with the Holy Spirit such that enables our own internal conversation to be joined to the uncreated reality and archetype of all created relationality that constitutes the perichoretic life of the Trinity. As noted above, this emphasis on the interpersonal and relational character of both love and grace as God's gift of love was present throughout the entirety of Lonergan's career, which attained its highpoint through his "hermeneutic turn" and later emphasis on the priority of love.

Pushing further still, we affirm that, through grace, human beings may come to recognize, nurture, and cherish our manifold relationships with the rest of creation. Borrowing and adapting Lonergan's terminology, we might recognize that, through the grace-filled processes of vertical finality, humanity is challenged to rethink its relationship to the whole cosmos and to work toward the realization of a "metaphysic of creaturely solidarity."⁸² While the networks of relationships entail the awareness that we

⁸² This phrase was suggested Joseph C. Mudd as a concise restatement of our thesis as described in a paper given at Marquette University's "Lonergan on the Edge 2019" conference titled "From Props to Players: Recognizing the Creaturely Cast in the Theodramatics of History." He suggested some parallels between our proposal there and Lonergan's sketch for a "metaphysics of human solidarity" in an early, previously unpublished manuscript, which was posthumously printed in Bernard Lonergan, "Panton Anakephalaiosis," *Method: Journal of Lonergan Studies* 9, no. 2 (1991): 139–72 and is now republished as Bernard J.F. Lonergan, "Panton Anakephalaiosis (2)," in *Archival Material: Early Papers on History*, ed. Robert M. Doran and John D. Dadosky, vol. 25, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2019), 65–75; Bernard J.F. Lonergan, "Sketch for a

are always co-experiencing, co-understanding, co-judging, co-acting, and co-loving, with the aid of grace we are able to expressly advert to these co-operations and to cherish and nourish their existence and proliferation on account of a new sense of unity with the whole order of creation and redemption. Such a development would constitute what the great Franciscan theologian Saint Bonaventure described as “contuition,” which Ilia Delio summarizes as the “consciousness of God’s presence together with the object of creation itself whether it be a tree, a flower or a tiny earthworm.”⁸³ These relationships constitute the conditions for our own vertical emergence, as well as the concrete plurality of the created world, which is, of course, related to all possible future emergences. By cultivating a self-understanding as a being-in-communion with a whole graced-network of other creatures, the vertical finality of both human beings and of the whole world comes into sharper focus. As we turn to our next chapter, we will explore these further effects of grace in the non-human world.

Metaphysics of Human Solidarity,” in *Archival Material: Early Papers on History*, ed. Robert M. Doran and John D. Dadosky, vol. 25, CWBL (Toronto: Published for Lonergan Research Institute of Regis College, Toronto, by University of Toronto Press, 2019), 76–79. Written in 1935 when Lonergan was still a graduate student, this relatively short piece reflects a surprisingly closed, Neo-Scholastic, and even triumphalist viewpoint that is absent and even rejected in many of Lonergan’s later works and which appears to be largely a reflection of the milieu in which he wrote it. This viewpoint was abandoned because it was completely rejected once Lonergan had retrieved what in *Insight* he then considered to be the authentic “mind of Aquinas,” and hence the key to facing the questions of a later age. This entailed also rejecting is the explicitly conceptualist account of solidarity that relied on a classicist (and hence ‘authoritarian’ account of “the assent of all to the Truth revealed in Christ.”

⁸³ Delio, *Simply Bonaventure*. 63. She also points to the development of this idea in Leonard J. Bowman, “The Cosmic Exemplarism of Bonaventure,” *The Journal of Religion* 55, no. 2 (1975): 181–98, <https://doi.org/10.1086/486424>. In fact, Bonaventure’s contuition shares much in common the doxological character of human praise as described by Zizioulas. Bonaventure’s metaphysics is perhaps best known for his emphasis on creation as the universal emanation from and return to God, which is critically facilitated by human beings through their contuition. Contuition is a form of prayerful, meditative thought that is not primarily concerned with action—though it may return to practical thinking in order to achieve certain concrete goods. In another article, Leonard J. Bowman, “Bonaventure’s ‘Contuition’ and Heidegger’s ‘Thinking’: Some Parallels,” *Franciscan Studies* 37 (1977): 18–31, Bowman compares contuition to Heidegger’s “thinking,” *das Denken*, highlighting that both concepts are set off against the world of practical, scientific action and that both are required if the practical and scientific form of thinking is to be well-grounded and directed.

5. CHAPTER FIVE: GRACE BEYOND THE HUMAN CONTEXT

As we turn, now, from the more familiar contours of a theology of grace in relation to human lives and contexts, first to the larger animal kingdom and then to still broader contexts, we would note at the outset a shift in our discourse. This shift owes in large part to the relative novelty of what we are proposing in identifying concrete instances of God's grace in relation to non-human creation. While we will continue to draw on scriptural, liturgical, systematic theological, and philosophical resources and from the history of Christian witness, experience, and reason, we will also have to draw from some less traditional resources. It is beyond the limits of this or any dissertation to perform the concrete investigations needed to identify grace in all creation or to adequately develop the full theological conjugate explanation therein. Rather than remain overly general and abstract or else say nothing at all about these broader contexts, we have tried to coordinate our account of grace unfolding according to absolute, horizontal, and vertical finality in the broader creation with some possibly-relevant reflections from various disciplines. Therein, we hope to provide a broad and suggestive context for our readers to begin thinking about how this theology of grace may be worked out in various ways. Then, in the final two chapters, we will more deeply explore three particular arenas of God's activity within contemporary conversations over evolutionary theory that demonstrate how, in an integral theology of grace, all the explanatory conjugates may be brought more fully into mutually enriching relation.

5.1 Grace in (Non-Human) Animals: A Brief Note on Method

Now, we begin by considering the patterns of graced relations with respect to those creatures who belong to the animal kingdom, broadly conceived—a category which includes human beings and, therefore, also suggests new ways of thinking about grace in our own lives. The inclusion of humans in this category alongside chimpanzees, dogs, pigs, octopuses, dolphins, and whales, but also alongside cockroaches, slugs, mosquitos, fruit flies, and protozoans and metazoans suggests just how wide-ranging the category we are dealing with is. Because grace represents a concrete offer of deeper relationship both with God and our fellow creatures, the sheer diversity of animal kinds and capabilities resists a one-size-fits-all approach. Nevertheless, we will suggest broad patterns or heuristics of grace throughout the animal kingdom, pointing to a few concrete manifestations in places, since a more exhaustive treatment is impractical here.

Similarly, we will not treat those creatures demonstrating higher intelligence and capabilities separately from the rest of the animal kingdom, even though their capacities far outstrip the simpler organisms with which they are here grouped. It is true that some of the most compelling evidence for thinking about humans and other animals as belonging to a common network of grace may be found in these kinds of encounters: Many of us can readily recall instances of our pets exhibiting what appears to be concern, gratitude, shame, curiosity, etc., encounters which have also engendered many different works on animal consciousness in contemporary philosophy.¹ Many recent investigations

¹ See, for instance Jacques Derrida, *The Animal That Therefore I Am*, Perspectives in Continental Philosophy (New York: Fordham University Press, 2008); Donna Jeanne Haraway, “The Companion Species Manifesto,” in Manifestly Haraway, *Posthumanities* 37 (Univ Of Minnesota Press, 2016); Alasdair

into animal life have taken this approach as well. For instance, Celia Deane-Drummond's *Wisdom of the Liminal*, treated at length in Chapter Two, significantly complexifies the sometimes overstated distinctions drawn between our species and especially a number of mammals of higher intelligence in relation to reason, freedom, language, community, justice making, and the building and maintaining of caring relationships.² There has also been a recent surge in the appreciation for the intelligence and complexity of the minds and lives of octopuses and other cephalopods, suggesting that even those animals whose branch of the evolutionary tree forked from our own long ago may nevertheless exhibit some version of those traits that have often been considered distinctively human.³

Similarly, we might also include a discussion of grace in relation to the statistical probability of other intelligent life existing at other places and times in cosmic history.⁴

C. MacIntyre, *Dependent Rational Animals: Why Human Beings Need the Virtues*, Paul Carus Lectures 20 (Chicago, Ill., Chicago: Open Court, 1999).

² Celia Deane-Drummond, *The Wisdom of the Liminal: Evolution and Other Animals in Human Becoming* (William B Eerdmans Publishing Company, 2014).

³ See for instance Katherine Harmon Courage, *Octopus!: The Most Mysterious Creature in the Sea*, Reprint edition (New York, NY: Current, 2014); Peter Godfrey-Smith, *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness*, First edition.. (New York: Farrar, Straus and Giroux, 2016); Jennifer A. Mather, Roland C. Anderson, and James B. Wood, *Octopus: The Ocean's Intelligent Invertebrate*, First Edition edition (Portland, Or: Timber Press, 2010); Sy Montgomery, *The Soul of an Octopus: A Surprising Exploration into the Wonder of Consciousness*, First Atria Paperback edition. (New York: Atria Paperback, 2016).

⁴ See Thomas F. O'Meara, *Vast Universe: Extraterrestrials and Christian Revelation* (Collegeville, Minn.: Liturgical Press, 2012), especially 6-10. As O'Meara suggests, "If only one planet out of every 150,000 contained life, there would be a million worlds with life in the Milky Way. Would not some of them hold intelligent life?" While there has been no recorded evidence of humans encountering such life, O'Meara refers the reader to the "Drake Equation," which was first offered by Frank D. Drake in 1961 at the first scientific meeting on the search for extraterrestrial life (SETI), and which expresses the statistical likelihood of humans communicating with intelligent life on other planets. "The Drake Equation is $N = R \cdot f_p \cdot n_e \cdot f_i \cdot f_c \cdot L$. The number of civilizations that could communicate with each other (N) would be the product of seven estimates. R, the rate at which stars form in one galaxy (the Milky Way, in our case); f_p , the fraction of stars that have planets around them; n_e , the number of planets per star that are capable of sustaining life; f_i , the fraction of suitable planets whose life forms actually evolve; f_c , the fraction of those where life evolves into intelligent life; f_c , the fraction of those who develop the technology to communicate out into other galaxies; and L, the fraction of planetary systems whose history overlaps with ours. When one assumes the smallest percentage at each stage, the Milky Way alone is so populated with stars that the likelihood of intelligent life on other planets with the ability to communicate across the galaxy is considerable.... Commentators on this topic project that if, on average, a civilization endures for between one thousand and one million years, the number of communicating civilizations in our galaxy is between

Each of these examples suggests an instance that might indeed raise the question of how other, non-human species might be caught up in the transformative effects of grace.

While these are questions worth examining, however, we will not take them up directly here for several reasons. Beyond the challenge of addressing the sheer multiplicity of different creatures and their capabilities, the question of how to understand various species' intellectual and emotional capacities in relation to our own is far from settled. Thus, while we can speak meaningfully about our own experience of having our own "will of the end" set toward God through grace; or of our experiencing and pondering the question of our own being, the being of others, or the idea of being; it would go far beyond all available evidence to extend these capabilities to other species. Moreover, this approach might also set up the expectation that the effects of grace in humans ought to be correlated to those of other species, thereby projecting human moral and ethical expectations onto the rest of the world. Perhaps the biggest problem with such an approach, though—beyond the dangers of inaccurate or incautious anthropomorphizing and projection—is that, rather than reimagining the world as wholly saturated with grace in ways beyond the current paradigm, we may end up settling for merely shifting the lines of exclusivity with respect to God's creative and redemptive work. For these reasons, then, we propose to treat the animal kingdom as a whole,

one thousand and one million. Perhaps advanced beings would inhabit one in every four hundred thousand star systems among billions. The Drake Equation does not give a proof for technological civilizations in the galaxy, but it encourages and directs research by future generations concerning the way the universe probably actually is. Drake's equation has received considerable acceptance in the scientific community and has been of service for almost fifty years." While critics have argued that the relevance of Drake's Equation as a model for prediction hinges on a series of data that we simply don't have access to at numerous points, the equation nevertheless proves useful for suggesting just how statistically unlikely—though not, of course, impossible—it would be to have a universe of this size and complexity in which Earth alone is intelligently inhabited.

pursuant to the three kinds of absolute, horizontal, and vertical finality laid out earlier in this chapter.

5.1.1 Grace in (non-human) Animals: Absolute Finality

What, then, can we say about the absolute finality of the creatures that have belonged (and will belong) to the animal kingdom throughout evolutionary history? We may first reaffirm that the absolute finality of animals to God admits of both an ontological and an eschatological dimension of creaturehood. According to the ontological dimension, all creatures have an absolute finality to God insofar as their existence and their goodness are both participations in the absolute, transcendent goodness of the one God. The significance of this ontological affirmation with respect to animals may be illuminated through a consideration of the possibilities of creaturely praise, which has received increasing attention in recent years.

This language of animal praise can be found both in the Christian tradition of prayer and in the Judeo-Christian scriptures. In the Roman Missal, we encounter prefaces that join our Eucharistic prayers in the liturgy to those of the rest of creation: “[A]ll creatures of heaven and earth sing a new song in adoration, and we, with all the host of angels, cry out, and without end we acclaim: holy, holy, holy lord God of hosts...”⁵ A similar affirmation is made in the Common Preface III, which proclaims that “it is right that all your creatures serve you, all the redeemed praise you, and all your Saints with one heart bless you.” Again, in the Entrance Antiphon for the Feast of Saint Mark the

⁵ See, for example, the Preface for the Fourth Sunday of Lent, the Preface II of Holy Martyrs, and the Preface for the Solemnity of the Most Holy Body and Blood of Christ. Many thanks to Timothy Brunk, who shared many of these passages in the course of our correspondence.

Evangelist, we are charged to “proclaim the gospel to every creature,” and in the Collect for the *Ritual Mass for the Evangelization of all Peoples*, we beseech God to “stir up... the hearts of your faithful and grant that they may feel a more urgent call to work for the salvation of every creature...” The deacon proclaims both praise and glory in the Easter *Exsultet*: “Rejoice, heavenly powers! Sing, choirs of angels! Exult, all creation around God's throne! Jesus Christ, our King is risen! Sound the trumpet of salvation! Rejoice, O earth, in shining splendor, radiant in the brightness of your King! Christ has conquered! Glory fills you! Darkness vanishes forever!” In recent years, these and other liturgical texts have been a significant source for ecological and ecumenical reflections, as Christians from different traditions have affirmed the significance of creaturely praise beyond humans.⁶

Though the precise meaning of creaturely praise, service, adoration, salvation, and glory are not developed in detail here, the language is drawn from a robust tradition of such statements found throughout the Hebrew Bible, as Elizabeth Johnson describes in a

⁶ See, for instance, this following excerpt from a recent dialogue between Catholics and United Methodists: “We gather to praise God. At God's gracious invitation and plan, we live on this earth as his creatures, made in the divine image and likeness. Humans, however, are not the only inhabitants of the earth, for we share this earth with countless animals, plants, trees, rivers, rocks, mountains and oceans. In and through the liturgy we praise God and give thanks for all the earth's creatures, its inhabitants and all that ever has or ever will dwell on it. The very fact that all these things exist means that by their very nature they mirror their creator. All creatures have their own unique voice, and as a uni-verse, creation joins in one chorus of praise. By their very being they give praise to God the maker of heaven and earth. While all created things by their nature offer a continual symphony of praise to God, it is the privilege and responsibility of humans to give shape to that praise by word, song and gesture.... We gather mindful of both our unity with the natural world and our distinctive vocation and responsibility within it. It may seem presumptuous to ascribe to one creature—on one planet circling a medium-sized star in a universe of billions of galaxies—the role of being the representative of all creation. We are mindful of the immensity of the universe and of its evolution over an awe-inspiring span of time, and we are also keenly aware of humanity's history of abusing nature. Therefore, it is important today to emphasize humanity's unity with the rest of the created universe.” Bishop William S. Skylstad and Bishop Timothy W. Whitaker, “Heaven and Earth Are Full of Your Glory: A United Methodist and Roman Catholic Statement on The Eucharist and Ecology,” 2012, <https://www.usccb.org/beliefs-and-teachings/ecumenical-and-interreligious/ecumenical/methodist/upload/Heaven-and-Earth-are-Full-of-Your-Glory-Methodist-Catholic-Dialogue-Agreed-Statement-Round-Seven.pdf>. § 17-18

recent essay. The prophet Isaiah proclaims that “The wild animals will honor [God], the jackals and the ostriches,” (Isa 43:20) and he instructs, “Sing for joy, O heavens, and exult, O earth; break forth, O mountains, into singing,” (Isa 49:13). Daniel enjoins, “Bless the Lord, you whales and all that swim in the waters ... Bless the Lord, all birds of the air ... Bless the Lord, all wild animals and cattle; sing praise to him and highly exalt him forever” (Dan 3:57–59). Such passages may be found in great abundance in the Psalms as well: “Let heaven and earth praise him, the seas and everything that moves in them” (Ps 69:34); “Praise the Lord from the earth, you sea monsters and all deeps... wild animals and all cattle, creeping things and flying birds” (Ps 148: 7, 10); and “Let all things that breathe praise the Lord!” (Ps 150:6). In addition to these and other direct references to animal praise, Johnson also notes many additional “passages that use wide-ranging synonyms for praise, such as bless, give thanks, give glory, sing, shout for joy, roar, tell, acclaim, declare, give honor, magnify, glorify, exult, clap, or make a joyful noise, [which] expand the range of such activity.”⁷ However, while these scriptural references ground the liturgical adverting to animal praise in the longer history of the Jewish and Christian prayer traditions, the challenge of deciphering and explaining their broader theological meaning remains.

Johnson’s own hermeneutic struggle with these questions revolves around two key questions: “How can we do justice to the animals’ praise without anthropomorphically attributing to them the kind of rational human consciousness that offers intentional, linguistic praise? [And how] can we avoid the pitfall of dismissing the

⁷ Elizabeth A. Johnson, “Animals’ Praise of God,” *Interpretation: A Journal of Bible and Theology* 73, no. 3 (2019): 259–71. 260.

construal as mere metaphor, delightful poetry without substance?”⁸ Johnson proposes that these passages first be interpreted by “nesting [them] theologically within all creation’s praise of God... [which] brings into play the relation between God and the world and avoids both anthropomorphic and metaphorical reductions.”⁹ Considered in light of the larger relation of dependence and participation that characterizes all of creation, Johnson suggests that “[by] virtue of their being created and continually empowered by the Creator Spirit, animals give praising glory to God simply by living according to their natures, which are oriented to God. In their very existence, their concrete quiddity, the way they interact in an evolving universe, they extol the excellence of their Maker.”¹⁰ Johnson thus avoids what she regards as the anthropomorphizing reading of these passages as suggesting that animals “articulate praise with the knowingness of human reflective consciousness,” arguing instead that “they do so in accord with their created natures, ontologically, by which I mean in a way rooted in being, in reality.”¹¹

While we would defer, for the moment, the question of whether animal praise may have a meaning beyond the ontological sense described by Johnson, her account helps to flesh out the meaning of the absolute finality of all animals—and, for that matter, of all creation—toward God.¹² Simply by their kind of dependent, participatory, creaturely being, animals reflect God’s own goodness. Johnson asserts the strong ethical implications involved in this recognition of ontological prayer, for the disappearance of any creature or species entails the end of a particular form of prayer, only the multiplicity of which taken

⁸ Johnson. 260

⁹ Johnson. 260

¹⁰ Johnson. 270

¹¹ Johnson. 269

¹² We will return to this question in our treatment of vertical finality in animals, below.

together can begin to reflect the richness of divine goodness.¹³ She also argues that the recognition of this form of ontological prayer resists those parts of the tradition that only recognize the goodness of animal existence as an occasion for humanity's own prayer and praise. Johnson points to Augustine's "Exposition on Psalm 148" as an example of this latter approach, summarizing his position as follows: "The well-made flea, then, becomes an occasion for human prayer, but the flea does not praise in its own right."¹⁴ Thus, in addition to our recognition of the direction of animal praise through the priestly anthropology described by Zizioulas, Briola, and others, the recognition of the absolute finality of all creatures toward God prevents the anthropocentric collapse of all prayer into only the vertical finality of humanity's prayer. In recognizing the ways in which animals "praise God" through their concrete being, we discover a particular locus of grace common to all creatures. In human beings, we recognize that no one prays except that the Holy Spirit prays within us first. As Paul describes in his Letter to the Romans: "Likewise the Spirit helps us in our weakness; for we do not know how to pray as we ought, but that very Spirit intercedes with sighs too deep for words. And God, who searches the heart, knows what is the mind of the Spirit, because the Spirit intercedes for the saints according to the will of God" (Rom 8: 26-27). Whether in humans or in other creatures, the focus is on God's initiative drawing us into a relationship of grace. We recognize also that praise is a form of prayer that glorifies God not for what God does, but rather simply for being God. While

¹³ We take Johnson's larger point, here, insofar as she identifies the ontological praise of each creature in relation to God and the ethical imperative for humans to respect and care for creatures specifically as part of God's good creation. However, we would note that, if one follows her logic to the end, then not only all natural, pre-human extinctions, but also the actions and prayers of deceased human beings would be the end of their particular prayers as well. On the other hand, if prayer is each being's contribution to the prayer of the whole of emergent probability, then their prayers never come to an end. This does not undercut the seriousness of species extinction or the moral imperative of humans to act in such a way so as to preserve the diversity of the world by living in accord with the dictates of an ecologically responsible ethics.

¹⁴ Johnson, "Animals' Praise of God." 261

we ought not project human forms of prayer and praise onto animals, to the extent that the tradition has recognized them as capable of their own distinct forms of praise, we must also recognize that this flows out of a divine initiative begun in graced relation.

What is begun in the divine initiative of grace according to the absolute finality of animal creatures considered ontologically may be considered also according to their completion in glory according to their absolute eschatological end. While speculation about what awaits animal creation in the fullness of time is perhaps even more fraught than our reflections on human ends, there is good reason to entertain these questions in a spirit of hope and expectation far beyond what has sometimes been envisioned in some parts of the tradition. In a section near the end of *Laudato Si'*, titled “Beyond the Sun,” Pope Francis suggests his own image of creaturely consummation: “Eternal life will be a shared experience of awe, in which each creature, resplendently transfigured, will take its rightful place and have something to give those poor men and women who will have been liberated once and for all” (*LS* 243). Here, Francis suggests not only an endurance of other creatures but also invokes the language of “transfiguration” with respect to a form of corporeal consummation. And, although these lines still seem to subordinate the animal good to the human good in what sounds like a problematic, servile fashion, he recognizes that the eschatological perfection does not obtain without the contribution of their presence. Moreover, there is reason to resist an interpretation of these lines as a wholesale subordination of animal life to eschatological utility. Consider, for instance, Francis’s comments earlier in the document:

The ultimate purpose of other creatures is not to be found in us. Rather, all creatures are moving forward with us and through us towards a common point of

arrival, which is God, in that transcendent fullness where the risen Christ embraces and illumines all things. Human beings, endowed with intelligence and love, and drawn by the fullness of Christ, are called to lead all creatures back to their Creator. (*LS* 83)

Similarly, only a few paragraphs later, Francis affirms that

... the destiny of all creation is bound up with the mystery of Christ, present from the beginning... [and] the end of time, when the Son will deliver all things to the Father... the creatures of this world no longer appear to us under merely natural guise because the risen One is mysteriously holding them to himself and directing them towards fullness as their end. The very flowers of the field and the birds which his human eyes contemplated and admired are now imbued with his radiant presence.” (*LS* 99)

He writes also of Christ’s resurrection, which signifies “the pledge of the final transfiguration of all created reality” (*LS* 237) and that “all the good which exists here will be taken up into the heavenly feast” (244). In these earlier passages, Francis recognizes the inherent and enduring worth of animal creatures on their own terms. While this suggests something of an unresolved tension in Francis’s vision, we would argue that the later, apparent eschatological subordination reflect Francis’s central goal of connecting ecological concerns with the larger scope of Catholic Social Teaching through his integral ecology.

Francis’s emphasis on the enduring and even eschatological value of non-human animals and especially his emphasis on redemption of all flesh through Christ’s sacrifice and resurrection echo the themes of Deep Incarnation and resurrection, raising questions

about whether we might expect non-human creatures to participate also in the general resurrection. A broad endorsement of the conservation of more than only human creatures would resist more destructive forms of Christian Apocalypticism, which views have been increasingly contested by ecologically-conscious theologians.¹⁵ As Aurelie Hagstrom summarizes, “Happily, Catholic eschatology anticipates not an event of destruction, but rather the arrival of a person.... God does not destroy God’s first creation, God marries it. It’s a marriage, a wedding feast of the Lamb that we anticipate (Rv 19:9).”¹⁶ However, while there is a greater emphasis on the redemption of animal creatures and on a fleshly transfiguration and redemption, neither Francis nor the Deep Incarnationalists suggest that the beatific vision awaits other non-human animals or the rest of creation, nor is it obvious that this can or should be extended. The beatific vision is understood to be the gift-fulfillment of the unrestricted desire to know and love as an obediential potency, whose fulfillment is a matter of vertical finality’s supernatural sublation, which is not required but both paradoxically desired and freely given by reason of God’s unmerited favor. Thus, while we would expand our eschatological hope to include all other creatures, there is little evidence to suggest that other creatures share in these specifically human potencies, nor is it clear how we would begin to investigate such a matter.¹⁷

¹⁵ See, for instance, Kiel, *Apocalyptic Ecology*.

¹⁶ Hagstrom, “Resurrection of the Body and Ecology: Eschatology, Cosmic Redemption, and a Retrieval of the Bodily Assumption of the Blessed Virgin Mary.” 155

¹⁷ That being said, we would note two things, here: 2 things: (1) the obediential potency is not only the unrestricted desire to know and love as constituted in individual human beings, but the concrete plurality of human beings constituted by that desire; and (2) the unrestricted desire to know and love is the finality of the universe become conscious. So, while there is good reason to wonder if the Beatific Vision would be appropriate to creatures that do not have this desire as constitutive of their consciousnesses, the broader way of thinking about obediential potency and universal finality raises some further questions, though we will not treat this here.

In raising questions about the legitimacy of extending the hope for the beatific vision to non-human animals, we are less endorsing an exclusionary logic than affirming the concrete difference and particularity of each creature and their capacities. Thus, as the beatific vision stands in relation to the concrete potencies of human beings in our historical situation, our questions about the absolute finality of other, non-human animals “in glory” directs us toward a further consideration of the horizontal and vertical finality of other non-human animals in grace.

5.1.2 Grace in (non-human) Animals: Horizontal Finality

Concerning horizontal finality, we once again consider what role grace might play in bringing creatures to their proportionate ends according to excellences and the limits of their particular natures, understood in terms of an intrinsically dynamic yet indeterminate openness to conditions possibly fulfilled in accord with emergent probability within the totality of a created universe that is disposed of by a creator who directs each being by directing all. One aspect of this was revealed already in our treatment of absolute finality, where we affirmed a form of ontological praise proper to each particular kind of creature. To the extent that the raccoon “raccoons” or the flea “fleas”—insofar as they operate and cooperate with other beings, each according to its nature—these creatures are praising God in their lives here on earth. While we do not force these kinds of ontological praise into the mold of the conscious, intentional praise of which humans are capable, we presuppose the priority of God’s action in eliciting the praise of creation. When we as humans praise God, we recognize that it is the Holy Spirit who first prays within us and we who cooperate (or not) with this praise. Similarly, when all animals praise God by the

very fact of their being, they do so as an expression of the gift of their creaturehood.

The recognition of creaturely “ontological prayer” carries significant implications for phenomenological, empirical, and scientific accounts of any given creature, since the mode of existence of each appears as a form of prayer. Thus, the explanatory account of any creature that, following Lonergan, we might previously have named its nature, is revealed to be an admixture of its nature, its nature as marred by sin, and its nature as restored and elevated by grace. The realization will entail in part the reality of creaturely praise, even if the observer does not have either the language, the knowledge, or even the inclination to do so. This is not to imply a kind of “counter-biology” or any destabilization of the sciences, as if a chemist, biologist, or zoologist must have recourse to theological categories to do their work well; nor would it be correct to suppose that all theologians need access to those other specialized scientific domains to do their specific work: Recall that the method and interrogative scope of any field of inquiry requires a relative independence of its conclusions, at least with respect to the comprehension of their specifically explanatory conjugate form. Nevertheless, to the extent that each account actually elaborates the being of that creature, it is also partially explaining how that creature as a creature praises its Creator. Thus, the theological conjugate cannot restrict its proper object to the merely psychic and spiritual domains in attending to the cosmic liturgy of praise. Though, in Chapter Five, we will consider some key concepts in the sciences that reflect this resonance of these multiple intelligibilities, we will attempt to sketch below how the theological conjugate may serve to distinguish these elements in creatures and creation. However, first we must attend to the reality of non-human creation as it also stands marred by the reign of sin here and now.

5.2 Excursus: “Sin” in Non-Human Creation?

Even though it is the prior gift of God’s grace that enables us to recognize the fallen and sinful state of the world, we will have to begin with a brief exploration of what it might mean to talk about “sin” and the effects of sin in the broader context of creation. As noted in Chapter One’s treatment of Willis Jenkins, theological approaches to ecology often are shaped by their grammars of grace. In Chapter Two, we observed how this may be the case in some of the leading Catholic ecological and evolutionary theologians, even if they have hesitated to invoke traditional theological categories of grace in their work.

5.2.1 Sin Beyond Humans in Contemporary Eco- and Evo- Theologies

While some of the theologians we have discussed have adverted to a broader understanding of God’s grace in creation, they have still shown a greater resistance to attributing sin and recognizing the repercussions of sin in non-human creation. Some attention has been given to the doctrine of original sin, rooted in Augustinian theology and receiving its definitive statement at the Council of Trent, in part, perhaps, because of the perceived tension between the Genesis 2-3 narrative and the increasing trend toward the polygenist teaching of evolutionary theory.¹⁸ Some biblical scholars have raised

¹⁸ This tension may be observed in *Humani Generis*’s conditional statement of the non-contradiction of the theory of evolution with Catholic teaching: “For the faithful cannot embrace that opinion which maintains that either after Adam there existed on this earth true men who did not take their origin through natural generation from him as from the first parent of all, or that Adam represents a certain number of first parents. Now it is in no way apparent how such an opinion can be reconciled with that which the sources of revealed truth and the documents of the Teaching Authority of the Church propose with regard to original sin, which proceeds from a sin actually committed by an individual Adam and which, through generation, is passed on to all and is in everyone as his own.” Pope Pius XII, “*Humani Generis*,” August 12, 1950. §37. Despite his many contributions to the recognition of evolution within theology, polygenism was also deemed problematic by Karl Rahner. See, for instance, Karl Rahner, “Monogenism,” in *Encyclopedia of Theology: The Concise Sacramentum Mundi*, ed. Karl Rahner (New York: Seabury Press, 1975).

questions, for instance, about the trees, fruits, and animals in the Garden and how they factor into our understanding of the emergence of sin in creation as a whole and in specifically human contexts.¹⁹ Other reflections have centered on Rene Girard's work, which highlights the role of imitation, mimesis, and a sense of original competition in early humans, which emphasizes the potential influence of inter- and intra-species

¹⁹ Consider, for instance, the role of the snake who tempted Adam and Eve prior to their choice, assuring them that in tasting the forbidden fruit they "will be like God, knowing good and evil" (Gen 3:5). Setting aside the later, allegorical association of the snake with Satan or the fallen angels, we may encounter instead an animal, a fellow creature of the good creation, who is critically implicated in the story of the emergence of sin in the world. In his own evolution-inspired interpretation of this passage, J. Richard Middleton raises precisely this question: "[The] puzzle is that the snake—which, according to the logic of Genesis 1, would have been created 'good'—serves as the foil to introduce temptation (and thus moral evil) into the garden story. How can the snake both be part of the good created order and yet be the means of temptation or testing? How can the garden story hold humans accountable for the introduction of evil in the world and yet require an outside agent of temptation and sin? Perhaps an outside agent is needed to narrate a singularity such as the original sin; how else could we imagine or conceptualize evil arising in a world previously without evil? Given the above discussion of the snake, I am inclined to think that it represents that aspect of the created order which allows for, or mediates, human ethical choice. It could even be an external representation of some aspect of the human psyche (or the psyche in relationship to the external creation)." See J. Richard Middleton, "Reading Genesis 3 Attentive to Human Evolution," in *Evolution and the Fall*, ed. William T. Cavanaugh and James K. A. Smith (Grand Rapids, Michigan: Eerdmans, 2017), 67–97. 86. While Middleton's interpretation tends to fold the snake's agency back into humanity, Celia Deane-Drummond has noted how this passage lends itself equally well to a reading of human sinfulness in deeper dialogue with the other creatures who cohabited our earliest environs: "Niche construction theories of evolution are inclusive of the importance of other species, and this argument can be extended in order to make a further claim, namely, that they were actually instrumental in the emergence of human im/morality. The significance of the human interaction with the snake [considered as an animal] is barely commented upon in the literature. Yet this is precisely what one would expect if human becoming is densely interlaced with the lives of other creatures." See Celia Deane-Drummond, "In Adam All Die? Questions at the Boundary of Niche Construction, Community Evolution, and Original Sin," in *Evolution and the Fall*, ed. William T. Cavanaugh and James K. A. Smith (Grand Rapids, Michigan: Eerdmans, 2017), 23–47, 37–38.). As Patrick Byrne pointed out to me, still another interpretation of this passage might be developed in dialogue with Bruno Snell's *The Discovery of Mind*. There he explains the difficulty of the rise of something like what Lonergan would call the "interiority differentiation of consciousness," and how the ancient Greeks had to portray deliberation as a dialogue between humans and muses or gods. Something similar might be true for the culture that composed the snake story—that in order to express the interior deliberation, the literary device of an external interlocutor was needed. This interpretation would remove any doctrinal need for a sinfulness in pre-human nature. In a similar vein, Frederick G. Lawrence points to additional possibly relevant interpretations in both Charles Hefling, "Why We Mess Things Up," *The Christian Century* (1902) 131, no. 13 (2014): 22–; Paul Ricœur, *The Symbolism of Evil*, Beacon Paperbacks; BP 323 (Boston: Beacon Press, 1969). In any case, we do not propose to resolve the issue of interpreting this passage from Genesis, here, as this is well beyond the limits of this dissertation. However, in dialogue with the larger questions about the relationship between the pre-anthropocentric context and the reality of particularly human forms of sin, we take this as sufficient warrant for exploring some of these questions here, if only in a preliminary and quite limited fashion and in service of the larger project of thinking about the scope of the redemptive economy of grace within a cosmic and evolutionary framework.

struggles for limited resources and the predator-prey reality that preexists human emergence.²⁰ As we saw in Chapter Two, Girard's work influenced Denis Edwards' treatment of original sin and of sin in evolutionary history, though Edwards stops short of attributing sin proper to non-human creatures or the larger creation.²¹ Recall also our noting Celia-Deane Drummond's argument concerning the way that the interrelationships between creatures described by Niche Construction Theory might have strong implications for the emergence of moral conduct in humans.²² Deane-Drummond goes further than most of her Catholic peers, when, at least in her later works, she recognizes the possible attribution of sin in a qualified sense to some animals, at least "inasmuch as they fail to realize their flourishing, becoming addicted to destructive behavior patterns, rejecting their responsibilities as parents, and so on," though she points out that "this is certainly not equivalent to human sin but is related to their moral capacity in their own world."²³ While Edwards and Deane Drummond would more than likely affirm that these behaviors are explicable according to many conjugate accounts—biological, paleobiological, zoological, etc.—their explorations here represent a desire to take seriously the ways in which these evolutionary relationships that develop in the lower manifolds condition the possibilities of higher emergent human behaviors, even if

²⁰ See, for instance, his discussion of his own work on mimesis in relation to biology and evolutionary theory in René Girard, "The Symbolic Species," in *Evolution and Conversion: Dialogues on the Origins of Culture*, Reprint edition (London ; New York: Bloomsbury Academic, 2017), 69–96.

²¹ See especially Chapter 8, "God's Redeeming Act: Evolution, Original Sin, and the Lamb of God," in Edwards, *How God Acts*, 129–142. See also Denis Edwards, *Jesus the Wisdom of God: An Ecological Theology*, Ecology and Justice (Maryknoll, N.Y.: Orbis Books, 1995). 145: "Nonhuman creatures, and the universe itself do not sin. Yet they will be transfigured by the saving love of God revealed in Jesus in what the scriptures call the New Creation. Salvation, redemption and reconciliation include the forgiveness of sins, but they are larger concepts embracing the transformation of the universe."

²² See Deane-Drummond, "In Adam All Die? Questions at the Boundary of Niche Construction, Community Evolution, and Original Sin."

²³ Deane-Drummond, *Christ and Evolution*, 2009. 162

animals are neither morally culpable themselves nor is their influence wholly *determinative* of human behaviors.

Broader theological resistance to attributing sin to non-human creation may lie in a desire to avoid imputing guilt or moral culpability to creatures that do not (at least obviously) exhibit the intellectual and moral capacities required to demonstrate effective freedom in decision making and acting. To the extent that Deane-Drummond appears as an exception to this rule, she is motivated by two different impulses. First, Bulgakov and eastern theologies of divinization direct her attention toward the ways in which all of creation is yearning for a greater redemption not only from sin but from death itself, which Bulgakov elaborates according to an account of their creaturely sophianic dimension to become more fully united with the divine Sophia. Second, her impressive knowledge of contemporary studies in animal behavior, ethnoprimatology, etc. have led her to recognize a blurring of the line between humans and at least some higher animals, which becomes further magnified by the ways in which our relationships with these creatures are revealed to be co-constitutive. However, to the extent that she recognizes the need to extend the soteriological grammars of sin and grace beyond the boundaries of humanity, her extension depends on a blurring of boundaries between humans and those species most like us.²⁴ Therein, it only shifts the boundaries of inclusion of the old paradigmatic understanding of grace, rather than articulating a genuinely comprehensive account of participatory, cosmic redemption due in part to the wide-ranging effects of sin.

²⁴ Especially for some readers of Lonergan's work, this may also raise questions about whether Deane-Drummond's account does adequate justice to the dependence of categories like "truth" and "morality" on the native, unrestricted human desire to know all truth and value.

5.2.2 Sin and the Effects of Sin in the Hebrew Bible

It is our contention that the larger paradigm shift for which we are advocating in this work may be facilitated by a retrieval of a wider and more robust understanding of the different senses of sin within the larger theological tradition, beginning with its roots in the Hebrew Bible. While we can only offer the first intimations of the larger retrieval we would seek to effect given our own focus on grace in this text, we believe that this larger category makes possible this expanded understanding of cosmic redemption from both sin and death and which provides a common framework for thinking about humans and other creatures together in the same arc of redemptive history. Following this partial retrieval, we will then suggest how this larger, inclusive category would need to be differentiated to prevent problematic theological slippage.

John L. McKenzie notes, “There is no word in [Hebrew] which means precisely theological sin.”²⁵ The word most commonly translated as “sin” is “*het*” or “*hatta*”, which he links to the Greek *hamartia*, or “to miss the mark,” both in the sense of “an intellectual error in judgment but [also] a failure to attain a goal.” This meaning of sin as *hamartia* is also the most prominent way that sin is referenced in the New Testament. However, McKenzie indicates a range of other words and meanings that fall under the broad umbrella of “sin”: “a breach of an agreement between nations and peoples” as in Judges 11:27 and 1 Samuel 19:4, 24:12, and 26:21; as “*’awo^n*,” which is translated as “iniquity” understood as a “distortion” or the becoming real of “what ought not to exist,” like the “rust which eats into a metal vessel” in Ezekiel 24:6; as “*’asam*,” referring to a “liability before Yahweh... [especially] the guilt of ritual infractions, which are not

²⁵ See “Sin” in John L. McKenzie, *Dictionary of the Bible* (Milwaukee: Bruce Publishing Co, 1965).

conceived as genuinely malicious”; as “*segagah*,” or “‘a straying’... [in which] the sinner leaves the path which leads to his destination and is lost. His life is aimless, and he will surely perish”; as “*pdsa\ marad, marah*,” which are translated as “rebellion” against parents, political superiors, or YHWH, in each case signifying “the act by which a community is dissolved”; and as “*ra’*,” translated as “evil,” “*to^ebah*,” translated as “abomination,” and “*’awel*,” translated as “twisted,” all of which McKenzie relates to the notion of “disorder” according to its “ugliness” or to “that which [YHWH] finds intolerable, which He rejects and loathes,” and “that which lacks its proper form and shape,” respectively. McKenzie notes several other usages, but the point, here, is that the term ‘sin’ functions as a catch-all for a range of different meanings in the Hebrew Bible, only some of which have to do with guilt or fall into the realm of the intentional. Critically, we would emphasize that the word sin does not thoroughly differentiate individual human sinfulness from the material and social consequences of that sin.

The connection between sin in this broader sense and the deformation of God’s good creation also resonates with Christ’s ministerial connection of healing and forgiveness in the Gospels, including, but not limited to, his healing of the paralytic in Mark 2:1-12.²⁶ Similarly, in John’s Gospel, Jesus rejects the idea that transactional sin is

²⁶ “When he returned to Capernaum after some days, it was reported that he was at home. So many gathered around that there was no longer room for them, not even in front of the door; and he was speaking the word to them. Then some people[a] came, bringing to him a paralyzed man, carried by four of them. 4 And when they could not bring him to Jesus because of the crowd, they removed the roof above him; and after having dug through it, they let down the mat on which the paralytic lay. When Jesus saw their faith, he said to the paralytic, “Son, your sins are forgiven.” Now some of the scribes were sitting there, questioning in their hearts, “Why does this fellow speak in this way? It is blasphemy! Who can forgive sins but God alone?” At once Jesus perceived in his spirit that they were discussing these questions among themselves; and he said to them, “Why do you raise such questions in your hearts? Which is easier, to say to the paralytic, ‘Your sins are forgiven,’ or to say, ‘Stand up and take your mat and walk’? But so that you may know that the Son of Man has authority on earth to forgive sins”—he said to the paralytic— “I say to you, stand up, take your mat and go to your home.” And he stood up, and immediately took the mat and went out before all of them; so that they were all amazed and glorified God, saying, “We have never seen anything like this!”

the cause of illness: “As he walked along, he saw a man blind from birth. His disciples asked him, ‘Rabbi, who sinned, this man or his parents, that he was born blind?’ Jesus answered, ‘Neither this man nor his parents sinned; he was born blind so that God’s works might be revealed in him’” (John 9:1-3). Here, Jesus clearly rejects that all physical or natural evil suffered by a person is rightly traced back to the personal sin understood as *hamartia*. However, this natural evil is presented as an opportunity for divine revelation in healing and as a feat that could only be accomplished through the ministrations of a holy person. Thus, in the same passage, the link between sin and the brokenness of the goodness of creation demonstrates that Jesus as a spiritual and physical healer cannot himself be a sinner:

The man [who has been blind since birth] answered, “Here is an astonishing thing! You do not know where he comes from, and yet he opened my eyes. We know that God does not listen to sinners, but he does listen to one who worships him and obeys his will. Never since the world began has it been heard that anyone opened the eyes of a person born blind. If this man were not from God, he could do nothing.” (John 9:30-33).

By attending to this rich semantic range, we can better consider both how all of creation may be distorted by sin understood in this broader sense and how it stands in need of God’s redemptive grace.

5.2.3 Defining and Distinguishing Sin

Drawing from this diversity of usage, we would first suggest as a broader definition of sin, “Anywhere that God’s good creation is marred.” As noted above, this broad category

suggests the broad hope of all creation for God's redemptive action, which is needed in a particular way in relation to the distinct failures of human beings as free, conscious, intelligent beings. We would then distinguish this category of sin according to four modes—personal, pre-personal, social, and “the sin of the world.”²⁷ *Personal sin* refers to the choices made by free and conscious actors that break their prior and constitutive bonds of attentive, intelligent, reasonable and responsible relationships both with other creatures and with God. *Pre-personal sin* indicates the broken reality into which we are all born, which limits the possibility of our choosing the good; it roughly coincides with the meaning of original sin, though it need not (and should not) entail the Augustinian notion of the transmission of that sin. *Social sin* includes all ways in which the larger community and its institutions are deformed by the historical panoply of sin: more than simply the sum total of the sins, it affects all the members of a community, whether or not they intentionally participate in those sins by personal sin. It follows, then, that living in a society disfigured by racism, sexism, classism, and colonialism, no one can claim to be free from the effects of this social evil, even if they may actively work to resist and transform its effects in themselves and in the society at large. Each of these three types of sin may be identified either analogously or directly with sin as the marring of good creation even beyond any human contexts, yet none of them is broad enough for the purposes of this project.

The fourth type of sin, the “sin of the world,” derives from John's Gospel, where the Baptist, upon first seeing Jesus approaching the River Jordan, declares, “Here is the

²⁷ While it is necessary to give some account of the operative definitions and distinctions attending the usage of the term “sin” in this dissertation, the limits and constraints of this project necessitate that this account be filled out only in broad strokes. In order for this project to be developed more fully, this topic would need considerably greater attention.

Lamb of God who takes away the sin of the world!” (John 1:29). Rendered in the singular, the sin of the world expresses not merely the aggregate of all sins in an individual or even the whole community, but as the force of darkness throughout world history.²⁸ It is connected with both Paul’s statement in Romans that “. . .there is no distinction, since all have sinned and fall short of the glory of God” (3: 21-22), and Paul’s personification of sin: “Therefore, just as sin came into the world through one man, and death came through sin, and so death spread to all because all have sinned—sin was indeed in the world before the law, but sin is not reckoned when there is no law” (5:12-13); and again, “But in fact it is no longer I that do it, but sin that dwells within me. For I know that nothing good dwells within me, that is, in my flesh. I can will what is right, but I cannot do it. For I do not do the good I want, but the evil I do not want is what I do. Now if I do what I do not want, it is no longer I that do it, but sin that dwells within me” (7:17-20).

5.2.4 The “Sin of the World” in Recent Theological Usage

This fourth category of sin of the world provides us with the best foundation for elaborating the broader understanding of sin as the marring of good creation beyond the limits of the specifically human context, including both the pre-human stages of evolution and the ways in which human actions—through war, pollution, irradiation, etc.—have left a scar on creation itself that stands in need of God’s healing action. This would require an expansion of the category beyond the ways in which it is used in

²⁸ Cf. 1 John 2:1-2: “My little children, I am writing these things to you so that you may not sin. But if anyone does sin, we have an advocate with the Father, Jesus Christ the righteous; and he is the atoning sacrifice for our sins, and not for ours only but also for the sins of the whole world.”

contemporary theology, where, in fact, it has received sustained attention only infrequently. There are some notable exceptions, including Piet Schoonenberg's discussion of the term, saying that it "points to the accumulation of sin in history, which in turn constitutes the situation into which everyone is born," where "the situation" is understood to mean "the totality of the circumstances in which somebody or something stands at a certain moment, the totality of circumstances prevailing in a certain domain."²⁹ As Roger Haight describes, Schoonenberg's account of "sin of the world" represents one "constructive reinterpretation" of the Tridentine articulation of the doctrine of original sin in an "attempt to make it intelligible" in the face of contemporary understandings of biology, psychology, sociology, and sexuality.³⁰ As Schoonenberg himself explains, he deploys the term "sin of the world"

to sum up the social nature of sin or solidarity in sin. Even if we prescind from any original sin and its influence on each of us, this solidarity still exists. In Scripture, the whole people of Israel is often considered to have sinned in common, and God was said to have visited the sins of the fathers on the third and fourth generations. Even after Jeremiah and Ezechiel [sic] proclaimed the responsibility of each individual before God, a truth underlined by the [New Testament], the link between fathers and children remains. Sin remains a power in the world, and the "world" remains a fellowship of sin. This fits in with our experience of the "contamination" of evil and in general, the "infectiousness" of moral action.³¹

²⁹ Piet Schoonenberg, *Man and Sin; a Theological View* (Notre Dame, Ind.: University of Notre Dame Press, 1965). 104-105. Cited in Roger Haight, "Sin and Grace," in *Systematic Theology: Roman Catholic Perspectives*, ed. Francis Schüssler Fiorenza and John P. Galvin, 2nd ed.. (Minneapolis: Fortress Press, 2011), 275-330, 287.

³⁰ Haight, "Sin and Grace."

³¹ Piet Schoonenberg, "Sin – Sin and Guilt," in *Encyclopedia of Theology: The Concise Sacramentum Mundi*, ed. Karl Rahner (New York: Seabury Press, 1975).

This account of the sin of the world points toward something larger than only the biological, social, or cultural inheritance of sin, because the whole world order as we encounter it is “contaminated,” “infected,” and generally damaged in a way that seems to go beyond the notion of collective personal sin or guilt as a way that leaves a mark on the flesh of the community for generations to come. However, his account does not adequately differentiate the notions of prepersonal and social sin either from each other or from the suprapersonal distortions of the sin of the world.

As a result, while Schoonenberg helpfully points toward the heuristic value of the term “sin of the world” to name the effects of sin that stretch beyond human activity either singly or collectively, his treatment remains at once too broad and too narrow for our purposes. It is too broad in that the elision of the categories of pre-personal and social sin with “sin of the world” obfuscates useful distinctions between the effects of sin on individuals, social structures, the whole species, and the entire world as affected by the situation of sin. For instance, although he helpfully draws a distinction between the broader meaning of sin and personal guilt, his collapsing of these three categories causes him to assert that guilt “[stemming] from the personal free act of each individual, cannot pass from one to another. It is not a social characteristic.”³² Thus, while he correctly recognizes that our being born into the situation of pre-personal or original sin does not itself constitute a hereditary guilt independent of our ratification of it in our thoughts and deeds, he fails to recognize that there is indeed a social guilt that is born by all members of unjust societies for which all must seek to repent.³³ Schoonenberg’s categories of sin

³² Schoonenberg. *Sin – Sin and Guilt*

³³ Think, for instance, of the social sin of racism. At least theoretically, a person may not personally harbor racist thoughts and intentions, but she or he may still benefit from and be party to a system that is inherently racist and therefore still stand called to repent of that sin and to work toward greater justice.

remain too broad and undifferentiated to describe the more nuanced realities of sin as we encounter it in the world, including the realities of ecological sin in species and habitat devastation that have become increasingly hard to ignore in recent years.

At the same time, Schoonenberg's understanding of "the world" remains too narrow to speak meaningfully to the ecological and evolutionary situation. He ties sin to the world of human action and society, but he fails to mention the ways in which we are implicated in a bigger evolutionary history and ecological situation, as well as the supra-personal and indeed supra-social dimensions of sin that are suggested in scripture. This narrowness of the meaning of "the world" is not unique to Schoonenberg, and it may be seen in many of the most prominent theologians of the 20th century, including some who sought to take seriously the theological import of evolution. Consider, for instance, Rahner's definition of "the world" in *Sacramentum Mundi*:

For theology "the world" in the first place signifies in a neutral, sense the whole of creation as a unity (in origin, destiny, goal, general structures, interdependence of part on part). It either includes man, or is distinguished from him as his environment, the stage set by God for the history of his salvation. In this sense world has the same meaning as "heaven and earth", and is a revelation of God, exists for his glory; it is good, meaningful and beautiful, the freely and lovingly created recipient of God's self-communication (Jn 3:16f.; D 428, 1805).³⁴

However, following Celia Deane-Drummond, we recognize in these usages a reduction of the rest of creation to scenery and props in the larger Theodrama at the expense of a truly cosmic soteriology.

³⁴ Karl Rahner, "Church and World," in *Encyclopedia of Theology: The Concise Sacramentum Mundi*, ed. Karl Rahner (New York: Seabury Press, 1975).

5.2.5 The “Sin of the World” in the New Testament

While it would surely be anachronistic to impute a contemporary, evolutionary meaning to “the world,” John’s Gospel intends more than just the world of human action. As John L. McKenzie notes, “There is no single [Hebrew] word which can be translated as world... [as conceived in [Greek] and modern thought as a systematic whole constituted by some unifying principle.”³⁵ However, the Greek word “*kosmos*,” which appears in some of the later Greek books of the Hebrew Bible, can entail this broader scope, though it may also

signify not the universe but the earth: man is created to manage the world (WS 9:3); the temple is honored over the whole world (2 Mc 3:12). Death and idolatry have entered the world (WS 2:24; 14:14). The world also means humanity: Adam is the first formed father of the world (WS 10:1), Noah was the hope of the world (WS 14:6), the wise are the salvation of the world (WS 6:24).

In the New Testament, “kosmos is both a cosmological and a theological term... [It] is far more common in the theological sense, but the two uses sometimes merge,” generating a whole range of different meanings. This merging of the two meanings is evident in John’s Gospel. Underscoring his cosmological usage, McKenzie points to the Prologue: “The true light, which enlightens everyone, was coming into the world. He was in the world, and the world came into being through him; yet the world did not know him” (John 1:9-10). While this usage occurs in the Gospel from the start, McKenzie also notes John’s use and development of the theological sense as “as the scene of the process

³⁵ See “world,” in McKenzie, *Dictionary of the Bible*.

of salvation; it is not merely the scene but one of the protagonists of the drama, for the world is mankind as fallen, as alienated from God and hostile to God and to Jesus Christ.” McKenzie correlates this theological sense also with the Pauline epistles—pointing especially to the passage from Romans 5:12 that we identified both with the “sin of the world” and with pre-personal sin earlier—where the “base of the opposition is found in the sinfulness of the world, the sin which entered the world through one man.”³⁶

As a close reading of John’s Gospel reveals, the “sin of the world” and the resulting opposition of “the world” to God forms a definitive theme against which Jesus’ Incarnation, death, and resurrection are strongly directed. However, as McKenzie emphasizes in the final lines of his treatment, the “sin of the world” does not mean that Christ or Christians reject the world: “To obtain the victory they must not identify themselves with the world as a power hostile to God, but neither can they lose their identity with the world as the creature of God, as the stage of the processes of salvation, and as unredeemed mankind.”

McKenzie’s account reveals a wealth of meanings in “the world” that together flesh out both the “sin of the world” and the possibilities for it to be redeemed by God’s grace. As a “power hostile to God,” the world is revealed as the marring of God’s good creation. As “a creature of God,” it enjoys a relation of dependence on God and even

³⁶ “Sin” in McKenzie. Though not our project here, it would be worth considering how this reading of both “sin of the world” and “pre-personal sin” here in Romans 5 culminates in perhaps the most often cited Pauline passage by ecological and evolutionary theologians only a few chapters later, “I consider that the sufferings of this present time are not worth comparing with the glory about to be revealed to us. For the creation waits with eager longing for the revealing of the children of God; for the creation was subjected to futility, not of its own will but by the will of the one who subjected it, in hope that the creation itself will be set free from its bondage to decay and will obtain the freedom of the glory of the children of God. We know that the whole creation has been groaning in labor pains until now; and not only the creation, but we ourselves, who have the first fruits of the Spirit, groan inwardly while we wait for adoption, the redemption of our bodies. For in hope we were saved. Now hope that is seen is not hope. For who hopes for what is seen? But if we hope for what we do not see, we wait for it with patience” (Romans 8:18-25).

subjectivity with respect to redemption. As the “stage of the processes of salvation,” we do not deny the creaturehood attributed above, but we also recognize that the world nevertheless constitutes the environment of human subjectivity. And “as unredeemed mankind,” we come to recognize that human salvation may not be severed from our existence with all creatures in the world. Through this broader reading, we come to acknowledge how “the sin of the world” gives us with a category for naming the brokenness of both human beings and the rest of God’s good creation in the ways that it has yet to be taken up in its fullness into theological accounts of the history of salvation.

5.2.6 “Sin of the World”: Environmental Damage

To begin with, we note that through a whole range of ecological sins, the Earth itself and the creatures in it have been marred by sin in ways that exceed personal, pre-personal, and social sin. As noted in the 2019 UN summary of the IPBES Global Assessment Report on Biodiversity and Ecosystem Services, in light of projected climate-change estimates, around one million described plant and animal species are threatened with extinction in the coming years, a number far greater than any other period in human history.³⁷ Because new emergences depend on the concrete diversity of lower manifolds, species extinctions result in a significant decrease in the potential of this world to give rise to new and higher emergences. The loss of particular species also exerts significant negative impacts on various cultures and ways of life. This includes the devastation of traditional peoples and cultures through species extinction and endangerment, illustrated

³⁷ S. Diaz, J. Settele, E.S. Brondizio, et al., eds., “IPBES (2019): Summary for Policymakers of the Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services,” *IPBES Secretariat, Bonn, Germany*, 2019, 60 pages.

in the words of the Crow Chief Plenty Coups, “When the buffalo went away the hearts of my people fell to the ground, and they could not lift them up again. After this nothing happened.”³⁸ But it can also be seen in the massive loss of jobs among generational fishermen in New England after decades of pollution and overfishing severely depleted the once seemingly endless stocks of cod and other fish that filled those waters.³⁹ In each case, we note that there is a massive damage to the animal populations, but the damage to these populations also contributed to the undermining of social, cultural, economic, and personal systems that provided a stable foundation for different groups.

Another example that has become all too familiar in recent years is the effect of accumulated plastic pollution on the Earth’s oceans which are then consumed by and become part of the organisms that inhabit and depend upon the ocean. This has been evidenced in a striking fashion by the growing number of dead whale carcasses washing up on beaches around the world, whose stomachs were gorged with discarded plastic.⁴⁰ Aside from such dramatic instances as these, recent investigations have discovered that the majority of the plastics in the ocean break down into microplastics and are ingested by nearly all oceanic creatures, thus bringing them more fully into the world food chain. In fact, some estimates suggest that the average human consumes nearly 40 pounds of plastic over the course of their lifetime.⁴¹ The long-term effects of this ingestion are not

³⁸ See the account of this in Jonathan Lear, *Radical Hope: Ethics in the Face of Cultural Devastation* (Cambridge, Mass.: Harvard University Press, 2006). 2

³⁹ Robert Buchsbaum, Judith Pederson, and William E. Robinson, eds., *The Decline of Fisheries Resources in New England Evaluating the Impact of Overfishing, Contamination, and Habitat Degradation* (Cambridge, Massachusetts: MIT Sea Grant College Program, 2005).

⁴⁰ Johnny Diaz, “Dead Whale, 220 Pounds of Debris Inside, Is a ‘Grim Reminder’ of Ocean Trash,” *The New York Times*, December 2, 2019, sec. World, <https://www.nytimes.com/2019/12/02/world/europe/harris-beached-whale.html>.

⁴¹ Jon Bonfiglio, “Humans Eating Plastic - 40 Pounds in A Lifetime,” *Plastic Oceans International* (blog), December 15, 2020, <https://plasticoceans.org/humans-eating-plastic-over-40-pounds-in-a-lifetime/>.

fully understood at this time, nor is there a clear way to remedy this problem, especially given the massive scale of the oceanic dispersion.

We could produce additional examples of the lasting effects of human environmental destruction *ad nauseam*. The deformation of the good creation caused by human sinfulness is striking and disturbing. The damage done to the environment has real, tangible, and lasting impacts on the concrete situations in which humans find themselves as moral actors. Our effective freedom to choose the good becomes increasingly limited by the realities of poverty, sickness, violence, and other evils that result from prior sinful actions. In an ecological and evolutionary worldview, the sin of the world is revealed to inhere in the very flesh of this world. Much of this damage traces back to human sin—personal, pre-personal, and social—but it has taken on a reality that is larger than any people, society, culture, or government. It represents a brokenness in and of the world that curtails both human and other creaturely possibilities in ways that are beyond our understanding but that must not be beyond our concern. Here, sin and the effects of sin are inextricably tied together, and neither humans nor the larger world can be healed without attending to both as interrelated. These instances of the effects of sin of and in the world speak to a deeper connection between human beings and other creatures than is easily identified in more limited, hamartiological understandings of sin.

Earlier in this chapter, we emphasized some initial loci where we may consider the connections between traditional understandings of sin and the embeddedness of human consciousness and existence in an evolutionary framework: i.e. (1) the dependence of higher emergent functions (e.g. human intelligence, reasoning,

responsibility, and loving) on the proper and healthy functioning of lower manifolds and (2) the relationships of dependence that have always characterized the emergence and ongoing development of human beings both as a species and as a collection of concrete societies and cultures. However, in what follows, we wish to briefly sketch some ways in which the theological category of sin must be situated more fully in relation to other creatures considered according to their own dignity and value. While we cannot do justice to these issues here, we would affirm that a fuller exploration of these and other related issues may prove vital to the larger project of discerning the healing effects of God's grace on the whole of creation.

5.2.7 “Natural” Evil

We begin by considering how recent ecological and evolutionary theologies have called for a reexamination of the realities of non-human creaturely suffering, whether at the hands of human beings or as a result of only “natural” processes. In many theological accounts including that of Aquinas, this suffering is considered explained as “natural” or “physical evil,” which is not directly related to the anthropological category of sin.

While, from the lamb's point of view, it is deemed bad for the lamb to be eaten, it is good for the lion to eat, and it is good for the whole created order to exhibit such a diversity of creatures, including both lions and lambs; the pain and death inherent in this system are the result of creation's physicality and creaturely finitude, both of which are goods in themselves. This natural evil is regarded as distinguishable from the evils that result from human sinfulness, which is distinct form of suffering in the world that is not part of the good order in and of itself.

As an explanatory account at the level of theory, Thomas's distinction helps to resolve concerns regarding a potential contradiction between God as omnipotent, omniscient, and benevolent, on the one hand, and the reality of a creation everywhere marred by sin, on the other. Indeed, as noted in Chapter Two in relation to John Haught's theology, this distinction is an important and enduring achievement, the loss of which has led more than a few contemporary thinkers to consider various forms of process philosophy and theology that seem to do damage to the theology of God in order to do greater justice to the theology of creation. In maintaining this distinction, theologians following Aquinas seek to affirm divine goodness by recognizing the limits of our human understanding of the good—especially the good of the whole, created, world order willed by the wholly good God. In his own theology, Lonergan affirmed that such suffering may be understood as part of the good of the universe, insofar as it pertains to the unconditional intelligibility of the universe of proportionate being. Without their deaths, there could be no continuation of life in the world, and their lives belong to the unfolding of a universal good of order, in which they are valued not only according to some material or instrumental vertical finality, but also in the goodness of their own nature and horizontal finality. As Lonergan was known to have remarked, it would be unreasonable to expect God to confine the goodness of the universe to the model of a kindergarten.⁴²

We would not deny Lonergan's insights or the insights of the larger Christian tradition regarding the way in which these creatures and their lives unfold according to the goodness of the whole world order as God freely and intentionally created it. At the same time, it would seem to be a mistake to ignore the sensitivity of generations of

⁴² As repeated to me by Frederick G. Lawrence and Patrick H. Byrne at different times.

ecologically and evolutionarily concerned theologians, who have so strongly emphasized the intrinsic value of all creatures and have meditated on and imaginatively engaged with the ways in which God may be comforting and redeeming these creatures, saving them also from the sting of death in the word. In the move toward more consciously and deliberately ecological and evolutionary theologies, many have questioned whether this or any such theodicy is adequate or even desirable in an evolutionarily oriented theology. Elizabeth Johnson notes that many contemporary theologians view such traditional approaches to theodicy as “attempts to rationalize what is in fact a deep mystery beyond comprehension, with deleterious practical effects,” favoring instead a variety of approaches that either eschew theodicy altogether or else tie it more strongly to a redemptive, Christological framework.⁴³

This dissatisfaction may be further fueled by the explosion of contemporary knowledge regarding animal behaviors, including especially those cases that evince a level of violence or brutality in both intra- and inter-species contexts that seem, to human sensibilities, to be excessive in relation to sustaining animal life. While we have long recognized the existence of ‘obligate carnivores’ (e.g. cats both big and small, sharks,

⁴³ Johnson, *Ask the Beasts Darwin and the God of Love*. 186-192. She attributes the former view to both Terrence Tilley and Jon Sobrino and the latter to Christopher Southgate and Thomas Tracy. Johnson distinguishes her own approach from any form of theodicy, but she is also critical of approaches like that of Celia Deane-Drummond, whom, she asserts, “addresses [suffering and death] as evils to be fought against” throughout evolutionary history and, therein, conflates the ethical imperative for humans to respond to suffering we create through sinful action and the biological role that suffering and death play in evolution. Rather than attribute these to God’s good plan for the universe, though, Johnson’s argues that suffering and death arise as “the result of the world’s autonomous operation... rather than being imposed from above by direct divine will... [thus refusing to root] it in the eternal will of a good and gracious God.” By tying suffering and death to the consequences of the “free process” of the created world order rather than to God, Johnson then argues that “the most fundamental move theology can make, in my view, is to affirm the compassionate presence of God in the midst of the shocking enormity of pain and death.” While we remain wary of this “free process” approach to a theology of God and creation, in what follows, we will affirm her second principle regarding the imperative for theology to seek out God’s compassionate presence to suffering creation.

snakes, etc.), which lack the salivary enzymes needed to live off plant matter, many species of carnivorous animals exhibit behaviors that to us appear needlessly vicious. Beyond the more mundane example of cats tormenting mice before killing them, consider the observed behavior of some pods of orcas, where the young orca will throw live seal pups back and forth between the jaws of various members of the group before finally tearing it apart. While displays such as these are sometimes theorized to be a function of play among the young that may contribute to their learning vital hunting techniques and social skills, the effects on their victims have raised questions for some about whether this ought to be considered an integral part of the larger good of the whole world order. Similar questions may be raised about practices of cannibalism, infanticide, “tribal warfare,” and vicious and sustained beatings that have been observed in many species of great apes, including most frequently in humanity’s closest relative, chimpanzees.

It is incumbent upon us, here, to note that, from the standpoint of evolutionary biology, these behaviors need not be regarded as puzzling at all. The reaction against this brutality as “excessive” would have to be measured against the actual path of the emergence and sustenance of these species, which, in accord with emergent probability, is wholly intelligible. Whether or not these species *could have survived* without these behaviors seems to be a challenge to whether this creation is a good or the best possible creation, to which we might expect a reprimand from the whirlwind: “Who is this that darkens counsel by words without knowledge... Where were you when I laid the foundation of the earth? Tell me, if you have understanding” (Job 38: 2, 4). Still, while we may recognize the goodness of these creatures and their behaviors insofar as they are part of the intelligible order of the whole cosmos, we would not seek to dissolve the felt

sense of incongruity between these behaviors and the eschatological vision of the peaceable kingdom.

This then brings us to a second concern raised by some theologians regarding the nature of the distinction between natural evil and the evils of sin, namely, as pertains to the evolutionary inheritance of human beings. Some have noted that theodicy may obscure the continuity between human emergence and development and the larger created order. They argue that drawing a strong distinction between human sinfulness and the natural evils of predation and competition that preexist humanity's emergence fails to adequately consider the ways in which human conscious behavior may be shaped by inherited potencies in the lower manifolds. Thus, Denis Edwards describes "a tendency to sin carried not only in our culture but also in our genes,"⁴⁴ and Celia Deane Drummond emphasizes that human sinfulness cannot be understood apart from our "intersubjective and intermoral evolution... [not] in isolation from other species, but in coevolutionary contexts."⁴⁵ These links identified in contemporary sciences raise new questions for theologians that ought not be too quickly glossed over or explained away. On the one hand, we might note that, insofar as a behavior is *caused* by underlying genetic or cultural factors transmitted through a 4-dimensional understanding of evolutionary transmission, it seems that it would not be an instance of personal sin since it didn't involve the effective freedom of the individual person. On the other hand, it is hard to imagine how we would go about identifying any instance of personal sin that arises wholly apart from our embeddedness in both our bodies and our shared histories.

⁴⁴ Edwards, *How God Acts*, 2010. 131.

⁴⁵ Deane-Drummond, *The Wisdom of the Liminal*, 2014. 136

The point, here, is not that we need to scrap the distinction of natural or physical evils from human evils or that we *must* assign moral or proto-moral evil to non-human populations. Rather, we merely wish to emphasize that, in attending to the need for God's healing grace in the world, we consider also whether that healing grace is also needed in situations that do not fit under the narrower and more limited understanding of sin proper as it has evolved in especially the Western Christian context with which we are most familiar. With Elizabeth Johnson, we recognize that Christians are called to hope for and attend to the possible manifestations of God's presence to suffering creatures. With Edwards and Deane-Drummond, we note that the redemption of human sinfulness requires not only a reversal of the damage that sin causes in our own hearts and minds, but also in our flesh and in the flesh of a world situation that is marked in part by our sinful behaviors. And, finally, as we consider the absolute finality of all creatures in relation to their position in the New Creation, we cannot help but wonder whether and how our human discomfort at some of the brutalities we observe in the world and its larger history might be redeemed or transformed in some fashion in the fullness of time. We do not pretend to have answers to these questions here, nor do we suggest that all animal suffering calls for a human ethical response or intervention. Rather, we only wish to suggest some of the new questions that may require greater attention if we are to take seriously all the ways in which God's grace may pertain to the healing of creation as a whole. No account of our thesis as it relates to ecological integrity can be complete without successfully grappling with these issues, even though addressing them further here would distract from the central line of our current argument.

5.3 Grace in (non-human) Animals: Returning to the Question

5.3.1 Grace in (non-human) Animals: Horizontal Finality Revisited

Our awareness of the degree of human deformation of creation as well as the suffering of other than human creatures can help us to consider whether all animals—human or non—stand in need of some analogous form of *gratia sanans* in order to realize their horizontal finality even apart from harmartologically conceive remedial contexts. Initially, we may be somewhat skeptical: while a cat, an orca, or any other animal may act in a way that we find troubling or that we have trouble reconciling with our view of a “Peaceable Kingdom” of all creatures in our imaginative engagements with the hoped for redemption of all creatures together in the fullness of time, it is not obvious that these things undermine the nature of the animal in the way that human nature is undermined by sin. Because our understanding of human nature is specified by our recognition of an unrestricted desire to know and love all things and by our natural desire for God, when we instead act inattentively, unreasonably, irresponsibly, and unlovingly, we recognize that we have in some way failed to live up to our own dynamic nature and so have failed to meet even our horizontal finality, thus requiring a supernatural solution. However, as we noted in our discussion of these matters in Lonergan, this understanding of human nature is not itself only reflective of an abstracted horizontal finality in humans, but rather it presumes human nature as situated both in a unitive world order and in relation to God’s creating, redeeming, saving, and elevating action. The challenge, then, for extending our understanding of the need for grace in order for other-than-human animals to realize their own horizontal finality is that, in general, we have been content to let the

natures of animals be specified by disciplines that do not advert to animals as “created” by God. Of course, to the extent that these same disciplines describe the human animal, we would not expect an account of our horizontal nature that reflects its relation to our absolute and vertical finality. As suggested in the excursus above, however, we recognize that the story of human sinfulness is made less intelligible when abstracted away both from our place in cosmic, evolutionary history and from the relations of dependence in which we stand with other creatures. Thus, in adverting to the horizontal finality of animals, here, we would suggest that, while the account of these creatures suggested by the natural sciences remains valid and important, it is inadequate to filling out this theological conjugate. For this, we must appropriate those descriptions of lower sciences within the higher theological manifold. While this task is considerably more difficult than appropriating the natural, social, and human scientific accounts of human beings into a theological conjugate since that task is more easily mediated by our appropriation of our own lived experience as subjects, we may nevertheless gain some initial intimations into these effects of grace outside of human existence by attending to the prophetic account of Saint Francis of Assisi’s interactions with various animals as recorded by his contemporaries.

Consider, first, the story of the wolf of Gubbio, which provides an instance of Francis mediating a kind of healing grace to both the wolf and the townspeople of Gubbio whom he had terrified through his attacks. Francis makes a sign of the cross in front of a hungry, human-eating wolf, who responds by not only “closed its terrible jaws and stopped running... [and] lowered its head and lay down at the Saint's feet,” but, in response to Francis’s offer of a peace with the local villagers, “knelt down and bowed its

head, and by twisting its body and wagging its tail and ears it clearly showed to everyone that it would keep the pact as it had promised... [and] raised its right paw and put it in St. Francis's hand as a pledge."⁴⁶ In this story, it is clear that God's gracious outpouring of love functions to heal broken relationships in a local ecosystem.

However, we may distinguish this from other stories, such as Francis's preaching to the birds and fish. While Francis intends to elicit some response from these creatures, it is neither to address any obvious brokenness. Rather, his aim seems to have been to call forth some particular goodness in the birds and fish, *as* birds and fish, by preaching to them about the absolute finality as revealed in scripture. Therein, he calls them into a new realization of not only their own nature vis a vis their horizontal finality, but also to participate in a new way in the vertical finality that connects all creatures. Even if they remain more at the level of imaginative engagement than concrete demonstration, these stories invite us to regard these creatures through the prophetic vision of Saint Francis and to ponder how we might live in transformed relationships with these creatures.

As we prepare to consider how grace heals and elevates animals according to their vertical finality, we must pause for a moment to meditate on the importance and dignity of these creatures in their own particularity and natural perfections. These effects are somewhat easier to observe in the fulfillment of the vertical finality of creatures, but to skip over the role of grace according to their particular natures is to risk obscuring their

⁴⁶ Raphael Brown, trans., *The Little Flowers of St. Francis* (New York: Image Books, 1958). 88-92. While we would not argue for these stories as history in the strict, modern sense of the word, we are nevertheless justified in treating them as religiously true and as relevant sources for our theological reflection. Like many stories about St. Francis, the story of the wolf of Gubbio has also been challenged, at least as regards its historicity. While the presentation in the *Flowers* may be hagiographical, it does not present the events as wholly fantastic, as the wolf does not speak or act as a human. Moreover, the story is also recorded without some of the more unusual details—e.g. nodding at particular statements—from other authors referring to Francis in less hagiographic contexts, as recorded at numerous points in Regis J. Armstrong, *Francis of Assisi, Early Documents*, vol. 3: *The Prophet* (New City Press, 2002).

dignity apart from their contributions to higher orders of evolutionary emergence. As we noted above, “the reality of proportionate being itself exhibits a similar incompleteness and a similar dynamic orientation toward a completeness that becomes determinate only in the process of completion...”⁴⁷ So much to say, while these creatures may be considered as different levels in an unfolding cosmos, their own emergence and perdurance as *this* particular kind of creature represents something irreducible. Without the concreteness of their being, there could be none of the stability that underwrites the emergence of other new things. In Lonergan’s terms, they represent a stable “scheme of recurrence” that becomes the foundation for new and higher emerging schemes. As Lonergan’s account of emergent probability shows, the integrity of each process builds on the processes of so many lower aggregates and stands in potency to those creatures that have emerged and that will emerge in the years to come. And so, holding on to this respect for each distinct individuality of each creature, we may now consider how their life processes are tied up with those of so many others.

5.3.2 Vertical Finality

We would begin by situating our understanding of vertical finality within Lonergan’s account of generalized emergent probability. Lonergan demystifies (without disenchanting) the phenomenon of genuine newness in cosmic evolutionary history by articulating the relationship between four distinct forms of intelligibility—classical, statistical, genetic, and dialectical— noting that, over long enough periods of time, relatively unlikely events may occur, given the right circumstances. Generalized

⁴⁷ Lonergan, *Insight*, 1992. 470

emergent probability clarifies the distinct intelligibilities proper to newly emerging schemes of recurrence since the organization of lower aggregates may give rise to a new reality capable of initiating what is sometimes referred to as “downward causation” in relation to the lower levels.⁴⁸ Lonergan also makes explicit the symmetry or “isomorphism” between the intelligibility of the world and (at least) human intelligence, such that “the real” is constituted by whatever can be experienced either sensorially or at the level of interiority, understood, and judged to be a correct understanding based on the evidence. Therein, generalized emergent probability provides a robust framework for organizing the various explanatory accounts of distinct natural, social, and human sciences in their efforts to understand the world and for relating these to our own account of the unfolding of graced nature according to its vertical finality.

As previously noted, Lonergan described four different types of vertical finality: instrumental, dispositive, material, and obediential. While he only focused on grace in relation to obediential potency in humans, we have seen how Robert Doran’s work on the mediating role of the psyche grounds Lonergan’s work in a more physical and fleshly reflections, therein suggesting that grace also operates in humans in relation to these other three forms as well. In our examination of human beings and their ongoing conversion, divinization, and hoped for consummation, we affirmed that vertical finality pertains to two different but related processes in human lives. First, it describes the process of sublation of the lower manifolds of physical, chemical, biological, and sensitive psychic energy into the conscious psyche of a mentally, emotionally, and spiritually healthy adult.

⁴⁸ The precise meaning of “downward causation” in relation to a variety of scientific and philosophical accounts of emergence is treated at greater length in the next chapter, but we would remind the reader, here, that it does not entail the abrogation of the lower explanatory accounts of world process by the higher.

Second, it also incorporates (1) the sanctification of human beings through the gift of the Holy Spirit, (2) our integration into the interior life of the Trinity, and (3) the connection between this divinization in the present and the promise of resurrection and glory in the life to come. Both Lonergan and his students acknowledge that generalized emergent probability and vertical finality may helpfully explain both natural phenomena in the order of nature and supernatural phenomena in the economy of grace and divinization in human beings.⁴⁹ They also acknowledge that grace in human lives may effect both relative and absolute supernatural orders, as grace is involved in both (1) healing the human organisms and psyches so that they may collaborate with the levels of the dynamism of conscious intentionality and (2) facilitating the reception of the habit of charity and the foretaste of the beatific vision. Our question, then, regards how grace may also be recognized in the elevation of non-human animals to either relatively or absolutely supernatural orders.

We may consider vertical finality in relation to animals in accord with their manifold diverse contexts. One particular place we might desire or even expect to find God's grace at work is in response to the pain, fear, and death that animals undergo in the course of their lives. Elizabeth Johnson and Denis Edwards, who argued that God suffers

⁴⁹ See for instance, the following passage, in which Lonergan explicates the continuity between the changes brought about by grace and the natural order with which it works in concert: "No doubt, once man was established within the supernatural solution, all would be well. For such a solution would be a higher integration; of its very nature it would respect and indeed foster the unfolding of all human capacities; and just as the organism attains the height of its complexity and versatility under the higher integration of animal consciousness, just as the psyche reaches the wealth and fullness of its apprehensions and responses under the higher integration of human consciousness, so also would human excellence enjoy a vast expansion of its effective potentialities under the higher integration of the supernatural solution. Still, generalities can be very misleading. It is not to be forgotten that the solution is a harmonious continuation of the present order of the universe, that it is constituted through conjugate forms that develop, and that its realization and development occur through acts of human acknowledgement and consent that accord with probability schedules...." Lonergan, *Insight*, 1992. 747-748.

with and accompanies other animals through these experiences as God does for the human animal already have foregrounded this concern, as we have seen. Theologians have in part addressed the question of human evil and suffering emphasizing the solitary presence and love achieved in God's own suffering in the life, passion, and death of Jesus Christ. A second emphasis has been on the redemption from this suffering and death promised to us through our participation in Christ's resurrection, the effects of which have already begun now in the life of grace and as brought to completion in the general resurrection and, in the fullness of time, in the beatific vision. How might other animals stand in need of their own proportionate forms of relief and redemption?

5.3.3 Distinguishing Pain from Suffering

First, it is critical that, with Neil Ormerod, we distinguish between pain and suffering. Pain, he writes, is proper to all animals insofar as they are consciously oriented toward a greater responsiveness to their environment, and it functions "as the body's warning system that something is wrong... [It] occurs when a finite conscious being reaches limits, whether those limits are physical... chemical... biological... or psychological."⁵⁰ Pain, therefore, common to all animals insofar as they are conscious. By contrast, he defines suffering as "pain that precipitates a crisis of meaning or purpose... [and is therefore] a particularly human experience because meaning is central to human living."⁵¹ According to Ormerod, we may seek to negotiate this suffering through "discovering" or, more often still, "creating" meaning in order to reduce our suffering. For instance, "some victims of crime might work for greater justice, through changes in the law, to help

⁵⁰ Ormerod, *A Public God*. 155

⁵¹ Ormerod. 156

minimize the possibility of the same thing happening to others. While the pain of loss may remain, the suffering is alleviated by the creation of this meaningful outcome to a bad situation.”⁵² Thus, Ormerod’s distinction suggests that we ought not predicate suffering (so understood) of any animals that lack a developed sense of meaning.

Ormerod’s distinction is helpful insofar as it correctly clarifies how the theological imperative is not to articulate an account of redemption that would remove all pain, but to try to make sense of the pain and suffering in relation to the more comprehensive meanings present in the story of the universe. Nevertheless, we remain somewhat unconvinced that humans are the only kind animal capable of raising any questions of meaning: Think, for instance, of the confusion that an abused dog demonstrates when it is beaten by an owner to whom it is devoted. It is not merely a reaction to a painful impulse or the acknowledgement of a limit; the dog exhibits a felt incongruity between the expectation of kind treatment from a trusted person and the reality of the violent behavior it undergoes. Distinguishing between this sort of experience and the pain experienced by an accidental injury or illness seems partially to be warranted by the fact that prolonged abuse tends to have a corrupting effect on the temperament of dogs as well. Similarly, an abused dog can learn to trust again in the care of a patient and gentle owner or family. And when, through death or separation, a dog loses the companionship of another dog or human with which it has bonded, its experience of loss suggests still another form of distress that we would avoid collapsing into the same category as responsiveness to physical pains. In any case, while we see no reason to equate these experiences with our own human experiences of making meaning

⁵² Ormerod. 156-157

and overcoming suffering, we would affirm that, perhaps, a wide variety of creatures experience at least proportionate forms of suffering in relation to their specific capacities.

5.3.4 God's "Suffering With"

We have to wonder, then, whether God's grace also heals the pain or suffering of different kinds of creatures, at least in line with their particular capacities to feel and understand them. At the level of individual animal consciousness, this question is difficult to answer. With Elizabeth Johnson and other proponents of Deep Incarnation, we may also affirm that God suffers with the totality of creation through the passion and death of Jesus. In light of God's own willingness to suffer together with and for us in the flesh, Johnson emphasizes the "compassionate presence of God in the midst of the shocking enormity of pain and death."⁵³ However, as Johnson acknowledges, we are left asking whether this presence makes any difference, at least at the level of the individual creature in their moments of terror and suffering. For humans, we believe that, in addition to the fact of God's omnipresence, our knowledge of this presence as gained through our belief in God's revelation may provide an objective form of consolation and hope; however, there is little empirical warrant for asserting this in relation to non-human animals, especially in the case of those possessing little to no demonstrable intelligence. Quoting Christopher Southgate, Johnson concedes this point:

When I consider the starving pelican chick, or the impala hobbled by a mother cheetah so that her cubs can learn to pull a prey animal down, I cannot pretend that God's presence as the 'heart' of the world takes the pain of the experience away; I

⁵³ Johnson, *Ask the Beasts Darwin and the God of Love*. 191

cannot pretend that the suffering may not destroy the creature's consciousness, before death claims it. That is the power of suffering... I can only suppose that God's suffering presence is just that, presence, of the most profoundly attentive and loving sort, a solidarity that at some deep level takes away the aloneness of the suffering creature's experience."⁵⁴

Both Southgate and Johnson note that their hope for a felt sense of God's presence in other creatures is a kind "anthropomorphic guess," since we have at best indirect access to animal consciousness. Nevertheless, their human desire to make sense of the hundreds of millions of years of animal existence marked by pain, suffering, death, and extinction provides further warrant for our continued use of the term suffering in relation to animals within the context of an integral understanding of creation within the comprehensive world order.

Perhaps the nature of their answer may be to be rather dissatisfying at first blush. Nevertheless, it embodies something more than mere gratuitous assertion. Our account of grace functions as something of a conjugate form—in this case, a particular way of explaining a thing or series of events that follows from a set of questions posed by one looking at the world through the eyes of faith. A significant role played by this conjugate form is to ground the sublation of the many other natural accounts so that physical, chemical, biological, or zoological sciences do not presume to exhaust the possibly relevant ways of understanding occurrences in the world. While a beetle certainly entails these lower, natural conjugates as part of its being, we can raise the question of whether

⁵⁴ Christopher Southgate, *The Groaning of Creation: God, Evolution, and the Problem of Evil*, 1st ed. (Louisville: Westminster John Knox Press, 2008). 52, in Johnson, *Ask the Beasts Darwin and the God of Love*. 206.

the fullness of its being would be badly truncated by being restricted to these levels of explanatory understanding. To be sure, the supernatural character of grace along with human limitations for entering into the conscious experience of other creatures may limit what we can concretely affirm, there remains this hopeful (if anthropological) guess as a heuristic higher viewpoint challenging us to ever greater attention and openness to the ways in which all things are brought to completion beyond all human anticipation.

5.3.5 Vertical Finality in Species Transcendence

This grace-enabled confidence in God's presence and its meaningful effect on each and every instance of creation opens up a widened and deepened affirmation of grace in the everyday existence of all creatures in the more mundane vertical dimensions of their lives. Through their reproductive capacities, bonds of kinship, social behaviors, and even in their very dependent existence taken as a whole, we are already aware that animals exhibit a transcendent connection with other creatures in and beyond the conjugate forms proper to their own existence.⁵⁵ Of course, their behaviors have been and should be understood in relation to their specific natures as well. However, the fact that these behaviors are part of the everyday lives of these creatures and that they surely are "natural" to the creatures as the kind of creatures they are need not prevent us from also asking whether they also ought to be understood as part of a universal theology of grace.⁵⁶ It may be objected that such a broad definition of grace undermines the

⁵⁵ By "transcendent," we mean that these behaviors link creatures both synchronically and diachronically with other species in a way that transcends the intelligibility relative to their explanatory species and genus. We do not, of course, mean to imply that this is equivocal with Lonergan's particular, technical meaning of self-transcendence in which human inquirers arrive at understandings, judgments, choices, and values that release the tension of inquiry by satisfying the desire to genuinely know reality in this robust sense.

⁵⁶ While there may be some hesitation to name the verticality of all creatures an effect of their being a composite of nature and grace, there are at least some indications that this position is not without precedent

usefulness of the term or of the distinction between nature and grace, but this need not necessarily be the case. We may still maintain the distinction between the grace of nature, on the one hand, and grace as operative, cooperative, and completing, on the other.

Moreover, we maintain that, while the whole of world is permeated by grace, we may also recognize moments that show forth that grace in a special way, just as we do in our recognition of the special moments of grace realized in the liturgy, prayer, and the sacraments. That is, just as there is needed a graced habit in order to recognize these particular, graced moments as graced in human lives, so, too, is there a need for us to develop our capacity as “sacramental beholders” in relation to this grace of nature.⁵⁷

While we can only scratch the surface of the possibilities, we would briefly consider how our understanding of just one topic, sexual reproduction, might suggest numerous points for deeper reflection in relation to the vertical finality of animals.

in the tradition. In his response to Martin Luther’s rejection of the freedom of the will, Erasmus stipulated four different types of grace: “There are then, first natural grace, second an exciting or operative grace, which is, to be sure, imperfect, third an efficient grace, which we have called cooperative, and which promotes that which is begun, and fourth a grace which leads to the final goal. The last three are supposedly one and the same grace, even though according to its operation in us, we call it by different names.” While the latter three are perhaps more familiar to most readers, Erasmus recognizes the need of affirming a “grace we possess by nature” against Luther’s overemphasis on the fallenness of the world. Natural grace—also referred to as “natural influence”—is “common to all mankind,” and may be seen in the universal freedom to “speak or keep silent, to sit or to stand up, to help the poor, to read holy books, to listen to sermons.” Erasmus notes that some would oppose naming this basic, universal divine empowerment “grace,” but he affirms the title nevertheless: “For God as creator, conservor [sic] and governor of this world everyday achieves greater miracles than the healing of a leper or the exorcism of demons. But we don’t call these divine acts of maintaining the world miracles, because they are obvious to us everyday.” While, in the context of Erasmus’s debate with Luther, he circumscribes his examples to human nature alone, the breadth of his vision is striking. Erasmus clearly emphasizes a view of the whole world as being shot through with this grace of nature, emphasizing that the ubiquity of examples alone engenders our forgetfulness of its graced character. Some readers may suspect Erasmus of abandoning of the theorem of the supernatural, here, and conflating the gift character of the natural goodness in the world with grace. However, given that Erasmus is responding to Luther in particular, it seems unlikely that this emphasis on natural grace is meant to undermine the goodness of the category of nature itself, which he defends against Luther’s theological attacks elsewhere. See Erasmus and Luther, *Erasmus-Luther: Discourse on Free Will*, trans. Ernst F. Winter, 7th printing edition (Frederick Ungar Publ. Co., Inc., 1973). 28-30.

⁵⁷ For the reference for this term, discussed also in Chapter Two of this dissertation, see Johnson, *Ask the Beasts Darwin and the God of Love*. 40-44, especially 42.

Though today common to approximately 99% of all multicellular eukaryotes including the vast majority of animals, the emergence and broad perduring fact of sex as the primary form of reproduction for animals is often remarked upon as a surprising evolutionary development. This surprising character owes to the “exquisitely high costs of sex, which include the time and energy it takes to find a mate, the passage of only half of one’s genes to the next generation, and the breaking apart of favorable gene combinations.”⁵⁸ While some of the benefits are perhaps obvious—especially the possibilities that it offers for adaptation during periods of rapid or extreme environmental change—many scientists have questioned whether these gains offset the costs.⁵⁹ While this language of cost and benefit suggests a subtle form of anthropocentrism that not infrequently infiltrates scientific inquiry, we would note that, in raising these further questions, it does not seem that these scientists are challenging the full intelligibility of the world. That is, if sex emerged and survived, it did so in accord with probabilities. Rather, in raising these further questions, these scientists are asking after the larger patterns of meaning that constitute this particular world. As Megan Scudellari

⁵⁸ Megan Scudellari, “The Sex Paradox,” *The Scientist Magazine*, June 30, 2014, <https://www.the-scientist.com/cover-story/the-sex-paradox-37259>. While sexual reproduction is also found in plants and other living species, its prevalence in animals is much higher. Approximately 96% of all plant species are hermaphroditic, meaning that every plant or even every flower contains both sexual functions and can pollinate on its own—or with a little help from insects or other species. Compare this with the animal kingdom, in which less than 5% exhibit hermaphroditism.

⁵⁹ Since the late 19th century, many scientists have offered their own accounts of the hypothesis that sexual reproduction may confer superior evolutionary advantages over asexual reproduction due to its potential for more rapid species adaptation. These accounts are often grouped together as variants of the “Fisher-Muller Hypothesis,” named for Ronald Aylmer Fisher and Hermann Joseph Muller, who separately articulated influential forms of this hypothesis in the middle of the 20th Century. Alternatively, the range of these different accounts are sometimes referred to as variants of the “Vicar of Bray Hypothesis,” which references a semi-fictional vicar who, beginning with the monarchy of Henry VIII, vacillated between allegiance to the Protestant and Catholic churches in England in line with the religious preferences of the monarch. For a history of these variants and for perhaps the most influential variant suggested in recent years, “The Red Queen Hypothesis,” see Matt Ridley, *The Red Queen: Sex and the Evolution of Human Nature* (New York: Macmillan, 1994).

summarizes, “In a static world, sex is likely unnecessary. The ever-changing environments of Earth call for a different scenario, however.”⁶⁰ As Scudellari remarks, in relation to the task of biological self-reproduction, sexual reproduction represents something of a loss on the part of both sexual partners, only half of whose genes will be present in any given offspring. Nevertheless, the advantages of exceptional diversification are notable, including greater adaptation even to rapid environmental changes and a significant resilience against species extinction caused by parasites and disease—at least in sufficiently large animal populations.⁶¹

In relation to our theological framework, the biological emergence of sexual reproduction suggests many potentially-fruitful points of reflection on the interconnecting role of vertical finality both within and between various species. Within a species, each birth generates a genotypically and phenotypically unique individual, differentiating *this* creature from its predecessors and peers. While sexual reproduction still produces the same kind of creature (according to metaphysical accounts of common nature, essence, or central form), sexual reproduction regularizes the otherwise more remote possibilities of change and grants a greater range of fleshly particularity to creatures within a given genera or species.⁶² This is not a claim to metaphysical individuation according to

⁶⁰ Scudellari, “The Sex Paradox.”

⁶¹ Nick Colegrave, “Sex Releases the Speed Limit on Evolution,” *Nature* 420, no. 6916 (December 2002): 664–66, <https://doi.org/10.1038/nature01191>.

⁶² This insight provides new opportunities for theological reflection on creaturely particularity to be joined to natural scientific reflections. We would suggest, for instance, that the recent eco-theological reflections on Duns Scotus’s principle of individuation, termed “*haecceitas*” or the “this-ness” of each creature, might offer one particular area of dialogue. See, for instance, Daniel P. Horan, “Haecceitas, Theological Aesthetics, and the Kinship of Creation: John Duns Scotus as a Resource for Environmental Ethics,” *Heythrop Journal* 59, no. 6 (2018): 1060–76, <https://doi.org/10.1111/heyj.12490>. *Haecceitas* refers to “the material substance [becoming] individual through a principle that contracts the common nature (*natura communis*) to singularity,” rather than through some “accidental quality or extrinsic material.”⁶² Thus, it is an attempt to get at creaturely particularity through a theoretical, metaphysical approach. However, we would suggest that a greater attention to this history of genotypic and phenotypic differentiation through the emergence of sexual reproduction provides a more concrete form of corporeal individuation. Rather than

material difference. Rather, it describes the process by which each individual creature shows forth differences from other creatures at each level of emergent reality: physical, chemical, biological, zoological, and so on. It allows for the differentiation and identification of creatures as individuals with their own defining features, with their own defining histories, the stories of which are recorded genotypically in their DNA and phenotypically on their bodies. This is a significant differentiation of historical and not merely theoretical significance, for the comparatively-rapid diversification of individuals in a species through sexual reproduction contributed vitally to the concrete manifolds of difference that grounded complexification through emergence in evolutionary history. Thus, while the move from diploid to haploid genetic reproduction of each individual creature may suggest a loss of individual fitness from the standpoint of theorists of genetic selfishness, this form of co-reproduction concretely enriches the creative potential of the lower manifolds to generate new and surprising higher possibilities both within and beyond the species. In fact, without the higher rate of creative mutation associated with sexual reproduction, it seems considerably less likely that higher animals up to and including humans would have emerged on Earth during this stable phase of its climatic history.⁶³

introducing new metaphysical terms, then, attending to the biological conjugate as biological may offer new possibilities for thinking through corresponding theological insights. While we would suggest that the example of genetic individuation parallels the concerns of Scotus's position, we are not arguing either that these two views are equivocal or that Scotus's metaphysics is congruent or congenial to Lonergan's or Aquinas's, which quite plainly has not been placed in common possession.

⁶³ The importance of sexual reproduction and favorable genetic convergence is explored in greater detail in Simon Conway Morris, *Life's Solution: Inevitable Humans in a Lonely Universe*, 1st pbk. ed. (Cambridge, UK; New York: Cambridge University Press, 2005), which will be treated at greater length in the next chapter.

Consider further that the basis for sexual selection, especially in higher order creatures, is ruled not only by the mechanistic interplay of only classical and statistical but also genetic intelligibilities, especially regarding partner selection among increasingly intelligent creatures.⁶⁴ In this way, there is a verticality within the species between successive generations as they struggle to maintain their place within a changing world. Moreover, for at least some species of animals, the necessity to find a partner for sexual reproduction contributed greatly to the emergence of social behaviors among members of the same species. Particularly in those species whose gestation and maturation periods are quite long, this has also led to the emergence of family units as well as larger social units for the protection of young, behaviors which represent the evolutionary precursors to human societies and cultures. Just as *Laudato Si'* emphasizes that the issues surrounding care for our young, old, poor, and vulnerable are inseparable from our care for our common home, evolutionary history shows forth the way that these connections that form the basis for an ecological spirituality in humans are rooted in much longer chains of emergence in relation to newly emerging (natural) creaturely capabilities.

⁶⁴ Of course, even among humans, this is not always the case. It should be noted that, throughout the broad range of the animal kingdom, characteristics that may be desirable for a prospective mate—such as a large and highly visible plumage in certain species of birds—may in fact decrease the likelihood of evading local predators and thus decrease “fitness.” Even beyond these questions, however, it should be noted, here, that our assertion of a relationship between the intelligences of humans and of other non-human animals is not meant to level the differences between them. As previously noted, Lonergan defines human intelligence in relation to our pure, detached, disinterested, and unrestricted desire to know and love everything about everything, which grounds the dynamic, conscious pattern of attending, understanding, marshalling and weighing evidence, judging truth and/or value, and acting in the world. Though scientific investigations into the relative intelligence of other animal species is still ongoing, there is, to my knowledge, little evidence that would support our predicating these conditions of other animals, nor is it clear how such a fact would be established without access to the same data that we have on our own intelligence only through a phenomenological self-appropriation of our own acts of knowing and loving. Nevertheless, while we would not, therefore, seek to equate these “intelligences,” it would be a mistake to wholly divorce these phenomena given our shared evolutionary history. For a helpful treatment of a number of positions on the relationship between the two, including that of Thomas Aquinas, see MacIntyre, *Dependent Rational Animals*. For a critique of MacIntyre’s argument through the lens of Lonergan’s critical realism, see Andrew Beards, “Critical Realism, MacIntyre, and Animal Consciousness,” *Angelicum* 83, no. 3 (2006): 495–513.

More striking still in terms of the extent of vertical finality throughout evolutionary history is the way in which sexual reproduction has proven key to the emergence of new species and to the deep connections that obtain between species. The commonsense understanding of evolution entails that species change over time, eventually giving rise to new species, but the complexities of this process are comparatively less well-known. In fact, the distinction between species by biologists turns out to be quite complicated. Perhaps the most well-known biological theory accessible to the general public is Ernst Mayr's 1942 articulation of what has come to be called the "Biological Species Concept," in which he argued that a new species may be distinguished from the line from which it emerged when its genes or traits have sufficiently diverged to prevent successful interbreeding, at least not beyond a single generation.⁶⁵ Thus, while two different species with a single genus may be able to reproduce—the pairing of a horse and a donkey to produce a mule, for instance—the offspring produced by such a union are sterile.

While the Biological Species Concept has circulated broadly among both professional and lay audiences, the reality has proved to be significantly more complicated, as numerous genetic studies in the intervening years have challenged this theory. Thus, significant periods of successful interbreeding have been demonstrated to exist between species that have long been considered distinct.⁶⁶ Recently publicized

⁶⁵ Ernst Mayr, *Systematics and the Origin of Species, from the Viewpoint of a Zoologist* (Cambridge, Mass: Harvard University Press, 1942).

⁶⁶ In fact, the complexities of delineating species have become so fraught as to attract additional attention from both biologists and philosophers. See, for example, James Mallet, "Hybridization, Ecological Races and the Nature of Species: Empirical Evidence for the Ease of Speciation," *Philosophical Transactions of the Royal Society B: Biological Sciences* 363, no. 1506 (September 27, 2008): 2971–86, <https://doi.org/10.1098/rstb.2008.0081>. In contrast with the emphasis on real, distinct species based on the earlier work of thinkers like Ernst Mayr and Theodosius Dobzhansky, Mallet argues that Darwin's original and subsequently often disregarded view of species being comprised of a series of more or less continuous

examples of this include the admixture of chimpanzee (*Pan troglodytes*) and bonobo (*Pan paniscus*) DNA, along with that of some mystery “ghost species” of ape;⁶⁷ as well as the rise in interbreeding between grizzly bears (*Ursus arctos horribilis*) and polar bears (*Ursus maritimus*) resulting from the depletion of arctic habitats, which have brought the species into ever closer proximity in their search for food.⁶⁸ Examples of this hybridization are widespread, blurring the strong distinctions that we often think of as separating various types of animals.⁶⁹ Our own species is no exception, as there has been a growing body of research detailing the interbreeding between what we often think of as modern humans and both Neanderthals and Denisovans, both of whom have come to be classified by some taxonomists as subspecies of *Homo sapiens*. There is also increasing evidence of interbreeding between humans and both *Homo erectus* and *Homo habilis*.⁷⁰

The evidence of genetic and cultural exchange between these other hominids and what

varieties. On the basis of this evidence, Mallet also mounts a brief critique of Creationist accounts, which rely on clearer distinctions and effective separations between different kinds of animals, most especially the human animal.

⁶⁷ Marc de Manuel et al., “Chimpanzee Genomic Diversity Reveals Ancient Admixture with Bonobos,” *Science* 354, no. 6311 (October 28, 2016): 477–81, <https://doi.org/10.1126/science.aag2602>; Martin Kuhlwilm et al., “Ancient Admixture from an Extinct Ape Lineage into Bonobos,” *Nature Ecology & Evolution* 3, no. 6 (June 2019): 957–65, <https://doi.org/10.1038/s41559-019-0881-7>.

⁶⁸ See Jodie D. Pongracz et al., “Recent Hybridization between a Polar Bear and Grizzly Bears in the Canadian Arctic,” *ARCTIC* 70, no. 2 (May 31, 2017): 151-160-151–60, <https://doi.org/10.14430/arctic4643>. While the authors note that the increasing number of hybrid bears can be traced back to just three non-hybrid parents, they also posit that the “breakdown of species barriers may start with atypical mating preferences of select individuals.”

⁶⁹ It should be noted that, for all the talk of blurring, evolutionary emergence is not simply one continuous line of species connected in more or less linear fashion and unfolding on predictable, linear timelines. Beyond the obvious examples of the many species lines that have gone extinct entirely, the theory of punctuated equilibrium, first posited nearly forty years ago, has convincingly argued that major evolutionary emergences tend to occur in fits and starts, rather than a slow and steady continuous march. For its first mention, see Niles Eldredge and Stephen Jay Gould, “Punctuated Equilibria: An Alternative to Phyletic Gradualism,” in *Models in Paleobiology*, ed. T.J.M. Schopf (San Francisco: Freeman Cooper, 1972), 82–115. However, even the relatively brief time frames of new species emergence that it theorizes take place over numerous generations of creatures.

⁷⁰ Adam Clark Estes, “It Wasn’t Just Neanderthals: Ancient Humans Had Sex with Other Hominids,” *The Atlantic*, September 6, 2011, <https://www.theatlantic.com/technology/archive/2011/09/it-wasnt-just-neanderthals-ancient-humans-had-sex-other-hominids/338117/>.

we think of as modern humans has been a subject of much theological reflection already, particularly in light of the evidence of religious or proto-religious art and rituals of these other hominids.⁷¹ In any case, the point, here, is that the emergence of new species—including our own—is one of surprising emergence of something new, but that the newness of each is and quite frequently remains deeply intertwined with what and who came before.

Without getting bogged down in the complexities of these various areas here, some of which will be the focus of our investigations in the following chapter, we may here make two key points. First, the overlap between species at the point of new species emergence and the phenomenon of interspecies breeding after their emergence underscores the fundamentally interconnected character of different animal species throughout evolutionary history. This phenomenon is perhaps especially striking in relation to the emergence of anatomically modern humans, since the attribution of grace to humans alone becomes significantly convoluted by the labyrinthine twists of our genetic and social history with other species. Second, though, the idea of emergence in relation to new animal species is significantly more complex than most of us are accustomed to thinking. Though we will reserve discussion of this question for the next chapter, we might here simply say that the judgment that a new thing or a new kind of

⁷¹ The most prominent contributor to this discussion has been J Wentzel Van Huyssteen, whose contributions to both theological and scientific debates led to his selection as the Gifford Lecturer in 2004, which lectures were reprinted as J. Wentzel Van Huyssteen, *Alone in the World?* (Grand Rapids, Mich: Eerdmans, 2006). For a recent treatment of his work and several more recent developments of his ideas, see J. Wentzel Van Huyssteen (Jacobus Wentzel) honouree, Christopher Lilley editor, and Daniel Pedersen editor, *Human Origins and the Image of God: Essays in Honor of J. Wentzel van Huyssteen* (Grand Rapids, Michigan: William B. Eerdmans Publishing Company, 2017). For a discussion of the various members of the genus Homo in relation to modern humans and the scope of human concern in *Laudato si'*, see Thomas Hughson, “Interpreting *Laudato Si'*: What Does It Mean to Be Human?,” in *Everything Is Interconnected. Towards a Globalization with a Human Face and an Integral Ecology*, ed. Joseph Ogbonnaya, First edition (Milwaukee: Marquette Univ Pr, 2019), 159–77.

thing has emerged has an irreducibly metaphysical component. As our brief treatment of Lonergan's critical realist metaphysics in the previous chapter avers, this does not in any way reduce the significance of the other conjugate explanations supplied by geneticists, taxonomists, animal behaviorists, etc., but it does make clear that category of emergence involves something beyond the creature in and of itself. In fact, as we will see, it involves a whole range of intra- and inter-species relationships with other creatures, all of which are taken up and sublated in the vertical finality extending between creatures and the horizontal finality of all creatures to God.

In each of these examples, individual animal creatures and whole species are caught up in a verticality that carries them beyond themselves, and, in at least some instances, yields the emergence of higher complexities, including the burgeoning of consciousness, self-consciousness, and intelligence. While these points have been recognized by theologians engaged in ecological, evolutionary, and more broadly scientific questions for some time, we are now poised to affirm this dynamic and deeply interconnected reality as part of a world order that is a composite of nature and grace, all the way down. The processes of mutation, selection, and—as we will treat more fully in the next chapter—cooperation in and between species may also produce a great number of non-viable offspring and may in some cases contribute to the dying off of a whole species. Nevertheless, we recognize in the emergence and development of animals within the world a movement toward increasing complexification and an “indeterminate, upwardly directed dynamism” that, through the eyes of faith, we come to recognize as God's creating, healing, and elevating action in a world that constantly impels creatures beyond themselves and their own limitations when considered in

isolation. While we ought not invoke the notion of grace as shaping the intentionality of all these creatures with regards to this upward trajectory—at least below the level of certain demonstrable intellectual and at least proto-moral capabilities—we can become more attentive to particularly graced moments that may emerge from this graced order.

5.4 Grace in Non-Animal Life

So far, we have worked to enlarge our understanding of grace as co-constitutive of all creation and not solely as the effects of God's presence in human lives. Now, we will consider the presence and difference of grace in living beings other than animals. While our consideration of grace in the animal kingdom kept the discussion close to home, the move to plants, fungi, etc. takes us much further away from these more familiar contexts. Tracing grace back to the emergence of the first modern humans takes us back between two and three hundred-thousand years. The consideration of grace among hominids more broadly pushes these considerations much further still, to between six and seven million years ago. If this latter category already taxes our powers of imagination well beyond its normal limits, the imaginative bridge connecting us to the split between our own animal kingdom and the plant and fungi kingdoms some 1.5 billion years ago may seem at first a bridge too far. For this reason, significant parts of this section will focus on highlighting the richness of plant life and relationships that are mostly unknown to so many people today. However, as in the last section, we do well to remember here that affirmation of and attention to graced nature in the whole of the created order need not—and, indeed, ought not—consist of human experiences of grace writ large. Rather, we begin by looking for instances of these creatures being brought to a disproportionate excellence

through an upwardly directed, if indeterminate, dynamism that is an expression both of their connection to other creatures, other species, and, ultimately, to God.

5.4.1 Absolute Finality

But what, then, might we mean by affirming the absolute finality of a tree to God? Here, we find ourselves without the aid of our two Francises—pope and saint, respectively—whose writings and prophetic visions and actions have typically focused more on fauna than flora. One helpful starting point for this reimagining may be found in the relationships between the Ethiopian Orthodox Tewahedo Church and the groves of trees that surround their church buildings, which was recently portrayed in a short documentary film published online by the New York Times.⁷² Dr. Alemayehu Wassie Eshete, a forest ecologist from Ethiopia, has dedicated his life to defending and strengthening the historic relation of dependence between the church communities and the forest around them.⁷³ A lifelong member of the church himself, he explains that, “In Ethiopian Orthodox Teaching, a church—to be a church—should be enveloped by a

⁷² The Ethiopian Orthodox Tewahedo Church is an autocephalous Oriental Orthodox church, the seat of which is located in Addis Ababa, Ethiopia. The church has been traditionally believed to have been founded by Sts. Matthew and Bartholomew in the 1st Century CE and represents an ancient and non-colonial form of African Christianity. Following the Coptic Church (under whose patriarchy it remained until 1959), the Ethiopian Orthodox Tewahedo Church rejects the Chalcedonian diophysite statement of Christ having two, unmixed, unconfused natures, holding instead a form of miaphysitism that was long misunderstood as a form of monophysitism by the Roman and Eastern Orthodox churches. In part because of the relative isolation from other forms of Christianity following the spread of Islam in neighboring countries, the theology of the church has been influenced by a syncretism with other local religions and spiritual practices, and, like many African churches, a robust angel- and demonology flourishes there, along with a widespread practice of exorcism. In the Twentieth Century, the Ethiopian Orthodox Tewahedo Church entered into numerous ecumenical dialogues with Eastern Orthodox Christians, and it was one of the founding members of the World Council of Churches in 1948. Today, the Church has over 34 million members, the majority of whom reside in Ethiopia. See “Ethiopian Orthodox Tewahedo Church” (Encyclopædia Britannica Inc, 2020), <http://academic.eb.com/levels/collegiate/article/33131>.

⁷³ See especially his treatment of these church forests in his book, Alemayehu Wassie Eshete, *Ethiopian Orthodox Church Forests: Opportunities and Challenges for Restoration* (VDM Verlag, 2008).

forest. It should resemble the Garden of Eden.”⁷⁴ This relationship was natural in the Ethiopian highlands, which before the past century, were carpeted in old growth forests. The trees and their many material gifts—wood, bark, leaves, roots, and flowers—were abundant, and they were the primary materials used to create the buildings and the icons they contain. However, over the last century, 97 % of those forests were cleared for timber and agriculture. In many parts of the highlands, the only forests left are the narrow rings that were protected by the churches, which have become microcosmic preserves of the rich biodiversity that once covered the land:

The church is within the forest; the forest is inside the church. In ecological terms, the whole is greater than the sum of its parts. There are millions of other creatures. It is so complicated, sophisticated—interaction you cannot explain. Because of the coexistence, there is what we call emergent properties. It’s a new hybrid character.... There is a problem always, a misperception that these forests would stay forever. We don’t have any other backup. To safeguard Ethiopian biodiversity, it is only the church forests. If we lose that, then that’s all.⁷⁵

As Dr. Alemayehu’s comments suggest, these forests are critical not only for the ecological but also the spiritual future of Ethiopia. Aba Gebre Mariam Alene, one of the priests who was also interviewed for the documentary, sheds additional light on the relationship between these trees and the church community:

Every plant contains the power of God, the treasure of God, the blessing of God.

So when someone plants a tree, every time it moves the tree prays for that person

⁷⁴ Quoted from the short documentary film embedded in Jeremy Seifert, “Opinion | What Makes a Church? A Tiny, Leafy Forest,” *The New York Times*, December 3, 2019, sec. Opinion, <https://www.nytimes.com/2019/12/03/opinion/church-forests-ethiopia.html>.

⁷⁵ Seifert.

to live longer. Just like we cultivate the new generation, we need to cultivate the forest. If we keep disturbing the young sprouts and the old trees are gone, there will be nothing to replace them.... If the church loses its forests it will lose itself.⁷⁶

Not only do the forests contain the churches physically, but the forests themselves are understood to be part of the church as a community of prayer working toward the establishment of the Kingdom of God here on Earth. While these brief remarks leave much to the imagination, they call us to think about how trees and other living, growing things more broadly may be part of the eschatological community as well. As Dr. Alemayehu concludes, “The mystery is to think beyond what we see.”

Following both Aba Gebre and Dr. Alemayehu’s suggestions, we may begin by noting that the trees and—we would add—all of the plants and other living, non-animal organisms are involved in a form of prayer and praise. As we saw in the previous section, Elizabeth Johnson’s account of animal praise was couched within the praise of the whole of creation, including trees and plants. As we survey the Bible, plants and especially trees are also presented as praising God. For instance, in Chronicles, we read that “...the trees of the forest sing for joy before the Lord, for he comes to judge the earth” (Chr. 16:33). Similarly, in Isaiah, we read that “The wilderness and the dry land shall be glad; the desert shall rejoice and blossom like the crocus; it shall blossom abundantly and rejoice with joy and singing” (Is. 35:1-2).

Even beyond this general praise, though, trees are found to play a pivotal role throughout the Bible. In fact, aside from humans, trees are mentioned more than any other creature.⁷⁷ Plants and trees appear in the very beginning of the Bible as the first

⁷⁶ Seifert.

⁷⁷ L.J. Musselman, “Trees in the Koran and the Bible,” *Unasylva* 54, no. 213 (2003): 45–52. 45

things that God creates on land in the first creation account (Gen 1:11-12). The Tree of Life and the Tree of Knowledge of Good and Evil also stand at the center of the second creation story in the Garden of Eden both spatially and narratively (Gen 2:8-9, 17; 3:1-12). They also feature prominently throughout Hebrew Bible: Noah receives an olive branch at the end of the flood (Gen 8:11); Abraham's visit with the Lord occurs by the oaks of Mamre (Gen 18:1); Moses most famous encounter with God was in the form of a burning bush (Ex 3:2-5); the prophet Amos was called forth from his career as a "a dresser of sycamore trees" (Amos 7:14). They are similarly featured throughout the New Testament: following Joseph, Jesus worked as a carpenter (Mk 6:3, Matt 13:55); Zacchaeus's story of redemption revolves around his climbing a sycamore fig to see Jesus (Luke 19:1-4); the mount of olives, so named for its ancient groves, was the site of many important events in Jesus's ministry, including his Ascension (Acts 1:6-12); and Jesus died "hanged on a tree" (Gal 3:13).

So, too, do trees and plants play a pivotal role in biblical eschatological visions of the major prophets: "Instead of the thorn shall come up the cypress; instead of the brier shall come up the myrtle; and it shall make a name for the Lord, an everlasting sign that shall not be cut off" (Is. 55:13); "See, I have set you this day over nations and over kingdoms, to pluck up and to break down, to destroy and to overthrow, to build and to plant" (Jer. 1:10); "And on the banks, on both sides of the river, there will grow all kinds of trees for food. Their leaves will not wither, nor their fruit fail, but they will bear fresh fruit every month, because the water for them flows from the sanctuary. Their fruit will be for food, and their leaves for healing" (Ez. 47:12). This final vision in Ezekiel is also

echoed in the apocalyptic visions found in Revelation, where the final vision in the final chapter centers on the Tree of Life:

Then the angel showed me the river of life-giving water, sparkling like crystal, flowing from the throne of God and of the Lamb down the middle of its street. On either side of the river grew the tree of life that produces fruit twelve times a year, once each month; the leaves of the trees serve as medicine for the nations. Nothing accursed will be found there anymore. (Rev 22:1-3)

Other accounts of trees playing an integral role in paradise may also be found throughout the earliest centuries of the church as well. Consider, for instance this passage from the Infancy Gospel of Matthew, in which the child Jesus rewards a palm tree for bending down and offering its fruit and lifting its roots to give water to the holy family as they returned home from Egypt through the desert:

This privilege I give thee, O palm tree, that one of thy branches be carried away by my angels, and planted in the paradise of my Father. And this blessing I will confer upon thee, that it shall be said of all who conquer in any contest, You have attained the palm of victory. And while He was thus speaking, behold, an angel of the Lord appeared, and stood upon the palm tree; and taking off one of its branches, flew to heaven with the branch in his hand. And when they saw this, they fell on their faces, and became as it were dead. And Jesus said to them: Why are your hearts possessed with fear? Do you not know that this palm, which I have caused to be transferred to paradise, shall be prepared for all the saints in the place of delights, as it has been prepared for us in this place of the wilderness? And they were filled with joy; and being strengthened, they all rose up. (Ps.-Mt. 21)

As this passage suggests, the religious imagination of early Christians also made room both for plants to act meaningfully in salvation history and to have a proportionate place prepared for them in the fullness of time.

Taken together with the creation narratives of Genesis 1-3, we find that the Judeo-Christian tradition has at numerous points affirmed the place of vegetative life alongside humans in the ultimate fulfillment of the world. It is perhaps unsurprising, then, that plants and trees were often at the center of Jesus' parables about the Kingdom, especially in the Gospels of Matthew and Mark: the Sower (Matthew 13:1-23, Mark 4:1-20), the Growing Seed (Mark 4:26-29) the Weeds Among the Wheat (Matthew 13:24-30), the Mustard Seed (Matthew 13:31-32; Mark 4:30-34), the Leaven (Matthew 13:33-34),⁷⁸ the Laborers in the Vineyard (Matthew 20:1-16), the Tenant Farmers (Matthew 21:33-45; Mark 12:1-12), the Budding Fig Tree (Matthew 24:32-35; Mark 13:28-33), and the Barren Fig Tree (Luke 13:6-9). As with many of Jesus' parables, these stories draw from familiar realities in relation to Jesus's audience, who lived and worked in or at least depended directly on agrarian communities. These parables relied on the understanding common to Jesus and his audience that these seeds and plants were integral to the ongoing life and well-being of the whole community and that they are a vital part of the goodness of God's creation. They speak to the heartiness, the potential for growth, the nourishment, the joy, and the beauty that plants offer to the world in fulfilling their own natural ends. While it may be difficult for us to imagine what the absolute, eschatological finality of plants and trees may be if we begin from our expectations for human

⁷⁸ Leaven or yeast belongs to the kingdom Fungi.

fulfillment, the much larger Judeo-Christian tradition has long had a place for these kinds of creatures as well.

5.4.2 Horizontal Finality

As with humans and non-human animals, our greater appreciation for the absolute finality of plants may serve as an invitation to consider anew the graced lives of plants in their own horizontal finality in the present. Remember that, for Elizabeth Johnson, the premiere example of a “beholder” of nature was Charles Darwin, pointing especially to his attention to the subtle wonders of their lives.⁷⁹ Seeking similar insight and inspiration, we would briefly turn now to consider the reflections of another “beholder,” the German forester Peter Wohlleben, as we look for insights into the graced character of the vegetative world, focusing predominantly on the lives of trees. In the pages that follow, we will give an overview of Wohlleben’s account of forest life in an effort to give concrete data to our search for understanding of the goodness proper to trees, considered both as individual creatures and as belonging to a larger, graced order of nature.

After a number of years working as a forester in the employ of logging companies in Germany, Wohlleben began working as a nature guide for visitors to those forests and,

⁷⁹ Johnson, *Ask the Beasts Darwin and the God of Love*. 40-44, especially 43. Particularly memorable was her reproduction of an excerpt from Charles Darwin, *The Voyage of the Beagle: Charles Darwin’s Journal of Researches*, ed. Janet Browne and Michael Neve (London: Penguin, 1989)., concerning the likelihood of plants dispersing their seeds great distances through the mud that adheres to the feet of birds: “I do not believe that botanists are aware how charged the mud of ponds is with seeds: I have tried several little experiments, but will here give only the most striking case: I took in February three table-spoonfuls of mud from three different points, beneath water, on the edge of a little pond; this mud when dry weighed only 6 3/4 ounces; I kept it covered up in my study for six months, pulling up and counting each plant as it grew; the plants were of many kinds, and were altogether 537 in number; and yet the viscid mud was all contained in a breakfast cup! Considering these facts, I think it would be an inexplicable circumstance if water-birds did not transport the seeds of fresh-water plants to vast distances, and if consequently the range of these plants was not very great. (386–7).”

in the process, underwent a profound ecological conversion. While he had been trained to analyze, treat, and maintain forests for the lumber industry, Wohlleben discovered that he had never been taught to attend to the complex lives of trees or their own natural processes and timelines. After 20 years spent among the trees as a beholder, Wohlleben published *The Hidden Life of Trees* in order to bring greater awareness, appreciation, and protection to plants and to trees in particular.⁸⁰ While it should be noted that Wohlleben has been (perhaps fairly) criticized for mixing his own, somewhat-fantastic and often anthropomorphic projections with the scientific research he references, his book has made an important contribution to the growing ecological consciousness and conscience of many readers and offers many resources for the imaginative engagement we are developing here.⁸¹

⁸⁰ Peter Wohlleben, *The Hidden Life of Trees: What They Feel, How They Communicate: Discoveries from a Secret World*, trans. Jane Billinghurst, Alaska Digital Library (Vancouver; Berkeley: David Suzuki Institute: Greystone Books, 2016).

⁸¹ Shortly after the book was released, two German scientists launched an online petition against it entitled “Auch im Wald: Fakten statt Märchen, Wissenschaft statt Wohlleben” (“Even in the forest, facts instead of fairy tales, science instead of Wohlleben”); the petition has also been forwarded under the English title “Even in the forest, we want facts instead of fairy tales.” See <https://www.openpetition.de/petition/online/even-in-the-forest-its-facts-we-want-instead-of-fairy-tales>. For a short, critical review that helpfully summarizes the controversy, see Sharon Elizabeth Kingsland, “Facts or Fairy Tales? Peter Wohlleben and the Hidden Life of Trees,” *The Bulletin of the Ecological Society of America* 99, no. 4 (2018): e01443, <https://doi.org/10.1002/bes2.1443>. Some of this criticism has rightly centered on Wohlleben’s attribution of the sense of smell, taste, touch, hearing, and even sight to trees, as well as his assertions that they experience pain and have memories, which are at best metaphors and at worst fanciful anthropological projections; however, some of the criticism has seemed to reflect an inherent criticism among some scientists to the mixing of spiritual and emotional vocabulary and insights with scientific research. These criticisms may also be influenced by Wohlleben’s unfortunate tendency to depict nearly all of the relevant research as having been carried out in the last few years—even when that is assuredly not the case—and his consequent depiction of the field of plant science as being feeble, stagnant, and even backwards. In any case, it is worth noting that Wohlleben does not try to disguise the somewhat magical experience he has of the forest. For instance, consider the opening lines of the Foreword to the book, written by Australian paleontologist Tim Flannery, “We read in fairy tales of trees with human faces, trees that can talk, and sometimes walk. This enchanted forest is the kind of place, I feel sure, that Peter Wohlleben inhabits.” While Wohlleben might have been more careful to meet the standards of the scientific community and its conventions, it seems to me to be somewhat disingenuous to characterize his book as a dangerous blurring of the line between science and fiction. Nevertheless, we have been careful not to reproduce Wohlleben’s more problematic phrasings here, and have tried to include the citations to both the peer-reviewed, scientific journal articles from which he draws and from additional sources for the benefit of the reader.

As one of his most often repeated themes, Wohlleben emphasizes that a good life for a tree does not consist primarily of a race to the top.⁸² While rapid growth seems to be a preoccupation of foresters and lumber producers, left to their own tendencies, most of the trees in old growth forests exhibit slower but more sustainable growth that contributes to the overall health of the forest ecosystem. Moreover, Wohlleben also highlights how trees seem to actively promote the survival of other members of their forest communities. For instance, he points to one set of recent studies that describes forms of communication between trees of the same species that allows them to warn each other of immanent attack: When their leaves are eaten by a giraffe, African umbrella thorn acacia trees release ethylene into the air, causing other acacias up to 50 meters downwind who are sensitive to this chemical release to immediately increase their tannin production, thus rendering their leaves bitter, unpleasant, and even poisonous, thereby preserving the larger community of trees.⁸³ In another example of mutual support, Wohlleben describes numerous instances of trees sharing nutrients through their root systems, pointing to the now famous discovery by Dr. Suzanne Simard of what has come to be called the “wood

⁸² Here, Wohlleben’s critique is reminiscent of Pope Francis’s emphasis on the need to slow down the rapid pace of consumption that he identifies as being at the heart of modern, technocratic life: “The continued acceleration of changes affecting humanity and the planet is coupled today with a more intensified pace of life and work which might be called “rapidification.” Although change is part of the working of complex systems, the speed with which human activity has developed contrasts with the naturally slow pace of biological evolution. Moreover, the goals of this rapid and constant change are not necessarily geared to the common good or to integral and sustainable human development. Change is something desirable, yet it becomes a source of anxiety when it causes harm to the world and to the quality of life of much of humanity” (LS 18).

⁸³ See Chapter Two, “Language,” in Wohlleben, *The Hidden Life of Trees*. Wohlleben is drawing from the work of Wouter van Hoven at the University of Pretoria. For other examples of similar phenomena in different plant species, see also I. T. Baldwin and J. C. Schultz, “Rapid Changes in Tree Leaf Chemistry Induced by Damage: Evidence for Communication between Plants,” *Science (New York, N.Y.)* 221, no. 4607 (July 15, 1983): 277–79, <https://doi.org/10.1126/science.221.4607.277>; and Silke Allmann and Ian T. Baldwin, “Insects Betray Themselves in Nature to Predators by Rapid Isomerization of Green Leaf Volatiles,” *Science* 329, no. 5995 (August 27, 2010): 1075–78, <https://doi.org/10.1126/science.1191634>.

wide web.”⁸⁴ As Dr. Simard observed, tree species are able to pass carbon, nitrogen, and phosphorus through a network of fungal mycelia that runs throughout the soil and connects the root systems of various trees of the same species, especially in many old growth forests. In addition to sharing resources among different trees, in some cases, these connections between the trees and the fungal networks may function symbiotically, helping the both species make the most of the forest ecosystem:

With the help of mycelium of an appropriate species for each tree—for instance, the oak milkcap and the oak—a tree can greatly increase its functional root surface so that it can soak up considerably more water and nutrients. You find twice the amount of life-giving nitrogen and phosphorus in plants that cooperate with fungal partners than in plants that tap the soil with their roots alone.⁸⁵

Though the trees often are required to contribute up to a third of their overall sugar production to the fungi, in addition to the increased nutrient absorption, many fungi also provide for increased instances of communication between trees and for the transfer of nutrients throughout larger groups of trees. This transfer is not merely random, either, as it seems that some of the tallest and strongest trees will transfer nutrients at a net-loss to themselves in order to nourish both smaller, light-starved seedlings and older trees that have sustained damage in such a way as to prevent them from nourishing themselves.⁸⁶

⁸⁴ Suzanne W. Simard et al., “Net Transfer of Carbon between Ectomycorrhizal Tree Species in the Field,” *Nature* 388, no. 6642 (August 1997): 579–82, <https://doi.org/10.1038/41557>.

⁸⁵ See Chapter Nine, “United We Stand, Divided We Fall,” in Wohlleben, *The Hidden Life of Trees*.

⁸⁶ See Chapter Six, “Slowly Does It,” in Wohlleben. Wohlleben notes that, while the older, taller trees—often the “mother” tree—often prevent the quick growth of the smaller saplings beneath them, the slow growth provided by the shared nutrition and limited sunlight is directly correlated with longer lifespans in the younger trees over time. See also, E. C. Fraser, V. J. Lieffers, and S. M. Landhausser, “Carbohydrate Transfer through Root Grafts to Support Shaded Trees,” *Tree Physiology* 26, no. 8 (August 1, 2006): 1019–23, <https://doi.org/10.1093/treephys/26.8.1019>.

These and other similar processes help ensure that the forest or grove is healthier overall, which, in turn, leads to a healthier existence for each tree and for the ecosystem. For instance, as Wohlleben elaborates, trees have a profound cooling effect on the surrounding ecosystem. They also slow wind gusts, thereby slowing the process of evaporation and moisture loss, and their leaves provide both cooling shade and the foundation for the rich, water-storing humus that “sweats” and “breathes” along with any rises in heat, thereby regulating forest climates. This process is also increased in forests where trees are able to provide scaffolding for moss and lichen (a symbiotic mix of fungi and algae), most of which are harmless to trees.⁸⁷ During powerful storms, trees are more able to weather repeated, dangerous wind gusts as the impacts are transferred from tree to tree and the degree to which they can be bent is curtailed.⁸⁸ All of these factors lead to longer lives for all the trees collectively, as well as a stable ecosystem capable of supporting a staggering richness of biodiversity.

As with the church forests of Ethiopia, old-growth forests around the world provide a host of benefits to their inhabitants including: nutrient-rich and well-anchored soil, the regulation and sustenance for forests streams and ponds, moderated temperatures, cleaner air, and leafy canopies and hollows that provide animals with shelter.⁸⁹ Through these many gifts, forests become beds of biodiversity for a whole range of creatures. In an experiment carried out by Dr. Martin Gossner in the Bavarian Forest of Germany, just one of the forest elders proved to be home to 2,041 different creatures,

⁸⁷ See Chapter Seventeen, “Woody Climate Control,” and Chapter Twenty-Six, “Let There Be Light,” in Wohlleben, *The Hidden Life of Trees*.

⁸⁸ See Chapter Twenty-Two, “Hibernation,” and Chapter Thirty-One, “Turbulent Times,” in Wohlleben.

⁸⁹ See Chapter Seventeen, “Woody Climate Control”; Chapter Eighteen, “The Forest as Water Pump”; Chapter Twenty, “Community Housing Projects”; and Chapter Thirty-Three, “Healthy Forest Air,” in Wohlleben.

including 257 unique species.⁹⁰ In fact, a full 20% of all known plant and animal species depend on deadwood from old trees for their existence. The benefits of forests are not all internal to their ecosystems, either, as they are crucial both to needed carbon storage and to oxygenating the atmosphere.⁹¹ Without coastal and inland forests, the world would become increasingly covered in deserts, as the regulation of temperature, storage of water, and transpiration of water by forests are required for rainclouds to travel further inland than 400 miles.⁹²

Throughout his narration of the complex lives of forests and their inhabitants, Wohlleben evokes an image of trees as contributing in striking ways to the stability, health, and diversity of their ecosystems. He elaborates the relationships among trees and between trees and other species: symbiotic, competitive, or otherwise. Modelling his approach on the recent successes of animal-rights advocates, Wohlleben tries to communicate the dignity, value, and unique character of trees both collectively and individually. His hope is that, by doing so, trees might be “allowed to live in a way that is appropriate to their species... to fulfill their social needs, to grow in a true forest environment on undisturbed ground, and to pass their knowledge on to the next generation. And at least some of them should be allowed to grow old with dignity and finally die a natural death.”⁹³

⁹⁰ See Chapter Twenty-One, “Mother Ships of Biodiversity,” in Wohlleben.

⁹¹ See Chapter Sixteen, “Carbon Dioxide Vacuums,” and Chapter Thirty-Three, “Healthy Forest Air,” in Wohlleben.

⁹² See Chapter Eighteen, “The Forest as Waterpump,” in Wohlleben.

⁹³ See Chapter Thirty-Six, “More Than Just a Commodity,” in Wohlleben.

It is true that, at numerous points, Wohlleben reaches well beyond the limits of scientific, semantic, or philosophical good sense in his attribution of sensory powers, consciousness, intelligence, memory, etc. to these vegetative beings. As one critic noted,

On the surface, Wohlleben's book seems to be suggesting that we should look to science to discover ecological complexity and reasons to preserve that complexity. But paradoxically, the book indirectly suggests that [interest] can only be stimulated if we believe that plants are like animals, and hence like us. This book is an appeal to our emotions more than to our interest in how scientists make new ecological discoveries.⁹⁴

While there does seem to be some merit to this critique, Wohlleben's insights and passion can help direct our attention towards the richness and complexity that characterizes the lives of trees, thereby helping to free them from their place as props or scenery in the drama of salvation history.⁹⁵

Thus, while we may wish to avoid the anthropomorphizing of trees and other creatures, we are no less called to take seriously the ways in which trees live out their lives at the level of their horizontal finality in a way that has both real value and dignity. Moreover, we are moved to ask how that finality reflects the goodness of a deeply interconnected and upwardly mobile creation. Through their interactions, trees provide for the good of themselves, but also of other trees in a way that demonstrates their possession of a level of recognition—at least in a qualified sense—of their surroundings and the possibilities and needs for growth therein. In ways different from but no less than

⁹⁴ Kingsland, "Facts or Fairy Tales?"

⁹⁵ See Deane-Drummond, *Christ and Evolution*, 2009. This was treated previously in our Chapter Two.

animals, we come to discover the myriad ways in which the lives of trees both unfold in a world of grace and mediate grace to the world around them and beyond.

5.4.3 Vertical Finality

As with both our own lives and the lives of other animal species, we also come increasingly to recognize how the fulfillment of the goodness of trees at the level of their horizontal finality leads inexorably into a shared vertical finality with the rest of creation. As indicated above, many trees and plants participate in and even favor mechanisms of sexual reproduction through pollination, allowing them to participate in the kinds of genetic verticality we saw in animals.⁹⁶ On average, trees live much longer than even the most abiding of animal species—the oldest identified non-clonal tree, dubbed “Methuselah,” is 4,851 years old—and they come to sexual maturity much later. Nevertheless, while the rate of change through generations is much slower, a great many trees—as well as many other plants, fungi, algae, and other growing things—also participate in the verticality of evolutionary processes.

There are also many unique aspects to plant life that situate their reproductivity within quite different and surprising forms of vertical finality. Charles Darwin’s observations regarding the hundreds of different aquatic plant seeds that could be contained in only a few spoonfuls of mud was no idle observation: he was concerned with explaining how species of plants in distant locations, climates, and ecosystems could

⁹⁶ See Chapter Four, “Love,” in Wohlleben, *The Hidden Life of Trees*. As he describes, some species stagger the opening of their male and female blossoms on the same tree to prevent self-pollination. Alternatively, some species that contain both the male and female organs in the same blossom have developed other ingenious forms to protect and promote genetic variation. For instance, the bird cherry tree has evolved a capacity to identify when its own pollen lands on one of its stigma, and it will desiccate the growth tubes before they reach the ovaries to prevent inbreeding through self-pollination.

share a genetic and evolutionary past. Seeds, pollen, and other plant reproductive elements have striking possibilities for settling new ecosystems. This potential may have a negative as well as a positive effect on an ecosystem, as the now ubiquitous presence of invasive species like kudzu have demonstrated in the southeastern United States. Nevertheless, the ability to be transplanted and the striking resilience of plant matter allow it to affect an ecosystem in ways irreducible to linear growth. This is the whole premise, for instance, of the Svalbard Global Seed Vault on the island of Spitsbergen in Norway, which now houses over a million varieties of seeds from around the world in order to regrow and rebuild whole crops, ecosystems, and ways of life in the event of a regional or global disaster. There have been numerous examples of quite ancient seeds germinating in the present day as well. In one instance, a nearly 2,000 year old seed from a Judean date palm tree was found in Herod the Great's palace at Masada; it has since been germinated and planted, and it has also been dubbed "Methuselah."⁹⁷ The oldest known seed that has successfully germinated and grown into a plant was a narrow-leafed campion, which, according to carbon dating, was first trapped beneath the Siberian permafrost over 31,000 years ago.⁹⁸ There has been a remarkable emergence and re-emergence of plant species in new contexts. In the case of some plant and tree species, they also have the unique ability to remake ecosystems entirely, though, as Wohlleben somberly notes, it is thought to take about 500 years for a newly protected patch of forest

⁹⁷ Steven Erlanger, "After 2,000 Years, a Seed from Ancient Judea Sprouts," *The New York Times*, June 12, 2005, sec. World, <https://www.nytimes.com/2005/06/12/world/middleeast/after-2000-years-a-seed-from-ancient-judea-sprouts.html>; Sarah Sallon et al., "Germination, Genetics, and Growth of an Ancient Date Seed," *Science* 320, no. 5882 (June 13, 2008): 1464–1464, <https://doi.org/10.1126/science.1153600>.

⁹⁸ Svetlana Yashina et al., "Regeneration of Whole Fertile Plants from 30,000-y-Old Fruit Tissue Buried in Siberian Permafrost," *Proceedings of the National Academy of Sciences of the United States of America* 109, no. 10 (March 6, 2012): 4008–13, <https://doi.org/10.1073/pnas.1118386109>.

to return to the health, vigor, and diversity of the old growth forests.⁹⁹ This power of plant life has made plants a bedrock element of the science-fiction turned science aspiration of terraforming other planets for eventual human inhabitation.¹⁰⁰

Throughout this section, we have tried highlight the often-unnoticed richness of vegetative life in an effort to suggest how the lives of plants and fungi unfold in the same, grace-filled world as our own. While extending our theological considerations from other animals to these more remote relatives is admittedly more difficult, we have suggested that, by attending to some prophetic voices in our midst, we can begin to develop as sacramental beholders of God's loving action in the world. At one level, this means attending to the data of the natural sciences as they complexify our understanding of these creatures and our awareness of our historical and ongoing dependence upon them. At another level, we are invited to open ourselves up to the spiritual insights of those communities that have lived and prayed in greater awareness of these relationships. Thus, recalling the remarks of Aba Gebre Mariam Alene, we wonder what it could mean that the trees of their forests also offer their prayers to their creator and for other creatures that

⁹⁹ See Chapter Thirty-Five, "Set Free," in Wohlleben, *The Hidden Life of Trees*. While their ability to alter the local climate itself through their presence is unmatched in the animal kingdom, it is worth noting that the presence of certain "keystone species" of animals may in fact be crucial to the survival of trees in the first place. Perhaps the best-known example of this today is the case of the reintroduction of grey wolves into Yellowstone Park in 1995. As an apex predator, wolves proved crucial to limiting the number of elk, deer, etc., which allowed for the regrowth of many species of trees which had been almost wiped out by over grazing since the wolves' disappearance from hunting nearly 100 years prior. With the return of these tress there also resulted the return of many other dependent species, including some, like the beavers, who further remade the ecosystem in important ways. The result of the reintroduction of wolves has been described as a "trophic cascade through the entire ecosystem." See Brodie Farquhar, "Wolf Reintroduction Changes Ecosystem," My Yellowstone Park, accessed August 4, 2020, <https://www.yellowstonepark.com/things-to-do/wolf-reintroduction-changes-ecosystem>.

¹⁰⁰ While terraforming is discussed as a theoretically desirable possibility among scientists engaged in the possibilities of humans achieving an interplanetary civilization, the possibility of terraforming of the only planet being discussed for habitation at present, Mars, remains well beyond our current technology. See Bill Steigerwald and Nancy Jones, "Mars Terraforming Not Possible Using Present-Day Technology," July 30, 2018, <https://www.nasa.gov/press-release/goddard/2018/mars-terraforming>.

“every plant contains the power of God, the treasure of God, the blessing of God. So when someone plants a tree, every time it moves the tree prays for that person to live longer.”¹⁰¹ Both Aba Gebre and Dr. Alemayehu express the belief that the trees are integral to the vertical finality that comprises the church community itself in ways that transcend their material and instrumental causality. It is not merely that the Ethiopian Orthodox communities have a human culture of praying in the forest. Rather, they have learned to pray from, by, and with the forests through a spirituality that is more inclusive, broad, and imaginative than that of many other Christians today. It is in this sense, then, that Aba Gebre affirms that, “If the church loses its forests, it will lose itself.”

While it can be admittedly more difficult to conceive of the verticality of plants, and while we would not seek to impute an unwarranted intentionality or consciousness to them beyond all empirical evidence, we may nevertheless recognize that their possibilities for completion and consummation are not wholly limited to the models of human growth and grace. Here, we are reminded of Henry Beston’s now-famous comments about the other animal species with whom we share this planet: “They are not brethren, they are not underlings; they are other Nations, caught with ourselves in the net of life and time, fellow prisoners of the splendor and travail of the Earth.”¹⁰² While we would affirm a deep relationship of creaturely dependence that exists between humans and all the other forms of life on Earth, we have tried to cultivate a new and startling strangeness in relation to them. Thus, although we may recognize all the ways in which our lives are related to, different from, and dependent on trees, plants, fungi, and lichens,

¹⁰¹ Seifert, “Opinion | What Makes a Church?”

¹⁰² Henry Beston, *The Outermost House* (1926), as quoted in Philip Hoare, *The Whale: In Search of the Giants of the Sea* (New York: Ecco, 2010), 210.

we must nevertheless recognize that their past, present, and future are not contained within the limits of our own unique possibilities, and we may actively and inquisitively wonder after what role they play in the continued unfolding of God's creation and redemption of the world.

5.5 Coda: Grace in All Matter?

Throughout this chapter, we have tried to move beyond the limitations of any theological model that would restrict the activity of grace to the human realms of cognition, affectivity, and spirituality alone. We have strived to think about grace as the base of a created, enduring, and potentially transformative relationship that God initiates with and in creatures. We began in the previous chapter with those contexts most intimate to our experience, and we considered how Lonergan's theology of grace might become a basis for reframing humanity's place within the ongoing and indeed in-breaking work of evolution as it has moved—admittedly by fits and starts—toward increasing complexity and the emergence of conscious life. The recognition our own belonging within the animal kingdom has made it possible for us to reflect in this chapter on how other animals—including those pre-dating human emergence—are also caught up in networks of grace in ways that allow for their own versions of self-transcendence and redemption. We then discussed how other growing things—plants, lichen, and fungi—have helped form our world and ourselves. Now, at the end of this chapter, we are emboldened to ask: What are the limits of God's transforming activity in the ongoing work of cosmic formation? What are the effects of God's gracious relation to all matter?

Following the taxonomic distinctions made throughout much of the Twentieth Century, we could how still other kingdoms enter into our understanding of life in the world.¹⁰³ Thus, in an examination of the Kingdom Protista we might observe all other eukaryotes not classed as animals, plants, or fungi, including a number of small, predominantly hydrophilic, microscopic, unicellular organisms, as well as some larger species such as seaweed and kelp. We could also examine the bacterial kingdoms, which are believed to contain the earliest of all organisms and who were responsible for oxygenating the atmosphere of Earth over billions of years, making possible all subsequent and higher emergences; here, we could also reflect more fully on the vast numbers and types of bacteria that form an integral part of every ecosystem and every creature, including, as we noted above, our own human bodies. The theology of grace suggested in this chapter offers important heuristic guides for a renewed attention to myriad ways in which all these creatures exist in relationships that function to heal, create, and advance the created order toward the awaited union with God. At the same time, such heuristics provide significant resources for acknowledging when the good creation, marred by sin, can and does to fall short of that goal. However, such a project is beyond the limits of what any book—or thinker, school, or even generation—could hope to accomplish, and we will not try to multiply our investigations any further here.

Rather, at the end of this already long chapter, we close by simply affirming that all the world is caught up in networks of grace as it is caught up in networks of potency and action that we may never fully understand, but to which we are all called to pay

¹⁰³ See footnote 5 above. As noted there, such an approach would follow the widely-taught if no longer widely accepted model of organizing the various species that has long had a significant impact on the way humans image their relationships to other creatures.

serious attention. We may be confident in the God who suffers with and alongside God's creation through a compassionate presence expressed in the divine missions of the Triune God. We try to identify ways in which creation moves to heal damage and promote new and surprising opportunities for life, even in areas where human action has proved catastrophically destructive. We marvel at the emergence of genuine newness in evolutionary history and at the persistence of life. And we are encouraged in our hope for the further realization of the Kingdom of God on Earth by myriad instances of individual transcendence at every level of creation.

Such a hope as this might lead us even to reconsider the lines we have drawn between living creatures and the lower manifolds that have persisted in shaping our collective existence since time immemorial. In her own recent reflections on interconnected creation as occasioned by the novel Coronavirus, SARS-CoV-2, and the source of the COVID-19 pandemic, Cathleen Kaveny writes, that,

Influenced by literal readings of Scripture as well as an implicitly Cartesian picture of the world, many Americans operate with three sets of sharp distinctions: 1) between living and nonliving beings; 2) between different types of living beings, arranged in a rigid hierarchy; and 3) between inert matter and vibrant mind or soul. But if we start to consider how viruses operate, all three sets of distinctions begin to dissolve, and interconnections take center stage.¹⁰⁴

As Kaveny explains, the question of whether viruses are alive has itself become something of a contested question, at least among some scientists. Unlike most "living beings," a virus is unable to "autonomously consume, process, ... expend energy, ... [or]

¹⁰⁴ Cathleen Kaveny, "Blurring Boundaries: Viral Biology & Interconnected Creation," *Commonweal*, 2020, <https://www.commonwealmagazine.org/viral-biology-interconnected-reality>.

reproduce on its own through a process of cell division.” However, pointing to an article by Luis P. Villarreal, the founding director of the Center for Virus Research at UC Irvine, Kaveny notes that there may in fact be less of a binary and more of a “spectrum...between what is certainly alive and what is not,” and therefore encouraging us “to think of life as ‘an emergent property of a collection of certain nonliving things.’”¹⁰⁵ In fact, viruses play a key role in the transmission of genes both within and between species and even kingdoms of creatures, as their injection of DNA into host cells in order to “organize” their own reproduction can significantly alter the course of evolution—though, of course, not always in what we might deem positive ways. Kaveny asserts that, while viruses may not be alive by some metrics, they are “lively,” and, moreover, so is all matter, as “Inertness is an illusion.”

While we often conceive of viruses and other particles in our environments as operating before, below, or beneath the world of human interactions, Kaveny reminds us that our own lives and our “dispositions and judgment” are also affected by these creatures since we, too, are “thoroughly embodied creatures, not minds trapped in inert matter.” Closing her article with a brief reflection on *Laudato Si’*, Kaveny urges the reader to reconsider its message of deep interconnectivity in light of our newfound if unwanted intimacy with the role of even viruses in our world: “Nature is not merely the setting for the drama of human existence. Other living beings are not merely part of the chorus. Even the scenery is not mere backdrop. Everything around us has an integral part to play in the story of creation.” As Kaveny reminds us, the impulse to cordon off a section of creation for ourselves or those creatures sufficiently like us can cause us to

¹⁰⁵ Luis P. Villarreal, “Are Viruses Alive?” *Scientific American*, December 2004.

miss the surprising ways that God is working in all of creation. It is to miss the way that, even after the emergence of life, so-called “inert matter” continues to play key roles in the emergence and maintenance of all life.

Through this lens, we are invited to see the whole world as marked by God’s gracious presence, including even the dirt. Not unlike the gardener’s distinction of “weeds” from the larger category of plants, dirt is sometimes seen as the mess that accumulates in unwanted places—our hands, clothes, and homes—while soil is the desirable medium of growth in our gardens and yards. To an earth, soil, or environmental scientist, dirt denotes the clay, silt, and sand that typically accounts for 45% of any sample of healthy soil. Of the remaining contents, 50% would be comprised of an equal mix of water and air, with the remaining 5% containing dead and decaying organisms. Not reflected in these percentages would also be a number of critically important living creatures, ranging from worms and weevils to fungi and bacteria, all of whom are essential to the continued health of the soil. What every avid gardener knows—but which may be surprising to some others—is not so much that the soil is home to so many creatures, but that its health requires its replenishment from the dead and decaying flesh of so many creatures: plants, animals, or otherwise. As Peter Wohlleben describes:

Without soil there would be no forests, because trees must have somewhere to put down roots. Naked rock doesn't work, and loosely packed stones, even though they offer roots some support, cannot store sufficient quantities of water or food. Geological processes such as those active in the ice ages with their sub-zero temperatures cracked open rocks, and glaciers ground the fragments down into sand and dust until, finally, what was left was a loosely packed substrate. After

the ice retreated, water washed this material into depressions and valleys, or storms carried it away and laid it down in layers many tens of feet thick. Life came along later in the form of bacteria, fungi, and plants, all of which decomposed after death to form humus.¹⁰⁶

The very possibility of the plant life that has made the Earth habitable by animal species like ourselves depended on the death of countless simple organisms and their slow decomposition and accumulation in hollows of the wind and water-beaten surface of this planet. It is literally in their very material remains that the possibilities of all subsequent life took root and flourished. This deep dependence of so many creatures today on the soil adds a new depth to the existing aural resonances between Adam and Adamah (translated as soil, ground, or earth) in Genesis 2 and 3.¹⁰⁷

Stretching our imaginations toward the universe of grace alive in the soil, we may wonder after that heavenly soil that nourishes the roots of the Tree of Life in the Book of Revelation, damp with the water flowing from God's throne, bathing the roots of the tree. We might consider how God's grace brings the soil into being, perfecting it in itself as a new thing emerging from the dirt and rock and clay. We might remember how the soil,

¹⁰⁶ See Chapter Fifteen, "In the Realm of Darkness," in Wohlleben, *The Hidden Life of Trees*.

¹⁰⁷ J. Richard Middleton, "Reading Genesis 3 Attentive to Human Evolution," in *Evolution and the Fall*, ed. William T. Cavanaugh and James K. A. Smith (Grand Rapids, Michigan: Eerdmans, 2017), 67–97, 73–74. "We should also note that the word for the first human ('ādām) functions as part of a Hebrew pun or wordplay throughout Genesis 2 and 3, where it sounds like (or resonates aurally with) the word for soil or ground ('ādāmā). Biblical scholars have suggested various equivalent English puns, such as the earth creature from the earth, the groundling from the ground, the human from the humus. The point is that the aural resonance of 'ādām and 'ādāmā suggests a primal ontological resonance between the human and his earthly context. Not only is the human taken from the ground (a matter of derivation or origin), the human purpose is to work the ground (a matter of calling or vocation). Due to human sin, the ground is cursed, in the sense that the human's relationship with the ground becomes difficult (work becomes toil); primal resonance becomes dissonance. And death is described as returning to the ground from which the human was taken. Throughout this entire storyline, the aural resonance of human and ground ('ādām and 'ādāmā), along with the narrated contours of their interdependence, suggests that humans are fundamentally earth creatures or groundlings."

composed of the remains of so many creatures, dead and alive, is the cradle of not only our own civilization but of all complex life that sprung from it and depends upon it. Through these types of finality—absolute, horizontal, and vertical—we may come to recognize that not even the soil is irrelevant. Our recognition of the multiple vectors of relationships, finality, and significance lies at the very heart of what it would mean to become ecologically converted. In a world of grace, God wastes nothing.

Human particularity in all its wonder remains unique from other creatures: in the marvels of our particular capacities, in the covenants that God forged with our foremothers and fathers, and in exceptional gift bestowed on humanity in Christ's assuming our form in the Incarnation. However, while we should be grateful for these gifts and recognize the tremendous responsibility that comes with them, we must continue to search for the effects of God's grace on the whole of creation, rejecting a theological jealousy. To refuse to attend to the ways that God's grace may be present even to the minutest particle of creation is to confine God's saving and elevating activity to a fraction of cosmic history. It is to accept yet another god of the gaps waiting for the right chink to appear in the armor of an otherwise independent creation.

While it is perhaps easy enough to recognize the way that all matter is caught up in the movement of a dynamic universe, we are called to go further. We are called to affirm that, through the eyes of faith, this movement appears as the result of a relationship with a God who empowers creation from within and who makes possible unforeseen new realities while abiding with and in all of creation. It is through these eyes that we reread John the Baptist's rebuke of the crowds flocking to him: "Do not begin to say to yourselves, 'We have Abraham as our ancestor'; for I tell you, God is able from

these stones to raise up children to Abraham” (Luke 3:8).¹⁰⁸ And again, from Jesus’s own lips when, after a long journey marked by his announcing of the Kingdom of God in our midst, he enters triumphantly into Jerusalem and reproaches the shushing Pharisees, “I tell you, if these were silent, the stones would shout out” (Luke 19:40). By tuning our ears to the cosmic scope of Christ’s message about the Kingdom, we may recognize in his words more than only poetry or hyperbole. In fact, in a later reprinting of Lonergan’s “Finality, Love, Marriage,” there appears a surprising and often overlooked editorial note on Lonergan’s first mention of vertical finality as “obediential” that reads: “a technical term to refer, for example, to the ‘obedience’ by which stones would, at God’s command, become Children of Abraham.”¹⁰⁹ While it would be a stretch to assert that the authors of this note, the editors Robert Doran and Frederick Crowe, or that Lonergan himself realized the implications of these statements in terms of a cosmic understanding of grace, we are called to re-appropriate their insights and the larger Christian tradition within a truly integral theology. In light of the long history of the world and the intimacy of God to each and all, we are challenged to hear in Jesus’ words a proclamation about both what is happening and what is to come in the unfolding/in-breaking Kingdom of God. We may affirm in faith that, not only humans, other animals, and plants; not only protists, bacteria, and viruses; not only rocks and dirt, then; but every particle from the beginning of time itself stands in graced relation to the one God who is Lord of nature and history.

¹⁰⁸ In Matthew’s account, this rebuke is directed specifically at the Pharisees and Sadducees who accompany the crowds (Matt 3:7-10).

¹⁰⁹ Lonergan, *Collection*. 261 note g

6. CHAPTER SIX: APPLYING THE HEURISTIC: EMERGENCE

In the previous chapter, we provided an overview of our foundational account of grace, nature, and sin in relation to the whole created world as we encounter it. We also suggested how a concrete engagement with the various natural, social, and human sciences may further broaden and deepen our theological framework, though much development is still needed therein. In this chapter, we now consider how that theological framework may guide our reciprocal engagement with those sciences.

6.1 Preliminary Considerations

Two dangers attend any theological engagement with the sciences. As for the first, theologians have often pretended to be omniscient in relation to all other sciences and to prioritize speaking when they should have been listening. Examples of this loom large in theological memory. In contrast to the expansive synthesis that characterized the best of the medieval thought, the decadent theology of the 14th century was marked more by Aristotle's logical ideal in service of certitude and proof than to dialectical learning and understanding. The defensive posture of Roman Catholic theology during the post-Reformation era inspired an even more radical shift. Eschewing the method of *quaestio* employed in the *disputatio* of the medieval *Summae* oriented toward *rationes convenientiae* or possibly relevant understandings, Catholic theology strongly embraced the proof-based approach of manualist *thesis*. Motivated by the desire of confessional

controversialists to win out over their adversaries, the use of so-called ‘proof-texts’ quoted without their historical contexts and followed by arguments from ‘reason’ became a common practice. After *Aeterni Patris* (1879) ‘dogmatic theology’ became the stock-in-trade of the manualist tradition in the form of the ahistorical ‘quote and proof’ motif what has come to be called *Denzinger-* or *Konklusionstheologie* that took up this strategy in accord with the ecclesiastical rejection of modern science and history typified by Pope Pius IX’s straightforward rejection of modernism in the “Syllabus of Errors.” Luckily, the Second Vatican Council caused the abrupt abandonment of this kind of theology, which, according to Lonergan, had been content to “substitute rhetoric for history, fancy for fact, abstract argument for textual evidence.”¹

The well-known history of the first danger has led to a much chastened and more epistemically humble theology, at least in many sectors of the academy. However, there arises also a second danger insofar as theologians may become merely passive recipients of any and all current scientific trends, thereby losing sight both of their own methods and sources, on the one hand, and of their own questions and proper areas of expertise, on the other. Our aim in this chapter and the next is to demonstrate how theology may both critically and constructively enlist the aid of the sciences succumbing to these extremes and, furthermore, to suggest that theology has some wisdom beyond moral and ethical guidance to offer in dialogue with scientists.

Recall the four foundational notions for our theology of grace laid out in the first chapter. First, we advocated a heuristic theology that defends the complete intelligibility of the world and promotes the ongoing and inexhaustible work of coming to know that

¹ Lonergan, *Insight*, 1992. 769.

world ever better in a wide variety of ways. Second, we noted that this search for intelligibility is structured and normed by an appropriation of the dynamic, transcendent process of human knowing, particularly as identified and described by Bernard Lonergan's critical realism founded upon a verifiable analysis of the dynamism of conscious intentionality.² Third, attentive to the role of human subjectivity in all instances of knowing, we also identified the need for a broad ecological conversion both with respect to the four transcendental conversions—religious, moral, intellectual, and psychic—and the categorical data of the world and humanity's deeply embedded existence within it. Finally, we have tried to attend to the reality of grace as both corporate and corporeal, as grace heals and elevates all of creation, grounding the relational bonds that connect creatures to God and to each other and bringing them closer to the realization of their tripartite finality—absolute, horizontal, and vertical.

With these foundational notions in mind, we will now examine three areas of dialogue between science and religion: emergence, convergence, and cooperation. Each

² Here, we are using the term critical realism to describe the philosophical framework assumed throughout this dissertation, which is indebted to Lonergan's grounding of ontology on cognitional theory, which grounds his epistemology. The term indicates a philosophical and scientific realism that explores, explains, and defends human beings' knowing reality as constituted by its intelligibility. Though Lonergan's philosophy is widely referred to as critical realism, it is especially important in the context of philosophy and theology of science to distinguish his work from other philosophies sharing this appellation. Within philosophy of the sciences, perhaps, critical realism is most commonly connected with the work of Roy Bhaskar, who is broadly credited with starting the critical realist philosophical movement, often abbreviated as CR. For a comparison of Lonergan and Bhaskar, see Christopher Sean Friel, "Lonergan and Bhaskar: The Intelligibility of Experiment," *Heythrop Journal* 60, no. 1 (2019): 55–78, <https://doi.org/10.1111/heyj.12162>. In theology, critical realism is often associated with a number of influential theologians who followed the work of Michael Polanyi, including Ian Barbour, Arthur Peacocke, John Polkinghorne, and T.F. Torrance. The term is also associated with the work of Alister McGrath and his program of theological critical realism. Though these various theologies and philosophies share a similar aim with Lonergan insofar as they seek to affirm the legitimacy of human knowing and knowledge with respect to the natural world, there is little explicit conversation between Lonergan's work and these other critical realist developers. Finally, for an account of how Lonergan's critical realism may be understood in relation to the larger tradition of Thomist realism, see Paul St Amour, "Lonergan and Gilson on the Problem of Critical Realism," *The Thomist* 69, no. 4 (2005): 557–92, <https://doi.org/10.1353/tho.2005.0003>.

of these topics has long been the focus of the development of natural theology, as theologians have entered these conversations and actively resisted the associated extra-scientific narratives of strong ontological reductionism, radical cosmic randomness, and gene-driven selfishness, respectively. Although we do not propose to operate according to the method of natural theology here, we hope to attend to the insights of natural theologians, philosophers, and scientists who have already begun attending to the way God is acting in the providential unfolding of history. Far from viewing God's providence as some originary schema, however, we argue that providence unfolds in the order of *cosmic* grace, whereby God maintains relationships of intimacy with all creatures and deepens the bonds of relationship among them, healing and elevating each and all despite the perdurance of sin in the present age. Thus, while these chapters focus on the conjugate explanations of world order provided by a variety of different sciences, we are especially concerned with developing the contribution of theological conjugates in relation to these accounts. This relationship of conjugates is grounded on the shared field of inquiry insofar as all disciplines attend to a world that through the theological lens may be recognized as already combining the effects of grace, nature, and sin. The uniquely theological task, then, is to attend to the world through the eyes of faith and discern how God is acting in our midst and how and where we are called to work as co-actors.

While we are not pursuing a natural theological approach, we nevertheless affirm that theology and other sciences share a common realm of rational inquiry. We view theology as a sublationary science, because it depends on all other forms of knowing as it seeks to understand God ever better. Hence, we define theology as the study of faith, the One in Whom faith is placed, and everything else in light of that faith. These chapters

are then concerned with the “everything else in light of that faith.” This includes not only the addition of positive theological content derived from the resources of special revelation, but also the relationships of higher emergent intelligibilities that connect theology with all other disciplines. In identifying and naming the patterns of grace, nature, and sin in the entire cosmos, theology has to provide an explanatory account of the emergent intelligibilities latent within the data of the lower manifolds of reality to which the lower sciences are confined by their stated methods and objects of inquiry. Theology occupies the highest *explanatory* rung in an emergent world order, although its explanatory force does not supplant, trump, or erase the verified results of other disciplines in relation to the questions and data proper to their sphere. Informed by our critical realist foundations, we are not proposing this theological intervention as a form of counter-physics, -chemistry, or -biology. Each field is governed by its own method; appropriate checks on any discipline may come from another discipline only insofar as that discipline may suggest new foci of attention for the application of that method. Appropriate checks on that method may derive from practitioners in the field or from discrete philosophical interventions, to the extent that the erring practitioners violate the imperatives governing all forms of inquiry: attentiveness, intelligence in understanding, reasonableness in judgment, and authenticity in deliberating about and evaluating courses of action for the sake of deciding and acting (*praxis*) rather than instrumentalized action for the sake of making or producing (*poiesis*). Therein, these interdisciplinary checks also form a critical intervention against the dominant contemporary ethos as oriented almost exclusively towards technological progress and bureaucratic language.

However, where any field has posited a problematic extra-scientific narrative beyond the legitimate scope of its specific inquiry, methods, and competencies, additional explanatory conjugates from theology and from the whole range of human inquiry may and must challenge such a narrative. To the extent that scientist bank on theoretical expertise in one domain to make sweeping proclamations in another or in all others, they cease to be scientific at all. Each field of inquiry brings one indispensable explanatory conjugate to our attempt to understand the whole.

This chapter explores the relationships among these conjugates under the heading of “emergence.” In what follows, the primary meaning for the term “emergence” continues to refer to Lonergan’s theory of generalized emergent probability, though further discussion of Lonergan’s contributions on this topic will be postponed until the end of this chapter. While his conception of these matters has had little or no impact on the larger, interdisciplinary conversation concerning emergence, we are convinced that it aids in “making the best of” the accounts we happen to be referring to, because his understanding of emergence within his critical realist metaphysics helps to eliminate some of the confusion that has characterized several versions of the recent “re-emergence of emergence.” This discussion of emergence will then provide the foundation for our final chapter, in which we will treat two other key conversations in evolutionary science as regards convergence and cooperation.

6.2 Emergence – Its Meaning and History

In broad terms, emergence refers to the relationship between phenomena of increasing complexity. These relations can be diachronic, as with the “emergence” of life from

prebiotic matter, or synchronic, as with the explanatory accounts of any given sets of phenomena developed by various disciplines. In either case, however, the meaning of the term can be somewhat difficult to pin down since it is regularly used equivocally to indicate a variety of purposes in different fields of study. For instance, as the evolutionary biologist Lynn Rothschild suggests, while

[While] the riches of the biological world contain a multitude of examples and types of emergence, perhaps greater than found elsewhere in nature... the word ‘emergence’, in the philosophical sense, is heard only sporadically among practicing biologists, as in ‘Is fitness an emergent property of species?’ In contrast, the philosophical literature regularly examines examples from biology, such as whether consciousness is an emergent property.³

Where the term “emergence” is used, its meaning can vary significantly within and between disciplines: “For example, in botany an emergence is an outgrowth coming from the tissue beneath the epidermis, as, for example, a rose thorn. In zoology, an emergence is the appearance of the adult form (imago) of an insect on the completion of the change (metamorphosis) from the larval stage.”⁴ In what follows, we will attend to the meanings of emergence in numerous fields as we pursue a more unambiguous, if not simply univocal, understanding of emergence to discuss the relationships obtaining among different aspects of the evolving, intelligible world.

The earliest significant references to emergence in the context of modern evolutionary theory appears in George Henry Lewes 1875 philosophical text, *Problems of*

³ Lynn J. Rothschild, “The Role of Emergence in Biology,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 151–65. 152

⁴ Rothschild. 152 FN 3

Life and Mind. As Paul Davies summarizes, Lewes asserted that successive stages of evolution emerged from the lower strata, arguing that

in physical systems the whole is often more than the sum of its parts. That is to say, at each level of complexity, new and often surprising qualities emerge that cannot, at least in any straightforward manner, be attributed to known properties of the constituents. In some cases, the emergent quality simply makes no sense when applied to the parts. Thus water may be described as wet, but it would be meaningless to ask whether a molecule of H₂O is wet.⁵

As Davies suggests, Lewes idea was especially popular among biologists and chemists near the turn of the twentieth century, who wished to push back against the overly-mechanistic views of the world widely espoused by “orthodox” physicists. Emergence offered a middle position between absolute physical reductionism and the equally problematic alternative of vitalism, the latter of which posited some additional essence superadded to animate, living beings that differentiated them from inanimate matter. Although theories of emergence enjoyed relative popularity during this time, especially in the British academy, broad scientific interest in the concept of emergence saw a rapid decline as the century unfolded, owing largely to the growing explanatory power of methodologically-reductive explanations generated by particle physics, molecular biology, and biochemistry. The broad explanatory success of these methodologically-reductive approaches militated against accounts of emergence because of their attempts to explain events at “higher” levels according to underlying aggregates at “lower” levels.

⁵ Paul C.W. Davies, “Preface,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul C.W. Davies (Oxford: Oxford University Press, USA, 2008), IX–XIV. X

There emerged, then, a kind of foundationalism that gave both ontological and explanatory precedence to the lower levels.

6.2.1 Two Key Distinctions: Strong and Weak Reduction, Strong and Weak Emergence

Here, however, Davies draws two key distinctions. First, he distinguishes between weak, “methodological reductionism,”—which some refer to as “epistemic reductionism”—and strong “ontological reductionism.”⁶ Whereas methodological reductionism seeks to ground or explain phenomena at one level (e.g. chemical interactions) by appealing to the interaction of constituent parts at a lower level (e.g. atomic physics), ontological reductionism asserts that this explanatory power derives from the absolute priority of the lower levels in determining events at the higher without exception or remainder. It entails “the assertion that the whole really is, in the final analysis, nothing but the sum of the parts, and that the formulation of concepts, theories, and experimental procedures in terms of higher-level concepts is merely a convenience.”⁷ As this distinction makes clear, the benefits garnered from methodological reduction by referring hitherto unexplained phenomena to lower, related levels of inquiry need not necessarily commit us to a reductionist ontology or causal scheme.

Inversely correlated to this first distinction, then, Davies also distinguishes between weak and strong emergence. Accepting strong ontological reductionism in principle, weak emergence “recognizes that in practice the only way that the behaviour of

⁶ Davies. XII. Evolutionary biologist Lynn Rothschild suggests an alternative (though complimentary) division of the reductionism/emergence relation into three categories, which will be discussed more fully below. See Rothschild, “The Role of Emergence in Biology.” 157-158.

⁷ Davies, “Preface.” XII

many complex systems may be determined is by direct inspection or by simulation.”⁸

That is, weak emergentists hold that, while a complete knowledge of all laws and conditions of physics would yield a perfect knowledge and unerring prediction of all events at higher levels—including the emergence of human minds and mental processes—such knowledge and computational power lies (perhaps permanently) beyond human reach, rendering so-called “higher level” explanations a pragmatic necessity.

Going further still, strong ontological emergence holds that, even if we had such knowledge and computational power, “micro-level principles are quite simply inadequate to account for the system’s behaviour as a whole,” especially as we move not only into chemistry or biology but also into questions of human cognition and behavior.⁹

6.2.2 The Re-Emergence of Emergence

While the broad acceptance of methodological reductionism across the natural sciences was accompanied by a corresponding decline in scientific interest in (especially strong) emergence in the middle of the twentieth century, theories of emergence have proved more durable than might have been expected. The larger philosophical discussion of emergence continued in the works of a number of thinkers beyond Lewes, including Nicolai Hartmann, C.D. Broad, C.L. Morgan, Michael Polanyi, Roger Sperry, and—at least in its weaker form—Samuel Alexander.¹⁰ Moreover, there has been a more recent “re-emergence of emergence” in both philosophy and the natural sciences. This

⁸ Davies. XII

⁹ Davies. XII

¹⁰ For a more complete account of this history, see Philip Clayton, “Conceptual Foundations of Emergence Theory,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies, (Oxford: Oxford University Press, USA, 2008), 1–31.

contemporary resurgence may be largely attributed to the development of the “sciences of complexity,” which include more synchronic accounts of emergence over scale (e.g. chaos theory, spatial-network game theory, collective behavior and social dynamics, systems biology, etc.) and diachronic accounts of emerging self-organization (information theory, geomorphology, machine learning and artificial intelligence, etc.). In many cases, methodological reduction fails to provide the explanatory or predictive resources needed to fund inquiry in these fields, leading scientists in these fields to accept at least the weaker forms of emergence. Given that their object of inquiry exists in an open system with input and output flows of both energy and matter, explanation by appeal to the lowest levels within the system is simply unhelpful. While this amounts only to a case for weak emergence, these burgeoning fields have helped to challenge the hegemony of reductionism in both its strong and weak forms.

6.2.3 Emergence and Quantum Physics

Even within physics, the de facto *Urwissenschaft* in the modern academy, there are some proponents of emergence, especially as regards the apparent disconnect between quantum and classical accounts of physics, often described broadly under the heading of “quantum decoherence.” To grasp the stakes of this question, though, it is helpful to understand something about the historical development of quantum physics as a discipline. The foundations of quantum mechanics trace back to Thomas Young’s 1801 double-slit experiment, which first established the wave-like nature of light. In this experiment, Young projected sunlight through two screens and onto a third. The first screen had only one slit, producing a single coherent light source. This light then passed through the two

narrow slits in the second screen before registering on the third. Each of the slits in the second screen thus became an independent and coherent source for light on the final screen. Rather than merely two points of light corresponding to each of the slits—which we might expect if light behaved as discrete packets or particles—Young observed several discrete bands of light and darkness on the third screen. These bands corresponded to the interference patterns generated by the overlapping of peaks and troughs from the two wave functions, where the dark spots represented a complete cancellation. In the 1860’s, Young’s wave-theory of light was also taken up into James Clerk Maxwell’s equations, which distinguished wave-like light—along with other electromagnetic phenomena—from localized, particulate matter. However, in 1905, Einstein complicated this picture through his research on the photoelectric effect, which demonstrated that light may also behave as a collection of discrete particles or “photons” in certain situations, giving rise to the view of light as exhibiting a wave-particle duality. In the 1920’s, Louis de Broglie theorized that this duality applied not only to photons, but also to all matter, which theory was experimentally confirmed shortly thereafter, giving birth to the study of quantum mechanics.

To convey the challenges raised by de Broglie’s theory and quantum mechanics more generally, it is helpful to return to Young’s double-slit experiment, replacing light with matter.¹¹ Imagine that an electron gun is now firing particles through the first screen with two slits, and the third screen has been replaced with a photoelectric screen that registers each electron’s impact. When a stream of electrons is fired through only one of the slits, there results a clustered pattern of impacts in a single band, much as one might

¹¹ Though this example is used in many popular accounts of quantum mechanics, we rely here on Jim Al-Khalili, *Quantum: A Guide for the Perplexed*, UK ed. edition (London: Orion Publishing Co, 2012). 10-23.

expect from matter behaving as localized particles passing through the screen. However, when the second slit is opened, instead of simply having a second band matching the first, the electron imprints on the photoelectric screen appear strikingly similar to multiple bands of the wave-interference patterns observed with light waves; moreover, this pattern occurred whether the electrons were fired quickly as a stream or much more slowly, in discrete bursts. While each electron marks a single, discrete point of impact, their aggregate distribution reflects their wave-like behavior. Stranger still, if the experimenter attempts to observe the path of the electrons using a particle detector, the resulting pattern appears as two distinct bands corresponding to electrons moving according to particle-like behavior. If we were to switch off the detector without removing it, however, the electrons passing through both slits would resume their wave-like behavior, suggesting that the particles behavior is affected by observation or measurement.

Examples such as these quantum variants of the double-slit experiment illustrate the central difficulty noted above in relation to quantum decoherence: how do we move from the compelling, testable, and verifiable hypotheses about the properties and behavior of matter at the atomic and subatomic layer to the rules and laws of governing macro-phenomena in the world of classical physics? Many of these difficulties trace back to the phenomena of “quantum superposition,” or the principle that various quantum states may be combined or “superposed” into another valid quantum state and that any valid quantum state may be represented as the sum of various other distinct states. This superposition may be observed, for instance, in the way that the distribution of electrons

passing through the two slits in the example above represent the overlapping wave functions emitted from each slit.

The difficulties associated with reconciling these quantum superpositions and indeterminacies with lived human experience are perhaps most famously captured in the example of Schrödinger's cat:

One can even set up quite ridiculous cases. A cat is penned up in a steel chamber, along with the following diabolical device (which must be secured against direct interference by the cat): in a Geiger counter there is a tiny bit of radioactive substance, so small, that perhaps in the course of one hour one of the atoms decays, but also, with equal probability, perhaps none; if it happens, the counter tube discharges and through a relay releases a hammer which shatters a small flask of hydrocyanic acid. If one has left this entire system to itself for an hour, one would say that the cat still lives if meanwhile no atom has decayed. The first atomic decay would have poisoned it. The Ψ -function of the entire system would express this by having in it the living and dead cat (pardon the expression) mixed or smeared out in equal parts. It is typical in these cases that an indeterminacy originally restricted to the atomic domain becomes transformed into macroscopic indeterminacy, which can be resolved by direct observation. That prevents us from so naively accepting as valid a "blurred model" for representing reality.¹²

Schrödinger's cat illustrated the experienced disconnect between quantum uncertainty and superposition and the world of classical physics.

¹² Erwin Schrödinger, "The Present Situation in Quantum Mechanics: A Translation of Schrödinger's 'Cat Paradox Paper,'" trans. John D. Trimmer, *Journal of the American Philosophical Society* 124 (1980): 323–38.

Nevertheless, while quantum mechanics is still very much a developing science, physicists have made great strides in the questions raised by Schrödinger and others. As Philip Ball explains:

The cat is still hauled out today as if to imply that we're as puzzled as ever by the mere fact that the quantum world at small scales turns into the world of classical physics at human scales. The fact is, however, that this so-called quantum-classical transition is now largely understood. Things have moved on, and we can state much more precisely than Schrödinger and his contemporaries could why and how quantum becomes classical. The answer is both elegant and rather astonishing. For quantum physics is not replaced by another sort of physics at large scales. It actually gives rise to classical physics. Our everyday, commonsense reality is, in this view, simply what quantum mechanics looks like when you're six feet tall.

You might say that it is quantum all the way up.¹³

Ball argues that the problem of decoherence—the breakdown between the quantum behaviors of particles as systems come into contact with other observers or phenomena—is actually the problem of massive, largescale coherence. The superposition of a set of particles comes to interact with countless others, drawing them into composite superpositions. This network of overlapping relations of superpositions is what is referred to as “quantum entanglement,” as quantum mechanics describes the ways in which these seemingly fragile quantum states are in fact dynamically acting throughout the

¹³ Philip Ball, “The Universe Is Always Looking,” *The Atlantic*, October 20, 2018, <https://www.theatlantic.com/science/archive/2018/10/beyond-weird-decoherence-quantum-weirdness-schrodingers-cat/573448/>. See also, Philip Ball, *Beyond Weird: Why Everything You Thought You Knew about Quantum Physics Is Different*, First edition (Chicago: University of Chicago Press, 2018).

macrophenomena in an open system.¹⁴ As Ball further explains, “Quantum superpositions are not, then, really destroyed by the environment, but on the contrary infect the environment with their quantumness, turning the whole world steadily into one big quantum state.” However, while Ball compellingly articulates the widely acknowledged reconciliation of quantum and classical physics in recent years, he moves in places from a salutary methodological reduction into a more problematic ontological reduction, remarking that the widespread entanglement of quantum phenomena with the surrounding environment “conjugates the *illusion* of classical physics out of the quantum soup.”¹⁵

6.2.4 Downward Causation: Whole-Part vs Level Entanglement

Paul Davies describes this dismissive tendency, common among many physicists, as a “nothing-buttery,” which treats all accounts apart from physics as nothing but an illusion.¹⁶ However, while Davies himself resists this strong reductionism, he urges emergent theorists to be clear about what precisely they believe has emerged in any higher-order phenomena, questioning whether it is “ever the case that an emergent phenomenon cannot be given a satisfactory reductive account, even in principle? ... If the answer is yes, then we come to the next key question: in what way, precisely, does the value-added emergent ‘law’ or ‘behaviour’ affect the system?”¹⁷ Strong emergentists who

¹⁴ See also Erich Joos, “The Emergence of Classicality from Quantum Theory,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 53–78.

¹⁵ Emphasis added

¹⁶ Paul C.W. Davies, “The Physics of Downward Causation,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 35–52. 35-36

¹⁷ Davies. 38

argue for such an emergence often point towards a “separate causal category” referred to as “downward causation.”¹⁸ Davies distinguishes between two possible meanings of downward causation: “The first is whole–part causation, in which the behaviour of a part can be understood only by reference to the whole. The second I call level-entanglement... and has to do with higher conceptual levels having causal efficacy over lower conceptual levels.”¹⁹ Physicists have an especially difficult time recognizing the first of these, as causality in physics is typically strongly tied to the local context; thus, though physicists may pursue global principles, phenomena are nevertheless explained by local causes and non-local constraints, such that local causation comports with global principles without being “caused” by them.

Davies is a bit more sanguine regarding the account according to level-entanglement, and he notes several instances where this obtains, including: the rewiring of the neural connections in the brain in response to patterns of thought and behaviors encountered by the organism, natural selection’s influence over evolutionary history (as a “sieve” or “constraint”), and numerous applications of information theory. Davies gives particular attention to the last of these and offers 4 examples of level entanglement in information theory that would be familiar to most physicists. First, he points to the wave-particle duality in quantum mechanics, where the “wave is not a wave of ‘stuff’, it is an information wave. Since information and ‘stuff’ refer to two different conceptual levels, quantum mechanics seems to imply a duality of levels akin to mind–brain duality.”²⁰

¹⁸ Davies. 38. Davies also cites D.T. Campbell, “‘Downward Causation’ in Hierarchically Organized Biological Systems,” in *Studies in the Philosophy of Biology*, ed. F.J. Ayala and T. Dobzhansky (London: Macmillan, 1974), 179–86. At the end of the section, we will consider also Lonergan’s treatment of this as “downward causality.”

¹⁹ Davies, “The Physics of Downward Causation.” 40. NB: This has no association with the phenomenon of quantum entanglement described above.

²⁰ Davies. 45

Second, Davies notes the role of information as the “statistical base for entropy,” noting that “information should not come into existence in a closed system.”²¹ His third example refers to genetics, where molecular biologists flip between “the informational level of description, full of language about constructing proteins according to a blueprint, and the hardware level in terms of molecules of specific atomic sequences and shapes.” Finally, Davies points to the theory of general relativity, which holds that “information shouldn’t travel faster than light.”²²

While Davies acknowledges that in all of these examples particle physics has to yield, to some degree, to the reality of explanatory, level-entanglement, he notes a persistent reluctance on the part of many physicists to recognize the notion of downward causation even in the less-objectionable form suggested by level-entanglement:

The problem about strong emergence is that there is simply no ‘room at the bottom’ for the deployment of additional ‘downwardly mobile’ forces if the physical system is already causally closed. Thus a typical closed and isolated Newtonian system is already completely determined in its evolution once the initial conditions are specified. To start adding top-down forces would make the system over-determined. However, this causal straightjacket presupposes the orthodox idealized view of the nature of physical law, in which the dynamical evolution of a physical system is determined by a set of differential equations in which the mathematical operations (e.g. differentiation) are in principle implementable in nature. In turn, this supposes that space-time is continuous and at least twice differentiable, that real numbers map one-to-one onto physical

²¹ Davies. 45

²² Davies. 46

states, and so on. Most physicists regard the laws of physics Platonically, that is, as existing in some idealized mathematical realm, and take for granted that the mathematical operations captured in the description of the physical laws may actually be carried out (by nature) to infinite precision. This idealization, in which the laws of physics, expressed as perfect immutable mathematical relationships, enjoy a transcendent ontological status, is one of the founding assumptions of science as we know it. The duality between timeless, given, eternal laws and changing, contingent, physical states reflects the theological roots of physics, in which a timeless, eternal Lawgiver created an evolving world.²³

The problem, then, is that most physicists too often beg the question of the foundational intelligibility of the universe, asserting physics as the fundamental explanatory account without remainder since (some form of) physics is the last stop for methodological reduction. While proponents of information theory within physics have begun to question this assumption, its widespread acceptance has tended to militate against the broad acceptance of theories of emergence by a majority of physicists.²⁴

6.2.5 Emergence: Biology from Chemistry and Physics

Such resistance grounded on appeals to the success of methodological reduction are not limited to physicists, either, as practitioners of higher order sciences often seem equally

²³ Davies. 46-47

²⁴ For examples of information theory resisting problematic forms of reductionism, Davies refers to J.A. Wheeler, in *Problems in Theoretical Physics*, ed. A. Giovanni, F. Mancini, and M. Marinaro (Salerno: University of Salerno Press, 1984); R. Landauer, "Wanted: A Physically Possible Theory of Physics," *IEEE Spectrum* 4 (1967): 105-9; R. Landauer, "Computation and Physics: Wheeler's Meaning Circuit," *Foundations of Physics* 16 (1986): 551-64; and Seth Lloyd, "Computational Capacity of the Universe," *Physical Review Letters* 88: 237901 (2002).

willing to sign on to theories of physicalist priority. Within biology, for instance, Lynn Rothschild describes just such a trend:

[T]o acknowledge emergence is to assail the approach that is so prevalent in biology today, the perception that with an increasing knowledge of chemistry and molecular biology (and to some extent, cellular biology) we will be able to explain all of biology. What started as a methodological simplification has turned into a faith that, by means of reductions of higher-order phenomena, all biological questions will be answered.²⁵

Despite this avowed ontological reductionism, however, Rothschild notes that these same biologists seem to at least performatively endorse at least a weak form of emergence insofar as their research attends to events and patterns only recognizable at the biological level. Rothschild notes, for instance, that “life,” the very thing which biology proposes to examine, cannot be recognized solely by appeal to sub-biological phenomena, for

unless death occurs by freezing the entire body quickly, by boiling, or some such event, biochemical reactions, and even organ functions, can continue beyond what we consider death. In contrast, there are organisms such as nematode worms and frogs that can freeze solid, ceasing biochemical activity, and yet are alive upon defrosting. ... Thus, one has the suspicion that it is impossible unambiguously to determine death in a reductionist way.²⁶

²⁵ Rothschild, “The Role of Emergence in Biology.” 151. See also 155 for a paraphrase of this point in which she further notes, “Thus, the question of emergence goes from being a philosophical curiosity to an issue that strikes at the core of methodology in the biological sciences. For, if emergence exists, absolute reductionism fails.”

²⁶ Rothschild. 159

It is not that the evidence which biologists may consider in relation to the life and death of an organism are not somehow dependent on the physical and chemical layers; but the very question of the life or death of any particular organism or of the general meaning of those terms does not itself emerge or seem to be accounted for by starting from below the level of biological investigation toward subatomic, atomic, molecular, or chemical manifolds.

Moreover, Rothschild argues that this disconnect and the consequent denial of emergence among many biologists is detrimental to the practice of biology itself, since “treating biological situations as emergent is a valid research strategy regardless of its philosophical underpinnings.”²⁷ Drawing from earlier attempts by Ernst Mayr to nuance biological reductionism, Rothschild offers a pragmatic account of emergence as a heuristic tool for biologists. She begins by distinguishing three different forms of emergence:²⁸

1. *Constitutive emergentism*. The material composition of organisms is drawn solely from the inorganic world. Thus, on a physical basis, there is no emergence. The stuff of physics is the stuff of biology. Clearly this is simply the same as [Mayr’s] constitutive reductionism.
2. *Explanatory emergentism*. One cannot understand the whole until one understands the constituent parts. Because function can be independent of composition in biology, and because components interact and living organisms are

²⁷ Rothschild. 151

²⁸ Rothschild. 157-158. Drawing from Ernst Mayr, *The Growth of Biological Thought: Diversity, Evolution, and Inheritance* (Cambridge, Mass.: Belknap Press, 1982). 160-163.

historical entities, some part of explanation in biology must be based on emergence.

3. *Theory emergentism*. If theories in biology are simply special cases of the theories and laws of physics and chemistry, then biology (and chemistry) would be taught in physics departments. But, as Mayr points out, biological processes are different from biological concepts, and the latter may be context dependent. Thus, biological theory must be based on emergence.²⁹

Rothschild defends the latter two forms of emergentism, providing a series of biological examples where “pragmatic emergence” rather than methodological reduction yields a more powerful and compelling explanatory mechanism. She notes, for instance, the dependence of biology on statistical probabilities of distinctly biological events, particularly in relation to evolution: “[One] must consider the underlying biological complexity as a cause for, and as constitutive of, emergence. Still, what are emergent are the particular outcomes of evolution, rather than the statistically based predictions that particular events will or will not happen.”³⁰ In other words, because of the “pure statistical variability,” emergence pertains to what obtains *de facto* in this world.

Similarly, Rothschild notes the explanatory advantage of emergence over reduction in regard to the ongoing debate about the locus of natural selection, which originally focused on the fitness of individual organisms within a population. For instance, the fitness of colonial species—ants, bees, and colonial hydrozoans, etc.—depends on the success of the whole colony, not on the fitness of any particular worker, warrior, or queen on their own, and there is only a partial genetic identity between

²⁹ Rothschild, “The Role of Emergence in Biology.” 158

³⁰ Rothschild. 158-159

members. She also points to Stephen Jay Gould's challenges to the dominance of genetic explanations for selection, as advocated for in the work of Richard Dawkins and others.³¹ Rothschild notes that "the function, appearance, and behaviour of an organism cannot be foretold based only on a knowledge of its genes. Genes create organisms in a non-additive and nonlinear fashion."³² Following Gould, she argues that primary locus of selection is not the gene or "replicator" but the emergent "interactor," or the phenotypic manifestation of the genotype in combination with environmental factors. Furthermore, Rothschild describes two forms of emergence evidenced in these more nuanced accounts of selection: (1) emergent function, which "occurs when the properties of an organism—such as look, smell, thought, and behaviour—cannot be predicted from knowing the entire gene sequence"; and (2) emergent fitness, which "maintains that the fitness of a species is different from the sum of its parts... [and] could depend on its ecological interactions or other environmental factors, which cannot be deduced from lower levels."³³ In both cases, she argues that both strong and weak forms of reduction fail to account for the complexity which arises in these biological cases. As Rothschild suggests, biology presents an especially rich field for discussions of emergence, since the relationships between various organisms present genuinely new forms of intelligibility when compared with the prebiotic stratum.³⁴ As organisms grow increasingly complex,

³¹ Stephen Jay Gould and E.A. Lloyd, "Individuality and Adaptation Across Levels of Selection: How Shall We Name and Generalize the Unit of Darwinism," *Proceedings of the National Academy of Sciences of the United States of America* 96 (1999): 11904–9; Stephen Jay Gould, *The Structure of Evolutionary Theory* (Cambridge, Mass.: Belknap Press of Harvard University Press, 2002); Richard Dawkins, *The Selfish Gene* (New York: Oxford University Press, 1976).

³² Rothschild, "The Role of Emergence in Biology." 160

³³ Rothschild. 160-161

³⁴ Though she does not use these categories, some of these differences are what we described in Chapter Three in terms of Lonergan's account of the emergence of genetic (as distinct from classical or statistical) intelligibility.

the possibilities for interaction with their other species and with their whole environment further resist simple reduction.

6.2.6 Emergence: From Biology to Zoology and Social Dynamics

Before moving on, it is worth examining one further defense of emergence on biological grounds. However, where the preceding example focused on the nexus between biology and the lower sciences, here, we examine the connection between biology and higher social and anthropological sciences in the work of Barbara Smuts, who examines the diverging social evolution of chimpanzees and bonobos from the same great ape ancestor in the Congo River basin.³⁵ She describes how, once separated by the impassible Zaire River, the divided community of their ancestral predecessor occupied two distinct ecosystems. One of the communities—the proto-chimpanzees—had to compete with the gorillas that also occupied their habitat and, therefore, were unable to support extensive social groups due to the limited resources. The other community—the proto-bonobos—did not have to contend with gorilla populations for their food supply, and thus were able to support significantly larger social groups. Examining the two contemporary populations, Smuts describes significant social differences. Chimpanzee society is far more male-dominated, with males exhibiting violent behavior against each other, against the females in ways including “sexual coercion,” and even against infants. Conversely, bonobo society is considerably more egalitarian between males and females, and violence is far less common in all three contexts. What explains this divergence?

³⁵ Barbara Smuts, “Emergence in Social Evolution: A Great Ape Example,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 166–86.

Drawing on the work of Richard Wrangham and others, Smuts argues that the larger proto-bonobo community could support a larger group of females who interacted and bonded over time, eventually leading them to band together and collectively resist individual male aggression and violence; such bonds are still evident today, both in the social structures and behaviors of the females in bonobo society. She particularly notes the prevalent female-female sexual encounters between among bonobos, which have been observed to occur with much greater frequency than male-female encounters in the wild and which play a central role in strengthening social ties between females.³⁶ Reflecting on the impact of lower phenomena on higher, Smuts underscores “how an unpredictable and seemingly minor change can exert effects that amplify through a system over time and at several levels, resulting in the emergence of novel patterned relationships, and, in this case, distinct species-specific behaviours (in the sense of ‘weak emergence’)...”³⁷

Smuts notes that, once these female relationships and social constructs emerged, they also exerted forms of downward causality that led to this more significant genotypic and phenotypic differentiation of bonobos from chimpanzees over time through the maintenance of “multiple recursive feedback loops.” While selection obviously still

³⁶ Smuts. 171. “One of these potential genetic changes involved shifts in female sexual proclivities. In the wild, female–female sex is very common—more common than female–male sex. For example, in the Lomako forest, out of 484 genital contacts observed, 464 involved two females, 15 involved a male and female, and 2 involved two males (Hohmann and Fruth, 2000) Female–female sex appears to enhance female–female relationships in several ways (de Waal, 1987; reviewed in Hohmann and Fruth, 2000). First, it is used to reduce tension in the context of feeding, so that females are able to feed close together and even share monopolizable resources, such as meat (Hohmann and Fruth, 1993). Secondly, when conflicts do occur among females, they often reconcile afterwards via sexual interactions. Thirdly, females appear to use sex to express status differences: lower-ranking females typically solicit sex from higher-ranking females, and higher-ranking females usually adopt the top position. Such willingness on the part of subordinates actively to acknowledge lower rank can facilitate more friendly relationships between bonobos of different ranks (de Waal, 1986).”

³⁷ Smuts. 170

resulted from male-female couplings among bonobos, the mechanisms for partner selection in a society where groups of females can resist and even deny over-aggressive males are significantly altered. Smuts describes several observable effects:

For example, compared with chimpanzees, bonobo females begin showing oestrous cycles [of sexual receptivity and fertility] earlier in life, resume oestrous cycles after giving birth much sooner (within one year, as compared with 3–4 years), and spend a much larger proportion of each cycle with a sexual swelling. These changes translate into an enormous difference in the percentage of time that females sport a maximal sexual swelling: 48 per cent for bonobos, versus 4 per cent for chimpanzees (Wrangham, 1993). What do these differences mean?

Because female bonobos copulate with males much more frequently than chimpanzee females over much greater periods of time, the chances that any given copulation will result in fertilization are much smaller, which greatly reduces the incentive for males to try to control mating access to particular females. Other physiological differences include larger sexual swellings among bonobos, a more prominent clitoris, and the forward rotation of the genital area, changes that appear to enhance the pleasure obtained during [genital-genital] rubbing (Wrangham 1993). Such changes seem to indicate a top-down causal relationship between bonobo social evolution and physiological change.³⁸

Smuts notes several other examples of social arrangements impacting physiology among females and males in both ape communities, emphasizing especially how these relationships have impacted the interaction between these communities and other species

³⁸ Smuts. 174

communities that also occupy their habitats. Beyond the impact of social behaviors, Smuts also notes that “consciousness [as both intentional and inventive] may also play an important role in the dynamics of some non-human animal societies, on both evolutionary timescales and on shorter timescales.”³⁹ Therein, Smuts recognizes individual agency among animals of sufficient complexity that have shaped and continue to shape not only their own species history, but also the larger trajectory of evolution on this planet.

6.3 Challenges to Emergence

The preceding examples in Davies, Rothschild, and Smuts suggest the broad significance of theories of emergence in the sciences, both methodologically and ontologically.

However, while support for theories of emergence has grown in some sectors, they still represent something of a minority position. Even among proponents of theories of emergence, there are significant differences among what precisely constitutes an emergent level. Rothschild suggests that, “for emergence to occur there must be hierarchy and the inability to predict a higher-level function based on its components.”⁴⁰ But how many levels of emergence can we then distinguish? George F.R. Ellis has suggested nine levels of emergence, each of which maps to a corresponding academic discipline: particle physics, nuclear physics, atomic physics, molecular chemistry, biochemistry/molecular biology, cell biology, botany/zoology/physiology, animal behavior/psychology, and sociology/politics/economics.⁴¹ Alternatively, the biophysicist Harold Morowitz

³⁹ Smuts. 180-181

⁴⁰ Rothschild, “The Role of Emergence in Biology.” 161

⁴¹ George F.R. Ellis, “On the Nature of Emergent Reality,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford

describes some twenty-eight levels spanning from the first three minutes after the big bang to the emergence of philosophy and spirituality in human history.⁴² Nearly all supporters of emergence recognize the emergence of life and mind, which are broadly regarded as the most difficult phenomena to adequately explain solely on the basis of reduction.⁴³ However, in part because of significant differences in central terms, even these phenomena remain contentious.

6.3.1 Jaegwon Kim

One of the leading philosophical critics of emergent phenomena and especially of the emergence of mind, Jaegwon Kim, argues that proponents of emergence must answer two central challenges to the meaningfulness of emergence:

University Press, USA, 2008), 79–107. 80. Ellis differentiates his levels, noting that “Each level underlies what happens at the next higher level in terms of physical causation. The existence of higher-level complex behaviour, which does not occur at the lower levels, then emerges from the lower-level properties both structurally and functionally (at each moment) and in evolutionary and developmental terms (over time).”

⁴² Harold J. Morowitz, *The Emergence of Everything: How the World Became Complex* (Oxford University Press, 2002). Morowitz’s list includes: the primordium or the first three minutes after the Big Bang, large scale structure surrounding the initial expansion of the universe and the appearance of matter, stars, the elements, solar systems, planets, geospheres, the biosphere, prokaryotes, eukaryotes, multicellularity, neurons, two subkingdoms of animals in terms of protostomia and deuterostomia, chordates and vertebrates, fish, amphibians, reptiles, arboreal animals, primates, the great apes, hominids, toolmakers, language, agriculture, technology and urbanization, philosophy, and spirituality.

⁴³ The emergence of mind, consciousness, and meaning have been particularly challenging and contested questions, as philosopher Owen Flanagan describes: “Within mind science, ‘the hard problem’ is to explain how mind is possible in a material world. How could the amazing private world of my consciousness emerge out of neuronal activity? This problem is hard. But it is even harder to explain how meaning is possible in this material world. Nearly everyone accepts that consciousness exists. Many wonder whether meaning does, even could, exist. Consciousness is. It happens, it is there. It flows like a stream while I live, and how it flows, how it connects to itself, is what makes me who I am. Meaning, if there is such a thing, is a matter of whether and how things add up in the greater scheme of things. Meaning, unlike consciousness, is not simply a puzzling feature of the way things are. Whether there is or can be such a thing as meaning is a more complicated matter than what there is. Unlike consciousness, meaning isn’t a matter of what there is or isn’t. Meaning, if there is such a thing, involves more than what there is. Minimally it involves a truthful assessment of what living a finite human life adds up to.” Owen Flanagan, *The Really Hard Problem: Meaning in a Material World*, Reprint edition (Cambridge, Mass: MIT Press, 2009). xi.

The first [challenge] is to show that emergent properties do not succumb to the threat of epiphenomenalism, and that emergent phenomena can have causal powers vis-a`-vis physical phenomena. This must be done without violating the causal/explanatory closure of the physical domain—or, if the physical causal closure is to be given up, a credible explanation and rationale must be offered. The second challenge is to give a positive characterization of emergence that goes beyond [emergence]—that is, beyond supervenience and irreducibility. Unless this is done, the thesis that minds emerge from bodies remains uninteresting and without much content; we need a positive account of how minds are related to bodies. Saying that they are not reducible to bodies says little about their relationship.⁴⁴

Kim’s first challenge raises the now familiar question of the possibility of downward causality. Kim subscribes fully to the physicalist “nothing-buttery,” as he suggests that “higher-order” phenomena like “mind” are merely epiphenomenal, meaning that the causal arrow points only upward, as thoughts are the result of physical and chemical processes. Thus, while multiple explanatory accounts may be developed according to the conventions of different fields, to say that any of these are strongly emergent would suggest a superfluous causal overdetermination.⁴⁵

⁴⁴ Jaegwon Kim, “Being Realistic about Emergence,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 189–202. 201. See also Jaegwon Kim, *Supervenience and Mind: Selected Philosophical Essays*, Cambridge Studies in Philosophy (Cambridge [England] ; New York, NY, USA: Cambridge University Press, 1993); Jaegwon Kim, *Mind in a Physical World: An Essay on the Mind-Body Problem and Mental Causation*, Representation and Mind (Cambridge, Mass.: MIT Press, 1998).

⁴⁵ Even if one accepts Kim’s physicalist premises here, Paul Davies suggests three different “loopholes” by which the challenge of overdetermination may be addressed by proponents of emergence at Davies, “Preface.” xii. “Paul Davies suggest three possible “loopholes” that would still allow for some form of strong emergence: “The first is if the universe is an open system. This would enable ‘external’ or global principles to ‘soak up’ the causal slack left by the openness. The system as a whole would then be

Second, Kim challenges that, at least in many descriptions of emergence, there is nothing to distinguish supposedly “emergent” phenomena from merely “supervenient” phenomena. For Kim, to say that a property or state is supervenient with respect to another merely means that “any system that has the base properties N_1, \dots, N_n will necessarily have the supervenient property M ; or, as [Robert] Van Gulick says, the N s necessitate M . It is important to see that this is only a claim of determination or necessitation of one property by a set of properties...”⁴⁶ The problem, as Kim sees it, is that too many theorists identify instances of supervenience and claim that they represent

determined in part from the micro-level dynamics and in part from the constraints imposed by the global principles. The second possibility arises when the system is non-deterministic—quantum mechanics being the obvious example—and the system under consideration is unique rather than belonging to a homogeneous ensemble (in which case a statistical form of determinism would still apply). The final possibility is if the laws of physics operating at the base level possess intrinsic imprecision due to the finite computational resources of the universe. All three possibilities would be considered unorthodox departures from standard physical theory.” The first of these possibilities might draw some support from multiple-universe theories, though these are notoriously untestable and so would require some additional, compelling reasons for us to invoke it in defense of emergence or else risk gratuitous assertion. The second, as Davies notes, eschews the strictly reductive determinism of a Newtonian, classically-closed physical world, though it would still accept forms of physicalism that accepted an irreducibly statistical component to reality. The third comports with the advent of information theory in physics, noted earlier in this chapter, and represents at least a partial challenge to physicalism, insofar as it posits information as the fundamental ontological category.

⁴⁶ Kim, “Being Realistic about Emergence.” 193. It should be noted that, while Kim’s understanding of the term “supervenience” is shared by many others and perhaps especially by physicalists, there is some variation in the use of the term. Consider, for instance, the definition offered in Nancey Murphy, “Emergence and Mental Causation,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 227–43. 231: “I define ‘supervenience’ as follows: Property S supervenes on (base) property B if and only if entity e possesses S in virtue of e ’s possessing B under circumstances c . Alternatively: Property S supervenes on property B if and only if e ’s having B constitutes e ’s having S under circumstance c . Thus, I take it that a supervenient property is dependent upon some base property (or set of properties) along with some additional condition(s)... This understanding of supervenience is not the most common, but its value will appear in due course. My definition makes it possible to say that mental properties supervene on brain properties and at the same time one can recognize that (some) mental properties are co-determined by the way the world is.” While acknowledging that Kim’s remains the more common approach, Murphy notes that Thomas R. Grimes, Berent Enç, Paul Teller, and others have also pushed back on Kim’s definition in similar fashion. The significance of her challenge pertains to her greater recognition of relational co-determination of phenomena of objects and states in the world in comparison with the (pre-emptively) closed physicalism that in Kim amounts to a causal straightjacket and which is difficult if not impossible to overcome on the basis of his terms.

instances of emergence, without adequately distinguishing the terms or demonstrating that the addition of “emergence” represents a value added. As Kim explains:

Supervenience, though necessary, is not sufficient for emergence. The surface area of a sphere supervenes on its volume, but it does not emerge from it; the mass of a physical object supervenes on the masses of its parts but does not emerge from them, except in the trivial sense of ‘specific value’ emergence. In contrast, at least according to most advocates of emergence, mentality both supervenes on and emerges from physical/biological conditions; likewise for biological properties in relation to physicochemical properties. What then must be added to supervenience to yield emergence?⁴⁷

According to Kim, then, too many emergentists assert the reality of emergence as evidence of ontologically higher orders without adequately differentiating so-called “emergent phenomena” from merely supervenient properties, the reality of which fail to adequately challenge the worldview of reductive physicalism.

6.3.2 A Response: Michael Silberstein

Kim’s critiques are aimed predominantly at various forms of “non-reductive physicalism,” all of which purportedly accept that the fundamental ontological and causal network in the world is physical but which reject that the world can be adequately explained by or reduced to physical laws and properties. However, Michael Silberstein has challenged that Kim’s reductive, materialist critique can only rule out emergence and complex causation insofar as we are willing to accept three of Kim’s presuppositions:

⁴⁷ Kim, “Being Realistic about Emergence.” 193

[The Closure of Physics:] All physical events are determined, in so far as they are determined, by prior physical events and the physical laws that govern them. For any physical event e , if e has a cause at time t , then e has a wholly physical sufficient cause at t .

[Physicalism:] All individuals are constituted by, or identical to, microphysical individuals, and all properties are realized by, or identical to, microphysical properties.

[The Causal Inheritance Principle]: If mental property M is instantiated on a given occasion by being realized by a basal property P , then the causal powers of this instance M are identical with, or determined by, the causal powers of P .⁴⁸

These three positions all begin from the assumption that physics is the most fundamental ground of reality, and, to the extent that they exist at all, all other explanatory accounts and disciplines exist in a relation of ontological and causal dependence upon that physical ground. However, Silberstein notes that these presuppositions are more gratuitously asserted than convincingly argued, and they cannot be derived from broadly accepted principles within the field of physics itself.⁴⁹

⁴⁸ Michael Silberstein, "In Defence of Ontological Emergence and Mental Causation," in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 203–26. 217

⁴⁹ Silberstein quotes David Papineau to this effect: "I [initially] assumed that the completeness premise was quite uncontroversial. Surely, I thought, everybody agrees that the movements of matter, such as the movements of molecules in your arm, can in principle always be fully accounted for in terms of prior physical causes, such as physical activity in your nerves, which in turn is due to physical activity in your brain . . . and so on. To my surprise, I discovered that some people didn't agree . . . My first response, when presented with this thought, was to attribute it to an insufficient education in the physical sciences . . . However, when they then asked me, not unreasonably, to show them where the completeness of physics is written down in the physics textbooks, I found myself somewhat embarrassed. . . I realized that the completeness of physics is by no means self-evident. Indeed further reading has led me to realize, far from being self-evident, it is an issue on which post-Galilean scientific tradition has changed its mind several times." David Papineau, "The Rise of Physicalism," in *Physicalism and Its Discontents*, ed. Carl Gillett and Barry Loewer (Cambridge; New York: Cambridge University Press, 2001). 13-14. Quoted at Silberstein, "In Defence of Ontological Emergence and Mental Causation." 217-218.

Kim asserts an identity claim between mental states and brain states without remainder largely on the grounds of these three presuppositions. As Silberstein notes, however, “no one in science outside philosophy of mind, computer science, and AI talks this way. Thus the burden is on defenders of [physicalism] to show that it captures actual scientific talk of neural correlates or neural mechanisms.”⁵⁰ While many reductive physicalists reject that there is any “explanatory gap to bridge,” it is far from obvious that the correlation of some mental state (pain, joy, understanding, etc.) with an observable brain state exhausts the causal chain, especially when the same idea or feeling is correlated with measurably different brain states between different persons.

Rejecting both ontological and methodological individualism, Silberstein emphasizes that minds do not emerge from brains, but rather that “coherent neural activity (in some form or another) is the mechanism by which, in part, the brain supports consciousness.”⁵¹ The brain and brain states “are physically necessary but not sufficient conditions for the existence of the various mental states that they causally and non-causally support.”⁵² Moving beyond the reductionist view of brains as the center of all thought, Silberstein argues that the emergence of minds and mental processes also depend on both bodies and deep connections to environmental systems; thus, even the well-maintained “brain in a vat” cannot be expected to give rise to a mind or authentic mental processes, because it lacks the required systemic causation.⁵³ Quoting Silberstein at length:

⁵⁰ Silberstein, “In Defence of Ontological Emergence and Mental Causation.” 219

⁵¹ Silberstein. 216

⁵² Silberstein. 205

⁵³ Silberstein. 210. This is a likely allusion to Hilary Putnam’s well-known brain in a vat thought experiment in Hilary Putnam, *Reason, Truth and History* (Cambridge: Cambridge University Press, 1981).

Consciousness and cognition are emerging processes arising from self-organizing networks that tightly interconnect brain, body, and environment at multiple scales. ... Such self-organizing networks are however not merely 'in the head'; numerous mutual interactions between brain and body exist at biochemical scales, for instance in the molecular components of the endocrine, immune, and nervous systems. The integrity of the entire organism depends on such regulatory cycles involving brain and body at multiple levels. Mental processes are 'constituted' not simply by neural processes in the head, but by the way these processes are integrated into the whole organism's cycles of operation, including physical and social features of the environment as well as its own evolutionary and developmental history. Mental processes (affective, phenomenal, cognitive, etc.), both conscious and unconscious, loop through the physical, social, and cultural environments in which the body is embedded. Cognitive and mental processes are not disembodied mental representations in the head but emerge from the dynamic sensorimotor processes of the entire organism as it is embedded in its physical, evolutionary, and social environment. Cognitive capacities in symbol-using beings such as ourselves are not primarily internal; they are enactive bodily capacities that involve our relations with the world. Cognition and mental states are inherently dynamical, as they involve constant and continuous feedback between perception and action. Thus it makes no sense to think of brain, body, and environment as internally or externally located with respect to one another. Instead, they are

mutually embedding and embedded systems, tightly interconnected on multiple levels.⁵⁴

Silberstein calls his approach to the emergence of mind, consciousness, and mental processes “enactive,” by which he means both “embodied” and “embedded.” One distinct advantage of this model is that it does not succumb to the mind/body or the subject/object split, both of which prove impossible to reunite once sundered. Brains do not give rise to minds that only subsequently exist in causal relationships with the larger world; rather, minds function precisely as the center of the tensive relationship between the subject and object.

Silberstein suggests that these relationships should be understood through a model of “systemic causation.” Mental causation arises in and from a complex and entangled reality that includes not only brains and bodies, but also environments, histories, etc., and it is not cordoned off from those entangled realities once it emerges. Some proponents of the enactive model take this complex web of causality in a “deflationary” sense, rejecting questions of the self, the center of consciousness, the seat of intelligence, the capacity for imagination, etc. as mere “illusions” that collapse once recognized as indistinguishably entangled with the multi-layered causality that runs through and between minds, bodies, and the world.⁵⁵ However, in contrast to the deflationary model, Silberstein holds up what he refers to as “ontological emergence,” in which, “new processes, properties, and systems such as those we designate ‘self’, ‘phenomenal experiences’, and so on, really do come into being.... To say that the self, phenomenological environments, and so on

⁵⁴ Silberstein, “In Defence of Ontological Emergence and Mental Causation.” 208-209.

⁵⁵ Silberstein. 213-214. As examples of deflationary enactivism, Silberstein suggests Susan Blackmore, *Consciousness: An Introduction*, 1st edition (Oxford ; New York: Oxford University Press, 2003) and Daniel C. Dennett, *Consciousness Explained*, 1st edition (Boston: Back Bay Books, 1992).

are neither ‘in the head’ nor located in the ‘external world’ noumenally designated is not to deny the reality or causal role of such things.”⁵⁶ By positing mind as an instance of ontological emergence, Silberstein notes that we are able to name the emergent phenomenon that is clear to us at a kind of commonsense level without positing some particularly emergent entity (e.g. “a central processor in the brain to explain self-governing behaviour”).

6.3.3 Resisting an Explanatory Hierarchy

While Silberstein recognizes the causality exerted by the ontologically emergent phenomenon of mind and mental processes, he remains somewhat averse to the language of downward causality found in many other theorists of emergence: “Mental properties, systems, and so on, are ontologically emergent in the following respects: ... The causal capacities of mental properties are not reducible to either the intrinsic or relational physical properties underlying them. Mental properties are therefore irreducibly relational or, if you like, irreducibly dispositional.”⁵⁷ The difficulty, as Silberstein sees it, is when these emergent levels are treated as discrete, hierarchically arranged levels that neatly segment reality:

The universe is not ordered as a hierarchy of closed autonomous levels such as atoms, molecules, cells, and the like. Rather, the universe is intrinsically nested and entangled. The so-called physical, chemical, biological, mental, and social domains of existence are in fact mutually embedded and inextricably interconnected. That is, mental properties are not on a higher level than neurochemical properties, the

⁵⁶ Silberstein, “In Defence of Ontological Emergence and Mental Causation.” 214-215

⁵⁷ Silberstein. 203-204

former are not on a higher level than chemical properties, and so on. It is best to view the world as divided into systems and subsystems, not levels—and even then, such divisions are often not ‘carved at the joints’ but are nominal and relative to various formalisms and explanatory schemas.⁵⁸

His strong rejection of hierarchical thinking in this context seems, in large part, to be an effort to push back against the idea that any single explanation (physical, chemical, neurological, etc.) is seen as more real, fundamental, or important than any other: “I see no a priori reason to assign a higher authority to one form of explanation over another as this is a matter to be resolved empirically. When it comes to scientific explanation, ontological emergence embraces pragmatic explanatory pluralism and thus rejects exclusivist approaches to explanation.”⁵⁹ Not only does this non-hierarchical approach informed by causal entanglement resist reductive physicalism, but it resists the opposite pull to define some “highest” emergent level as the best explanatory account.

Silberstein’s account of enactive emergence responds directly to both of Kim’s critiques on philosophical grounds. By denying the a priori significance of any particular explanatory account over all others, he dissolves the assertion of an epiphenomenalism regarding any explanatory account; each layer exists in a causal entanglement, and the priority of any particular account can only be grasped with respect to “pragmatic and perspectival conditions” proper to the questioning subject. Therein, he directly challenges Kim’s first critique. Silberstein also responds to Kim’s second critique, especially insofar as he links the emergence of mind not only to brains and neural circuits, but to a network of causal entanglement between brains, bodies, and the larger environment in its

⁵⁸ Silberstein. 204

⁵⁹ Silberstein.

historical context. However, in resisting any manner of conceiving of a strictly hierarchical order in these explanatory accounts, Silberstein is less able to respond directly to Kim's second critique, since, in Silberstein's view, "The way we divide the world into systems and subsystems is often a matter of pragmatic and perspectival considerations."⁶⁰ This does not mean that such divisions are arbitrary; rather, they are subject to the particular concrete judgments of subjects approaching distinct questions from distinct vantage points, which seems to presuppose the larger epistemological and ontological commitments of his view of emergence, which "seeks to eliminate the a priori and merely philosophical question, *what is the mental?*, and replace it with the question, *how do phenomenological-intentional systems arise and what are their causal capacities?*" As a result, for Silberstein, providing a positive account of "what" emerges beyond mere supervenience is referred more directly to the different fields of inquiry themselves.

6.3.4 Terrence Deacon and the "Hole at the Wheel's Hub"

At this point, Terrence Deacon provides one helpful framework for thinking about what precisely emerges. While Deacon affirms his strict orthodoxy with the second law of thermodynamics, he proposes to investigate those instances where there appears to be a steady increase in order and regularity in various kinds of emergent phenomena. He notes that there appear to be self-organizing forces at work in these emergences, but he remains deeply wary of ascribing a teleological force or cause, noting that while the "superficial appearance of time-reversal [observed in these apparently self-organizing phenomena] is

⁶⁰ Silberstein. 206. Emphasis original.

the original motive for describing functional and purposive processes in terms of final causality... even Aristotle was clear that this could not be a literal ends-causing-the-means process.”⁶¹ Rather, Deacon argues that the apparent increase in order depends on “the flow of energy provided by increasing entropy because they are not so much regularities of structure as they are regularities in the dynamics of a process, though it may also leave a structural trace.”⁶²

Deacon proposes to explain these instances of emergent complexity according to what he calls “affordance logic.” While the “western mind” is inclined to think causality primarily in terms of discrete pushes and pulls, Deacon suggests that affordance, or a “specifically constrained range of possibilities, a potential that is created by virtue of something missing,” often accounts for these instances in which something seems to “appear out of nothing.”⁶³ He notes that, as systems scale up in complexity, possibilities for iterative interactions between both the particles and the limits of each entity also increase, which paves the way for “emergence,” which Deacon defines as the “unprecedented global regularity generated within a composite system by virtue of the higher-order consequences of the interactions of composite parts.”⁶⁴ As Deacon summarizes,

[E]mergent phenomena grow out of an amplification dynamic that can spontaneously develop in very large ensembles of interacting elements by virtue of the continuing circulation of interaction constraints and biases, which become

⁶¹ Terrence W. Deacon, “Emergence: The Hole at the Wheel’s Hub,” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 111–50. 117. See also our critique of John Haught’s “metaphysics of the future” and of similar moves in process thought in Chapter Two.

⁶² Deacon. 118

⁶³ Deacon. 120

⁶⁴ Deacon. 122

expressed as system-wide characteristics. In other words, these emergent forms of causality are due to a curious type of circular connectivity of causal dynamics, not a special form of causality.

He rejects claims for strong emergence that would sever the causal chain between higher and lower order phenomena, but he also rejects any merely methodological or weak emergence understood as “a re-descriptive variant of standard reductionistic causality, and thus as emergence only with respect to human observers and their limited analytic tools.”⁶⁵ Rather, in sympathy with Kim’s second critique, Deacon notes that emergence is too often invoked as “an anti-reductionistic code word in holistic criticisms of standard explanations... [or] a placeholder,” and he proposes “to outline a technical sense of emergence that explicitly describes a specific class of causal topologies (i.e. self-constituting causal structures) and then attempts to show how this may help to explain many of the attributes that have motivated the emergence concept.”⁶⁶

In pursuit of such technical differentiation, Deacon identifies three general categories of emergent dynamics:

I will argue that many thermodynamic effects correspond to first-order emergent relationships; that self-organizing phenomena (the prototypical exemplars of emergence in most current discussions) correspond to second-order emergent relationships (a mode of causality I will call morphodynamics); and that life, evolution, and mind all correspond to third-order emergent relationships (a mode of causality I will call teleodynamics).⁶⁷

⁶⁵ Deacon. 122

⁶⁶ Deacon. 123

⁶⁷ Deacon. 126

Deacon acknowledges that first order emergent relationships—such as the emerging properties in liquids, like laminar flow, surface tension, viscosity, etc.—are supervenient in the sense that Kim describes; however, the supervenient macro-properties that emerge exhibit a broad regularity between samples despite the possibility of significant differences in underlying micro-configurations of particles. Furthermore, the emergence of these regularities of the first order provide a stable foundation upon which second level emergences are scaffolded.

Deacon describes second order emergences as “morphodynamic” in reference to their inclusion of particular self-structuring feedback loops that yield “a tangled hierarchy of causality, where microconfigurational particularities can be amplified to determine macroconfigurational regularities and where these in turn further constrain and/or amplify subsequent micro-configurational regularities... [as] form-[begets]-form...”⁶⁸ It is at this level that Deacon names the emergence of a what may properly be termed a system, since “specific reflexive regularities and the recurrent causal architecture are paramount.”⁶⁹ Deacon suggests several instances of these phenomena: geometric regularities in “eddies and convection cells, coherence-amplifying dynamics like the conversion of incoherent white light into monochromatic coherent light within a laser, structural pattern-generation processes like snow crystal formation, and complex chemical dynamics like autocatalysis.”⁷⁰

⁶⁸ Deacon. 136

⁶⁹ Deacon. 136

⁷⁰ Deacon. 118. The concept of autocatalysis is frequently employed by various complexity theorists to explain emergence, including especially the emergence of life. See, for instance, the parallels between Deacon’s account of emergence and the notion of “order for free” described by the biologist and researcher Stuart A Kauffman in both Stuart A. Kauffman, *The Origins of Order: Self Organization and Selection in Evolution* (New York: Oxford University Press, 1993); Stuart A. Kauffman, *At Home in the Universe: The Search for Laws of Self-Organization and Complexity* (New York: Oxford University Press, 1995).

Finally, instances of Deacon's third-order, teleodynamic emergence not only build on and incorporate the stable regularities at the lower levels, but they also involve an "additional loop of recursive causality" in the form of causally-effective information or memory such that "constraints derived from specific past higher-order states can get repeatedly re-entered into the lower-order dynamics which lead to future states."⁷¹ This adds a kind of non-linear temporal element to emergence, as emergent entities exhibit growth, development, and the possibility for much higher order stochastic processes that are less limited by the need to maintain conditions in time and space that gave rise to them. Critically, Deacon also notes that, at the level of third-order emergence, we begin to observe a potential for self-reproduction in a relatively simple molecular "autocell," which

is comprised of two interlocking self-organizing (i.e. morphodynamic) processes: an autocatalytic process and a self-assembly process. Autocatalysis occurs when the catalyst that aids the formation of one molecule is itself (either directly, or indirectly by the intermediary of other catalysts) a catalyst that aids the formation of the first. This produces a circle of catalytic reactions that becomes self-amplifying.... Autocellularity occurs when one catalyst in an autocatalytic set is also able to self-assemble into a structure that can contain other catalysts. Thus, autocatalysis will generate molecules that tend to enclose regions of space that are likely to include the catalysts of the very set that creates such enclosures. This makes autocells self-repairing if they are broken open; moreover, they are potentially self-reproducing if broken open in the vicinity of sufficient raw

⁷¹ Deacon, "Emergence: The Hole at the Wheel's Hub." 137

materials to support many additional cycles of autocatalysis. The transition from self-reproduction to selection dynamics occurs as an autocell lineage happens also to enclose one or more additional molecules that get caught up in the autocatalysis and increase, in some manner, the reproductive capacity (e.g. by increasing rate, reliability, or matching to more plentiful substrates in the environment). In this way autocells can spontaneously evolve, even though they are not in any typical sense alive.⁷²

As Deacon argues, this account suggests how the emergent complexity of first and second order emergences set the foundations for higher order emergences without “[postulating] in advance any particular assumptions about information or [taking] as given the existence of information-bearing molecules like DNA.”⁷³ The self-replication outcomes are the result not of true ends-causing-means forms of causality, but of the success of the “least-discordant-remainder” among possibilities, or what Deacon alternatively refers to as a “constitutive absence.”⁷⁴ In a situation not unlike natural selection, emergence is characterized by a “physical disposition to develop toward some target state of order merely by persisting and replicating better than neighbouring

⁷² Deacon. 141. Compare with Lonergan’s description of “schemes of recurrence” in relation to emergent probability in Chapter Four of *Insight*.

⁷³ Deacon. 142

⁷⁴ This latter term accords the guiding metaphor which provides the title for Deacon’s essay, “the hole at the wheel’s hub,” and which Deacon borrows from Lao Tzu’s *Tao Te Ching*: “Thirty spokes converge at the wheel’s hub to an empty space that makes it useful. Clay is shaped into a vessel, to take advantage of the emptiness it surrounds. Doors and windows are cut into walls of a room so that it can serve some function. Though we must work with what is there, use comes from what is not there.” Deacon quotes from verse 11 of Robert Henrick, *Lao Tzu’s Tao Te Ching* (New York: Ballantine Books, 1989).

alternatives is what justifies calling this class of physical processes teleodynamic, even if it is not directly and literally a ‘pull’ from the future.”⁷⁵

Thus, Deacon offers a compelling response to Kim’s indictment of non-reductive physicalism that neither abrogates the causal closure of the world nor succumbs to broad generalizations in arguing for the genuine emergence of whole orders and in a special way for third order teleodynamics. As Deacon argues:

Life and mind cannot be adequately described in terms that treat them as merely supervenient because this collapses the complex levels of emergent relationships that stand in between. More critically, supervenience analyses entirely overlook the defining dispositional reversals that occur within these higher-order transitions. As a result, these analogies miss the most salient and descriptively important dynamics of these phenomena, which are precisely what make them emergent in the sense discussed above.⁷⁶

Though Deacon correlates his arguments with philosophical figures at various points, his project is better understood as a defense of emergence on the basis of particular scientific conjugates.⁷⁷ In fact, Deacon explicitly affirms his desire to avoid “engaging the pointless semantic debates about the completeness of reductionism or

⁷⁵ Deacon, “Emergence: The Hole at the Wheel’s Hub.” 143. Though we will not explore this here, Deacon’s challenge to the language of future causality suggests important resonances with our critique in Chapter Two of John Haught’s metaphysics of the future.

⁷⁶ Deacon. 148

⁷⁷ Aside from the brief excerpt from Lao Tzu’s *Tao Te Ching*, the most substantive of these brief engagements comes near the end of the essay, where Deacon describes his project as a kind of modernized Aristotelian approach to causality. See Deacon. 148: “Whereas Aristotle simply treated his four modes of causality as categorically independent, however, I have tried to demonstrate how at least three of them—efficient (thermodynamic), formal (morphodynamic), and final (teleodynamic) causality—are hierarchically and internally related to one another by virtue of their nested topological forms. Of course there is so much else to distinguish this analysis from that of Aristotle (including ignoring his material causes) that the reader would be justified in seeing this as little more than a loose analogy. The similarities are nonetheless striking, especially considering that it was not the intention to revive Aristotelian physics.”

dealing with metaphysical questions about the ontological status of emergence.”⁷⁸ He does, however, provide a positive, explanatory account of the relationships and regularities that arise at different levels of complexity across his three orders of emergence. While he is wary of positing anything like a vitalist emergence, he demonstrates that the global constraints and the relations among various objects are conservative of emergent newness and tend towards greater complexity, as lower levels set the stage for higher. Even prior to the emergence of the teleodynamic processes of life and mind, Deacon identifies the generative potential of morphodynamic processes that tend towards self-reproduction and stability. Deacon and the other theorists of emergence describe a world that, at its very core, is open to an emergent newness fostered by the proliferation of interactions between and among newly emerging realities. Though the things that emerge cannot be reduced to their constitutive elements, neither can they be understood as wholly self-contained, as emergence depends on increasing and increasingly complex relations.

6.3.5 The Need for a Philosophical Account of Emergence

While Deacon provides a response to Kim’s call for a more substantive and positive account of emergence, it remains to unpack these scientific reflections through more explicitly philosophical reflections on the scientific task in relation to emergence. It is at this point, then, that we return to Lonergan’s treatment of emergence, which provides a critical realist framework for concretely naming what has emerged both epistemologically and ontologically. We suggest this as a complement to the enactive

⁷⁸ Deacon. 123

approach suggested by Silberstein, though we note Silberstein's obvious distrust of both (1) hierarchical explanatory accounts and (2) of philosophical rather than concretely scientific accounts of this differentiation. However, we would argue that Silberstein's approach requires that practitioners in each discipline have insight not only into their own field of expertise, but also into other fields and, moreover, into the epistemological and metaphysical structures that connect these different fields. While Silberstein is somewhat allergic to this approach, insofar as the hierarchical differentiation of disciplines so often leads to the unwarranted ontological privileging of one account of another or even all others, this is not inevitable. As we argue below, Lonergan's approach rooted in emergent probability and in the notion of vertical finality clearly distinguishes an emergent hierarchy of being, but the distinctions between the levels of being are semi-permeable inasmuch as vertical finality lifts and liberates the lower in the higher. Moreover, ever attentive to the concrete methods and practices of scientists themselves, Lonergan's account of the hierarchical differentiation of reality and the sciences that inquire into that reality makes explicit something critical to the scientific process.

6.4 Returning to Lonergan's Account of Generalized Emergent Probability

Lonergan's account of generalized emergent probability forms the center of his philosophical program, insofar as it differentiates and connects classical, statistical, genetic, and dialectical methods of inquiry, which together describe the contours of our encounter with the whole world as intelligible. The crux of Lonergan's transposition from the realm of theory to interiority lies in his phenomenologically verified account of human cognition in relation to many distinct acts of knowing. Where common sense

operates in a descriptive mode, accounting for things in relation to us, theory explains things as they are in themselves. Both of these views are sublated by the subsequent turn to interiority, within which various explanatory accounts are grounded in the performance of the conscious and intentional operations that are constitutive of the human process of knowing.⁷⁹ Of course, the express awareness of such occurrences depends upon the appropriation of the self-assembling structure of cognition by the exercise of a generalized empirical method that includes both the data of sense perception and the data of human consciousness.

For Lonergan, as for many other proponents of emergence, the idea of explanation is crucial. The relevant explanatory nature of his account requires attending to not only the data of various modern sciences, but especially to the performance of practitioners in each field as they develop their respective explanatory conjugates. Just as they account for what precisely differentiates one emergent level from the next, Lonergan succeeded in providing a significant, verifiable understanding of distinct kinds of understanding: by experiencing, understanding, and judging each of the distinct acts of inquiry, insight, formulation of intelligibility, questions for reflection, gathering and marshalling of evidence, and the achievement of the indirect understanding that the evidence is sufficient to warrant a certain or probable judgment of fact. In this case, an explanatory formulation of cognitional structure is attained.

⁷⁹ Lonergan explained ‘sublation,’ as follows: “[W]hat sublates goes beyond what is sublated, introduces something new and distinct, puts everything on a new basis, yet so far from interfering with the sublated or destroying it, on the contrary needs it, includes it, preserves all its proper features and properties, and carries them forward to a fuller realization within a richer context.” Lonergan, *Method in Theology*, 2017. 227

Lonergan's account of understanding is supported by his having discovered how Thomas Aquinas appropriated Aristotle's metaphysical psychology of the intellect's act of understanding, insofar as understanding is accounted for in the reception of an insight into data as sensed and imagined in the passive intellect in response to the interrogative anticipation of the active/agent intellect. Insight refers to the occurrence of a possibly relevant answer to a question for understanding: What? Why? How? On what principle? For Aristotle, then, insights make possible the differentiation of intelligible form from the other irrelevant data contained in the imaginative reconstruction of the sensory data, i.e., the "phantasm". Lonergan follows Aquinas's advance beyond Aristotle to analyze acts of judgment. Besides answering the distinct question, Is it so? concerning the correctness of one's possibly relevant understanding and formulation of a hypothesis or a definition, judgment also happens to be involved the process of discriminating between what is necessary for an insight and what is impossible—that a particular butterfly sensed or perceived is a Monarch, requires, first, attending to data such as the size, shape, and patterning of the wings, while understanding the fact that the butterfly's being perched on any particular tree or shrub in a given field, on a given day, at a given time, are not necessary for the precise formulation of the intelligibility apprehended by one's insight. Lonergan refers to such irrelevant aspects of data as the 'empirical residue.' In short, we discern what is merely residual through judgments based on *inverse insights* into the lack of significant intelligibility in the data as sensed or imagined—at least with respect to the precise question being asked.

For many strong reductionists and mechanistic determinists, this account of abstraction may well represent no more than an "impoverished replica" of reality, failing

to capture what is really happening in all its empirical richness.⁸⁰ On the contrary, though, Lonergan's account of abstraction describes an enrichment, as the emergence of an insight correlates to a newly apprehended emergent intelligibility regarding the phenomena in question,⁸¹ as may be shown by the shift from the notion of acceleration described as going faster to the explanatory notion of average acceleration expressed in an algebraic formula, which is open to the inclusion of both going faster and going slower.⁸²

In other words, descriptive knowledge that this collection of cells or atoms is a butterfly does not diminish or undermine this reality known by other fields in the explanatory way typical of science. Moreover, the zoological understanding and verification neither contradicts nor renders irrelevant the accounts provided by physics, chemistry, biology, etc. Rather, sciences are called "higher" only insofar as their line of inquiry recognizes some additional intelligibility in that which stand to the basic terms and relations of that specific lower science as objectively random or as a merely empirical residue for a science, which, for that reason, is simply unable to respond to the further questions raised by that distinct range of phenomena. Thus, the laws of chemistry name intelligible regularities that appear as only chance occurrences to the physicist. As Philip McShane explains in relation to Lonergan's position, "emergent laws do not

⁸⁰ Christopher Sean Friel, "The Impoverished Replica: A Restatement of Lonergan Against Mechanism," *Heythrop Journal* 59, no. 5 (2018): 817–31, <https://doi.org/10.1111/heyj.12768>.

⁸¹ See, for instance, the description of such conceptualist counterpositions in Philip McShane, *Randomness, Statistics and Emergence*. (Notre Dame, Ind., Dublin: University of Notre Dame Press, Gill and Macmillan, 1970). 45-46: "Moreover, this abstraction is not an unconscious quasi-mechanical process, the simplex apprehensio of the later scholastics, the conceptio of Scotus, yielding concepts which require later analysis that they be understood. It is a conscious process which questioningly anticipates an intelligibility to be added to sensible presentations, which searches out the significant, the essential, what Aristotle would call the form, and which only terminally reaches the theory, the definition, the formulation, the verbum incomplexum of Aquinas."

⁸² I.e., as in the formula for average acceleration, $a = \frac{\Delta v}{\Delta t}$.

‘represent irreconcilable inconsistencies in the physical system,’... [They] are not ‘statements of chance occurrences’ but irreducible higher systematizations of aggregates of random but determinate lower events.”⁸³ Thus, Lonergan rejects that emergence requires indeterminacy at the lower level via quantum loopholes or the like, for it is not a new force but a newly intelligible systematic regularity that has emerged and which is apprehended in virtue of more adequate understandings of questions raised by distinct empirical data.

Now we must stress the significance of the explanatory role played by Lonergan’s fundamental meta-scientific distinction between classical and statistical regularities in relation to his theory of emergent probability. Classical laws express systematic regularities in world processes, all other things being equal; statistical laws explain non-systematic divergences from some norm by expressed by an ideal frequency that indicates how often other things would actually be equal. Lonergan rejects the view of Laplace, which treats statistics as a stopgap for dealing with our limited human ability to comprehend the enormous number of lower interactions that determine the unfolding of even a mechanistic world.⁸⁴ Rather, for Lonergan, reality has an irreducibly statistical component, an actually random character. However, randomness is always determined

⁸³ McShane, *Randomness, Statistics and Emergence*. 171

⁸⁴ As Laplace is the central representative of the view we wish to reject in detail, we had best quote his own clear detailed statement of the claim: ‘We ought to regard the present state of the universe as the effect of its antecedent state and as the cause of the state that is to follow. An intelligence knowing all the forces acting in nature at a given instant, as well as the momentary positions of all things in the universe, would be able to comprehend in one single formula the motions of the largest bodies as well as of the lightest atoms in the world, provided that its intellect were sufficiently powerful to subject all data to analysis; to it nothing would be uncertain, the future as well as the past would be present to its eyes. The perfection that the human mind has been able to give to astronomy affords a feeble outline of such an intelligence. Discoveries in mechanics and geometry, coupled with those in universal gravitation, have brought the mind within reach of the system of the world. All the mind’s efforts in the search for truth tend to approximate to the intelligence we have just imagined, although it will forever remain infinitely remote from such an intelligence.’ Pierre Simon Laplace, *Théorie Analytique des Probabilités* (Paris: Courcier, 1820). Preface. Cited in McShane, *Randomness, Statistics and Emergence*. 37-38.

with respect to some a set of intelligible data; it is not a property of things or events in themselves. As Patrick Byrne puts it:

[I]t is impossible to establish by empirical means alone that a given series of events is absolutely random and conforms to no conceivable intelligible pattern. The most that can be established is that the data are random relative to some specifiable (albeit extremely complex) kinds of patterns. To claim that some series of events is absolutely random goes beyond scientific verifiability. It turns a relative into an absolute without scientific warrant.⁸⁵

In affirming that there is real randomness in the world, Lonergan makes a claim about the world as defined by its intelligibility as isomorphic with the unfolding of intelligent minds. The randomness at any given level is real but not totalizing, as it may give rise to greater complexity and systematic intelligibility at a higher level.

Consider, for instance, the regular functioning of cells. Biologists may correctly identify thousands of different samples as instances of human skin cells, and, on the basis of that verified identification, they may know certain things about those cells and how they are likely to function in different circumstances. However, what appears as a systematic regularity at the level of biology admits of a great, non-systematic variability to the particle physicist. Any explanation of a given cell according to electron position would be biologically useless regarding the cell as a cell, for “even if one could reach a non-simplified solution of a particular problem the solution in its exactness will be a non-systematic aggregate of physical equations and conditions, referable only to the particular

⁸⁵ Patrick H. Byrne, “Quaestio Disputata: Evolution, Randomness, and Divine Purpose: A Reply to Cardinal Schönborn,” *Theological Studies* 67, no. 3 (2006): 653–65, <https://doi.org/10.1177/004056390606700308>. 658. Cited in Crysdale and Ormerod, *Creator God, Evolving World*. 31

case.”⁸⁶ Although such a description of a cell may be of great interest to physicists, biologists are driven to understand the behavior of cells as an emergent class of entities, whose behavior exhibits particular, predictable, systematic, biological regularities despite significant variations in atomic structure and composition among samples.

Having compared investigations of physics and biology in the preceding example, it makes sense to name the biological intelligibility “higher” only because there emerges from the nonsystematic and relatively unintelligible data at the lower level a novel (from the vantage point of physics) systematic intelligibility that cannot be grasped by physics alone.⁸⁷ It is not “more real.” It does not suspend or interrupt the operations of the physical regularities observed by physicists. Nevertheless, it names something genuinely new and discontinuous from the investigations of the lower sciences. This newness may be attributed not to the superaddition of some new force, but to the emergence of a new “objective randomness,” as the higher science recognizes that certain variations at the level of the lower science are random and irrelevant regarding their own object of inquiry. The emergence of what biology names cells from a physical and chemical substrate is not mere epiphenomenon, for the lower levels need not exhibit the same systematic regularities as regard the higher, even as the higher certainly depend on the lower both for their emergence and their maintenance within “flexible circles of ranges of schemes of recurrence.”⁸⁸

In each emergent discipline, it is necessary to formulate the new intelligibility grasped by understanding through a process of conceptualizing the basic explanatory

⁸⁶ McShane, *Randomness, Statistics and Emergence*. 184

⁸⁷ Of course, this in no way implies that there cannot be such a thing as physical biology.

⁸⁸ See “Chapter Fifteen: The Elements of Metaphysics” in Lonergan, *Insight*, 1992.

terms and relations and discussing them publicly in community. Thus, biologists have to explain this new and distinct intelligibility in terms of its relations to the preceding levels not only of physics but also of chemistry, since the arrival at the new level of intelligibility is characterized by both continuity and discontinuity. As we have seen in a number of authors already treated, many emergentists appeal to Aristotle's distinction between form and matter to help explain this relation. However, this approach is inadequate insofar as any would-be-Aristotelian is unfortunately liable to overlook an express insistence on the role of understanding as insight into data mediated by imaginative reconstruction (or "phantasm"), which is a function of supposing that insight's abstract formulation is just an impoverishment.⁸⁹ As Lonergan makes clear, the paradigm for understanding is the realization that the emergence of insight's apprehension of the intelligibility as the key to form, nature, and substance comes about insofar as intelligence moves from potency into act only in relation to the imaginative reconstruction of sensible data that provoked inquiry.

No matter how perfectly we picture something in our mind, the moment when we grasp the intelligibility of the object in question through understanding is ultimately irreducible to anything in the (nevertheless indispensable) image itself. This newness was dramatically illustrated in Archimedes' famous cry of "Eureka!" when he realized that the displacement of water by the votive crown was the key to determining its volume and

⁸⁹ Aristotle distinguished clearly between, for instance, knowing **that** a certain drug helps control blood pressure, and knowing **why** that is so; and for example, between knowing **what** an eclipse of the sun is, and knowing **why** it is an eclipse. As Lonergan wrote: "The Aristotelian formulation of understanding is the scientific syllogism (*sylogismus faciens scire* [that is, the syllogism that causes knowing, or the *epistemonikós*]) in which the middle term is the real cause of the presence of the predicate in the subject. But the genesis of the terms involved in scientific syllogism follows the same model: sense provides the subject, insight into sensible data the middle, and conceptualization the predicate, which is the term whose genesis was sought." And so 'form' is what is reached by understanding either of what is perceived by the senses or of what imagination presents, namely, 'matter.' See Lonergan, *Verbum*, 1997. 28.

the purity of its composition. Lonergan realized that this momentous flash of insight was an occurrence undergone or suffered, a *pati*, a thing simply received.⁹⁰ In her essay linking attentiveness in school studies with the experience of prayer, Simone Weil also explains the impossibility of forcing understanding to occur: though we may furrow our brows and hold our breath and tense all our muscles, the understanding is not contained in the math problem or the words on a page or chalkboard any more than God's presence is contained in the words of a prayer.⁹¹ To be sure, even though we have to use images in order to have the higher understanding occur to us, the understanding or the resulting conception of the intelligibility understood is wholly irreducible to the imagined as such. Thus, the Aristotelian couplet of form and matter may be instructive for understanding emergence only insofar as one understands the relationship between the human understanding and the requisite sensible data or the imagined presentations from which it emerges but to which it is irreducible.

When Lonergan quotes Aquinas to the effect that, "... anyone can experience in himself the following, that when he tries to understand something, he forms images for himself by way of examples, and in these he inspects, as it were, what he is striving to understand,"⁹² he had already grasped the metaphysical underpinnings for the act of understanding through his study of Aquinas, who had adopted the position of Aristotle's *De Anima*, lock, stock, and barrel. Lonergan acknowledged that the explanatory account of the causes of understanding and conception depend on the way the essence of the

⁹⁰ Lonergan.

⁹¹ Simone Weil, "Reflections on the Right Use of School Studies with a View to the Love of God," in *Waiting for God*, trans. Emma Craufurd (New York: Harper Perennial, 2000), 57–142.

⁹² See Lonergan, "Christ as Subject: A Reply." 171. Citing Thomas Aquinas, *Summa Theologiae* I, q, 84, art. 7 c.

human soul grounds the *potencies* (or faculties/capacities), which in turn ground the acts, and the acts ground the knowledge of objects. He stressed that what made this possible are *cognitive* reasons, i.e., the empirically verifiable inward operations which were the basis for the account of *ontological* causes. As Thomas Aquinas explained: “The human soul understands itself by its understanding, which is its proper act, perfectly demonstrating its power and nature.”⁹³ “. . . For man abstracts the intelligibles from images and receives them into his mind in their actuated state; for in no other way would we have come to knowledge of these acts, did we not experience them in ourselves.”⁹⁴ These explicit indications given by Aquinas led Lonergan to realize that St Thomas had asked and answered the question proper to cognitive theory: What are we doing when we think we are knowing? This question is distinct from the epistemological question: Why is doing *that* knowing? The distinction is significant, because the latter question cannot be adequately answered without correctly answering what *that* is.

While Lonergan may have first grasped the role of understanding through his study of Aquinas, the answer to the cognitive theoretic question can be verified independently by paying attention to the way in which scientists themselves operate. Whatever cognitive, epistemological, or metaphysical claims scientists make, their authority is grounded in the successes of the scientific method and in its faithful application, and it is this knowledge-seeking practice that we must investigate if we would understand the significance of the explanatory differences the sciences identify. Consider the following passage, in which McShane explains more proximately how an interrogation of knowing

⁹³ Thomas Aquinas, *Summa Theologiae*, I, q. 88, art. 2, ad 3m.

⁹⁴ Aquinas, *Summa contra Gentiles*, 2, c. 76, § 76.9

in the natural sciences yields the same cognitional and epistemological results as those Lonergan identified in Aquinas's study of Aristotle, discussed above:

Indeed, there seems no other way to turn if one wishes to appreciate the method of science: for, science is human knowing, the method of science is a process of human knowing, and so the data for the understanding of scientific method lies essentially within the subject's own processes of knowing. One may counter this by saying that one must rather reflect on reality and the facts of science. But it is only a myth which would grant that such reflection somehow goes outside the processes of knowing, that the real order can be reached other than through human knowing, that in some way knowledge can be compared with reality. Instead of such myth we have of the isomorphism of the structure of the real with the structure of knowing and, as we pointed out earlier, that assumption is unavoidable, inescapable. ... The *Weltanschauung* thus given is not a set of abstract propositions or a speculative metaphysics, but a structured anticipation. Moreover, that anticipation may not be the methodological anticipation of the results of just one science, but an integrated anticipation of the results of a hierarchy of sciences, such indeed as our inclusive principle of emergent probability provides. Finally, as we have emphasized throughout, the anticipation is neither present nor appreciated in an a priori fashion: it develops with the development of the sciences, and the appreciation of it grows with the development of the science of methodology.⁹⁵

Naming the emergence of new systems of explanatory intelligible regularities, Lonergan's understanding of emergent probability is focused not predominantly on the

⁹⁵ McShane, *Randomness, Statistics and Emergence*. 253-254, 259

emergence of individuals or populations considered in isolation. Rather, like Deacon, Lonergan emphasizes the regularities that emerge in whole systems and which scaffold ongoing complexification throughout the whole cosmos.⁹⁶ Lonergan refers to these emergent regularities as “schemes of recurrence,” which depend on the interplay of stable, classical regularities together with the non-systematic and genuinely creative (or destructive) randomness of statistical realities. These recurrence schemes provide stable conditions for the emergent phenomena that give rise to the likelihood of the repetition of particular emergent phenomena at a new level perhaps generically and specifically determined not by the probabilities of its emergence from the lower substrate, but by the new systemic regularities that constitute sets of higher recurrence schemes. Moreover, these schemes may mutually enrich each other to form a “flexible circle of schemes,” as the regularities tend to generate sets of random realities that can set the conditions for a stable foundation for the recurrence of other, otherwise quite remote possibilities.⁹⁷

Viewed from the diachronic perspective of evolutionary history, the emergence of higher and more complex realities appear to bring about a move towards greater complexity through the probable emergence of higher systematic intelligibilities, i.e., through the establishment of schemes of recurrence proper to novel genera and species. Following Lonergan, then, we may recognize the “upwardly but indeterminately directed dynamism” of world process previously discussed under the heading of finality.⁹⁸

⁹⁶ This suggests also a framework congenial to Celia Deane-Drummond’s emphasis on Niche Construction Theory (NCT) and a more holistic and multi-directional understanding of evolutionary influence.

⁹⁷ McShane, *Randomness, Statistics and Emergence*. 227-228

⁹⁸ See also the section titled “Finality: A New Way of Conceiving Directionality” in Crysedale and Ormerod, *Creator God, Evolving World*. 68-74.

6.5 Emergence in Theology: Gregersen's Five Models

Now we are in a position to ask what more can be said about emergence from the standpoint of our theological project. As Philip Clayton reminds us, if and how theology enters into the various conversations around emergence in relation to different disciplines is not predetermined:

It could be that the data on emergence leave religion untouched. It could be that they deeply undercut the sorts of claims to knowledge traditionally made by at least some systems of religious belief, such as classical theism. Or it could be that emergence theory suggests a way to transform religious truth claims in order to bring them more into line with the view of reality being offered by the sciences today.

While it is obvious that the theology of grace developed in the preceding chapter enables us to take a positive stance on integrating into our theological work the contemporary insights into emergence in science and philosophy, we still need to identify what the precise relationship among these may be. It may be helpful, at this point, to place ourselves in relation to some of the other emergentist theologies that have been developed already.

Niels Gregersen describes five different models for appropriating emergence within a religious perspective.

1. *Flat Religious Naturalism* holds that “nature is all that is,” but may still entail a strong sense of “spirituality” and reverence for nature. While Emerson, Thoreau, and Whitman represent some early examples of this position, Gregersen refers to Ursula Goodenough’s *The Sacred Depths of Nature* as a contemporary example,

noting that “she seems fully satisfied with weak emergence... [The] divine becomes the predicate of Nature, and not the creative author of the world of emergence. Creativity resides in Nature, whereby Nature is transformed into ‘the divine.’”⁹⁹

2. *Evolving Theistic Naturalism* finds its classical expression in the work of Samuel Alexander, but may also be observed in the more recent work of Harold Morowitz.¹⁰⁰ Like the first model, it also holds “that nature is prior to God and that the divine is a quality of nature, not its source,” but it recognizes a genuinely new emergent property of divinity, though “God (being the possessor of deity) is itself an emerging reality like everything else in the universe” and appears “as a result of the upward drive of evolutionary history.”¹⁰¹
3. *Atemporal Theism* finds its classical expression in thinkers across the Abrahamic faiths during the Middle Ages, including Moses Maimonides, Thomas Aquinas, and Avicenna.¹⁰² Gregersen notes that each of these thinkers reflect the significant influence of the Greek philosophical conception of a creator God who is “unimaginably beyond time and change.”¹⁰³ In early modernity, however, this immanent principle of transcendence was combined with the physical closure of nature yielding an extreme form of deism, removing divine action from the now-isolated world of nature, thus abrogating God’s sovereign, if apparently

⁹⁹ Niels Henrik Gregersen, “Emergence: What Is at Stake for Religious Reflection?” in *The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion*, ed. Philip Clayton and Paul Davies (Oxford: Oxford University Press, USA, 2008), 279–302. 288.

¹⁰⁰ In a footnote, Gregersen also draws a parallel to Alfred North Whitehead, though he declines to develop that comparison.

¹⁰¹ Gregersen, “Emergence: What Is at Stake for Religious Reflection?” 289

¹⁰² Gregersen. 290

¹⁰³ Gregersen. 291

‘interventionist,’ workings in the created world.¹⁰⁴ Gregersen notes that one contemporary form of this may still be observed in the writings of the physicist-theologian Willem B. Drees.¹⁰⁵

4. *Temporal Theism* rose to prominence during the twentieth century from Alfred North Whitehead’s dipolar concept of God. A variety of contemporary expressions may be found in Ian Barbour, Arthur Peacocke, John Polkinghorne, Keith Ward, and Robert John Russell. According to Gregersen, this model “has a particular affinity to strong emergence... [as] the view that God interacts with a developing world is particularly congenial to the notion of a God whose experience grows along with the emergent realities in relation to which (or whom) God is seen to be actively involved.”¹⁰⁶ These views often emphasize the limitation of God’s knowledge or power to act in cosmic history, sometimes as the result of a divine self-limitation or as a form of kenotic “letting go” in order to allow creation to develop according to its own integrity.
5. *Eschatological Theism* “reverse[s] the order between emergent and resultants” such that “the concrete instantiations of emergence and the formation of novel structures take precedence over the subsequent formulation of laws of nature.”¹⁰⁷ Gregersen identifies variations on this approach in Charles Sanders Pierce’s philosophy of nature and Nancy Cartwright’s philosophy of science, as well as in the theological

¹⁰⁴ As a comparison with our earlier treatment of Lonergan’s appropriation of Aquinas suggests, we would note, here, that Gregerson’s description of Aquinas’s position on divine action fails to consider some of his subtler accounts of divine action, including especially the setting of the will of the end in human hearts.

¹⁰⁵ Gregersen refers to particularly to Willem B. Drees, *Religion, Science, and Naturalism* (Cambridge ; New York: Cambridge University Press, 1996) & *Creation: From Nothing until Now* (London ; New York: Routledge, 2002).

¹⁰⁶ Gregersen, “Emergence: What Is at Stake for Religious Reflection?” 294.

¹⁰⁷ Gregersen. 298

works of Teilhard de Chardin, Jürgen Moltmann, and Wolfhart Pannenberg.¹⁰⁸

Each of these theologies emphasize the inbreaking of an eschatological future that exerts a causal influence on the present that is at least as important as the receding past; this accounts for one of the primary differences from temporal theism, since eschatological theists are bound to a form of strong emergence that rejects the explanatory capacities of solely “natural” sciences.

6.5.1 Evaluating the Models

Where might we place our theological project within this framework? Obviously, the first two models—Flat and Evolving Religious Naturalisms—are at odds with the traditional Catholic and Christian teachings on both the theology of God and Creation, and it is unclear how we could affirm the Trinity or the Incarnation within either without serious qualification. These approaches are simply not coherent within a Christian or specifically Catholic theology. Rather, our position seems to be congruent with elements from each of the latter three models.

With Atemporal Theism, we share a common conviction in the utter transcendence of God, which, as we have previously argued, agrees with an equally strong emphasis on God’s complete immanence to all of creation. We also share a commitment to a view of God as without beginning, end, or change, though we also note that this metaphysically-grounded position does not entail a God who is indifferent to God’s creation or its suffering. Insofar as this model takes Aquinas’s theology as paradigmatic, our proposal shares much in common with this approach, although we

¹⁰⁸ Following our treatment of his work in Chapter Two, we might add John Haught to this list as well.

clearly reject any turn towards deism or what Elizabeth Johnson has critiqued under the name “classical theism.”¹⁰⁹ While we would challenge the description of Aquinas’s account of God’s providential and gracious action in history as atemporal, we would nevertheless note that Aquinas’s theology stands in need of significant modification and transposition to meet the needs of the contemporary issues we engage.

There are certainly aspects of Aquinas’s work that must be rejected as wrong, problematic, or out of date: for instance, his treatment of the sexual reproduction of women, the influence of planetary motions on terrestrial affairs, the incorporation of new understandings of cosmic history, et al. These are no small matters, and they must be dealt with directly. Beyond these sorts of problems, however, we would argue that much of Aquinas’s position is taken up into our own. Throughout this work, we have suggested that Aquinas’s synthetic achievement must be understood according to the theoretical framework within which it was composed. Differentiated from what we have earlier described as the “commonsense” language of the scriptures, the theoretical model does not have a better or truer picture of God or divine action, but it does try to situate the personal and historical encounters with God recorded in scriptures, the lives of the saints, and in Jewish and Christian history into a framework within which apparent conflicts with other philosophical or scientific truths are resolvable. Moreover, following the turn to the subject and the rise of modern methods and sciences, the theoretical approach stands in need of a transposition into the realm of interiority. Thus, while the emergent theology we suggest cannot be built into what Gregersen names an Atemporal Theism, a

¹⁰⁹ See, for instance, Elizabeth A. Johnson, *She Who Is: The Mystery of God in Feminist Theological Discourse*, 10th anniversary edition.. (Crossroad Publishing Company, 2002). 19-21.

significant portion of this theological achievement may be preserved and expanded within our framework.

The fourth model, Temporal Theism, is congenial to our own to the extent that it is concerned with challenging any disinterested or deistic version of God, emphasizing instead that God's creative and redemptive action is constantly unfolding in our midst in new and surprising ways. However, we roundly reject this model to the extent that its emphasis on a world in process is subsequently projected back onto God, thus mistakenly placing God within the causal structures of space and time which God in fact created. We have argued, to the contrary, that God is acting meaningfully at the heart of the whole of cosmic history through the gracious relationships that draw all creation into a tripartite finality. Michael Silberstein's account of an enactive model for the emergence of consciousness suggests one helpful account of what, through the eyes of faith, we may name an effect of grace; if mind is not merely a property of an isolated subject, then both the emergence and the transformation of mind are caught up in the embodied and embedded relationships that Silberstein describes. Following Lonergan, we would also emphasize that these gracious relationships define the genuine newness that God is bringing about in our midst. We note the fundamental incommensurability of higher order emergences that simply cannot be logically reduced to the lower level and that have their emergent being from the network of intelligible relations that support them. While we support accounts of strong emergence, we would also reject any account of strong emergence that undermines the integrity and the horizontal finality of each level, which supplies the proportionate matter for higher emergence. Speaking from within the theological conjugate, we may affirm that God holds all these realities in relation and

through this inner dynamism makes possible the actualization of potentially higher kinds of emergence that emerge from the lower substrate but that were wholly unpredictable and surprising prior to their occurrence, bringing about a genuine newness in our midst that lends itself to the ongoing complexification of the world. Carrying each thing towards and its own perfection and the good of the larger world order, we recognize how all emergence is dependent on the grace that grounds all beings in other beings and in God's Being. Such a recognition of the significance of the existence and influence of each creature including ourselves may give each of us pause as we struggle to understand and cherish the world by means of each distinct conjugate method. However, we also admit that these events unfold in the flesh of a world still marked by the distortions of sin; the statistical realities that give rise to emergence also admit of death, suffering, extinction, and other things that may trouble us and leave us searching for greater redemptive meaning but which are nevertheless integral to God's emergently probable creation. Still, while we readily embrace this view of a world in process, we must reject the process understanding of God associated with this model by Gregersen.

Turning to the fifth model, Eschatological Theism, we would also wish to avoid the implications of a process view of God and of the world insofar as it assumes any metaphysics of the future. While this model offers something valuable insofar as it underscores the dramatic newness of emergent unfolding, it fails to differentiate between the properly theological conjugate and the other legitimate forms of knowing which remain indispensable in our efforts to better understand the whole of God's creation. In this way, Eschatological Theism undermines our ongoing dialogue with and appropriation of the various other sciences. Inasmuch as each science engaged with the

world concretely and phenomenologically cannot help but describe a world that is a combination of some mixture of grace, nature, and sin, the loss of each explanatory account of highly differentiated and specific conjugates also undermines not just our theological knowledge but also our ability to discern how God is acting in different moments in history. Within our own framework, we may more effectively situate these multiple accounts of the world within a critical, heuristic framework and, as theologians, we may more effectively identify the unfolding of horizontal, vertical, and absolute finality as they play out in particular instances. So informed, we are better empowered to act not only for the preservation of individual creatures in their unique dignity, but also to inquire into how this creature is, has been, and may yet be caught up in the vertical finality that carries the whole world forward in possibly redemptive schemes of recurrence. The properly functioning theological conjugate seeks to understand and evaluate other accounts of emergence insofar as they may complicate and enrich our understanding of God through God's action in this world.

6.5.2 “Which End Is Nearer to God?”

Rooted in this conviction of God's deeply transformative relationship with the whole cosmos, we have rejected any account of emergence that locates grace solely in the emergently mental and spiritual events we experience in ourselves, even as we recognize these as a particular perfection of and through grace, especially due to the action in us of the Holy Spirit mediated by Christ's Incarnation into specifically human flesh, and his life, death, and resurrection. To so circumscribe the effects of grace would be to reinscribe the reductionism that has so long bedeviled the increasingly antagonistic

relationship between religion and science in the modern era. More than that, by undercutting the dignity of each level as expressed in both its horizontal and vertical finality, this circumscription would undermine the account of grace developed in the preceding chapter—as a created base of manifold relationships among creatures that opens them up to God’s transformative love and that leads to deeper relationships with other creatures. In sum, the account suggested by Eschatological Theism seems both to succumb to another form of the “God of the Gaps” and to too divide God’s ontologically-originary *creation ex nihilo* from God’s ongoing redemptive *creatio continua*. Though we may regard as positive the hierarchical emergence of which we are a part, to restrict God’s action within it is mistaken. As Richard Feynman noted, this leaves us with an impossible question:

Which end is nearer to God, if I may use a religious metaphor: beauty and hope, or the fundamental laws? I think that the right way, of course, is to say that what we have to look at is the whole structural interconnection of the thing; and that all the sciences, and not just the sciences but all the efforts of intellectual kinds, are an endeavour to see the connections of the hierarchies, to connect beauty to history, to connect history to man’s psychology, man’s psychology to the workings of the brain, the brain to the neural impulse, the neural impulse to the chemistry, and so forth, up and down, both ways. And today we cannot, and it is no use making believe that we can, draw carefully a line all the way from one end of this thing to the other, because we have only just begun to see that there is this relative hierarchy. And I do not think either end is nearer to God.¹¹⁰

¹¹⁰ Richard Feynman, *The Character of Physical Law*, 2nd ed. (London: Penguin, 1992). 125. Cited at Davies, “Preface.” xiv

Ultimately, in engaging with the whole range of possible complementary sciences inasmuch as the acknowledge the workings of emergent probability, theology does not seek to dominate but to learn from the other sciences as they describe intelligible aspects of the whole at each level of God's good creation. In this way, theologians would be allied with scientists insofar as their research pursues that intelligibility, even if we recognize that certain scientific conclusions may be questioned and even judiciously challenged insofar as they appear unable to be sublated into an authentic theological conjugate normed by faith as the eye of being in love.

6.6 Conclusion

In this chapter, we have suggested how our foundational account of the whole world as marked by the interplay of grace, nature, and sin might frame a critical and constructive theological engagement with a range of modern sciences. While the theological account remains open to amendment and expansion through the ongoing discoveries of various fields, it is grounded in the understanding of grace within the Christian and especially the Catholic Christian theological tradition as informed by scriptural, metaphysical, and phenomenological reflections. Thus, while it seeks to learn from these disciplines, it consciously seeks to appropriate their data within a horizon that is structured by the affirmation of the goodness and the complete intelligibility of the world. The result is a theology that attends specifically to the ways in which the deep interconnections between all creatures bring them to completion in themselves, in common communion across cosmic salvation history, and ultimately in God.

As we have demonstrated, this interpretive horizon has been especially shaped by a critical realism that takes as foundational the phenomenologically-verifiable structure of intelligence as oriented towards the intelligibility of the whole of reality. Within this horizon, theology appears as an explanatory conjugate that identifies emergent patterns that are not wholly identifiable within lower order sciences. We engaged the debates over the meaning of “emergence” in an effort to situate our theological conjugate within a larger, interdisciplinary conversation. We argued that our theology of grace, coordinated to the dynamisms of an emergently probable universe, resists strong reductionism and its denial of higher emergent realities. However, we found good reason to endorse at least some forms of weak or methodological reductionism insofar as they reflect the insight that higher intelligibilities are grounded in regularities that emerge in the lower levels. We also affirmed at least a nuanced account of strong emergence, insofar as that account avoids all forms of vitalism or the denial of the endurance or coherence of the lower level intelligibilities. On the contrary, we argued that these lower levels are preserved in a relationship of sublation at the higher levels. To clarify how this emergence need not be viewed as a causal violation or interruption, we drew from the work of Lonergan’s cognitional theory and especially his attention to the emergence of insights into mental images (phantasms) in the act of understanding, which is related to but materially irreducible to the phantasm itself.

Considered in relation to the diachronic emergence of complexity in evolutionary history, we also examined how higher forms emerge not as isolated or monadic individuals, but rather as part of large schemes of recurrence. Following Michael Silberstein, we agreed that the emergence of consciousness represents a particularly apt

example of emergence, not only in its irreducibility to lower elements, but also in its embodied and embedded—or “enactive”—character, as it depends not only on the biological substrate of the brain but on the interconnections between the brain and the rest of the intelligible world, which relations undergird the emergence of mind rather than follow from it. In light of the contributions of Terrence Deacon and Bernard Lonergan, we became even more convinced that different schemes of recurrence and regularity may also, in turn, serve as the concrete manifold of potential for new and higher emergences again and again through history.

Of course, these schemes are not indestructible, and the survival of any new form is not guaranteed; history is not an uninterrupted march of progress. However, we argued that, at the level of theological investigation, and informed by theological methods and sources, we may identify patterns of graced emergences in history. Based on Niels Gregersen’s models of theological engagement with emergence, we understood the possibility that theology can learn especially from the models of both Atemporal and Temporal Theism, the best elements of which may be integrated by appropriating Aquinas’s theoretical metaphysics, which Lonergan had inferred was critically grounded through an empirically verifiable generalized empirical method which embraces the data of experience of consciousness and the data of the senses.¹¹¹

¹¹¹ By the “data of consciousness,” we refer to sensation, perception, imagination, inquiry, understanding, conception, reflection, assembling and assessing the sufficiency of evidence, judging, deliberating and evaluating possible courses of action, deciding, and acting. Aristotle’s psychology in the *De Anima*, as propped upon his biology, distinguished among the interactions of living beings and their environments exclusively in terms of efficient and final causality. As Lonergan pointed out, “If the objects of vegetative activity are causal, it remains that the objects of sensitive and intellectual activity are also intentional. If vegetative acts are not accessible to introspection, sensible and intellectual acts are among the immediate data of consciousness; they can be reached not only by deduction from their objects but also in themselves as given in consciousness. Finally, when conscious acts are studied by introspection, one discovers not only the acts and their intentional terms, but also the intending subject, and there arises the problem of the relation of the subject to the soul.” Such is the significance of the shift from a metaphysics proper to the

To be sure, the model of Eschatological Theism evokes the surprising character of graced emergence perceived as the inbreaking character of God's action. Nevertheless, we distanced our own position from this model due to its process view of God, which holds that God is intrinsically conditioned by space and time, and therefore cannot help but diminish the scope of divine action upon the lower levels by its restricting it to the higher. Instead, our emphasis on grace as both corporate and corporeal can acknowledge that the effects of God's gracious relation to creation occur throughout all levels and in relation to the vertical finality of the whole as God brings about the healing and elevation of the flesh of all the evolving world.

Taking as foundational this framework of emergence as articulated in relation to theological, philosophical, and natural scientific conjugates, in the next chapter, we will proceed to examine to additional conversations within evolutionary theory in relation to the issues of convergence and cooperation.

faculties known solely by inferring them from their different operations to an analysis of what contemporary phenomenology speaks of as conscious intentionality. As Lonergan explained: "If in Scholastic circles such a *Problematik* is contemporary and indeed, for many, still novel, it is plain that neither Aristotle nor Aquinas handled the matter in a triumphantly definitive fashion. This is not to say, of course, that they anticipated positivists and behaviorists by systematically avoiding any use of introspection or any appeal to the data of consciousness. ... Aquinas explicitly appealed to inner experience and, I submit, Aristotle's account of intelligence, of insight into phantasm, and of the fact that the intellect knows itself, not by a *species* of itself, but by a *species* of its object, has too uncanny an accuracy to be possible without the greatest introspective skill. But if Aristotle and Aquinas used introspection, and did so brilliantly, it remains that they did not thematize their use, did not elevate it into a reflectively elaborate technique, did not work out a proper method for psychology, and thereby lay the groundwork for the contemporary distinctions between nature and spirit and between the natural and the human sciences." See "Introduction: Subject and Soul," in Lonergan, *Verbum*, 1997. 3-11. 4-5.

7. CHAPTER SEVEN: CONVERGENCE AND COOPERATION

Having concluded our discussion of emergence in the previous chapter, we now turn to two other areas of debate regarding the meaning and significance of evolutionary trends and processes: namely, evolutionary convergence and cooperation. Where emergence provided a foundational framework for challenging ontological reductionism and affirming a sublationary understanding of explanatory pluralism, the discussions around convergence and cooperation provide opportunities for resisting two problematic narratives about our world: radical cosmic randomness and gene-driven selfishness, respectively.

7.1 Convergence

From the standpoint of evolutionary biology, ‘convergence’ refers to the independent evolution of similar morphologies, structures, and abilities in relation different species at different places and times. It is opposite of evolutionary divergence, in which members of a single species separate and develop distinct genetic, phenotypic, and behavioral differences leading to distinct and separate speciation—e.g. the divergence of the chimpanzees and bonobos of the Congo River basin from a common ancestor.¹ Although biologists appear to have a broad recognition of the effects of both convergence and

¹ See our discussion of Smuts, “Emergence in Social Evolution: A Great Ape Example,” in the previous chapter.

divergence in the history of evolution, there has also been a tendency to prioritize divergence and radical contingency in the larger, extra-scientific narration of evolution, which has contributed directly to the perceived tension between scientific agnosticism and even nihilism, on the one hand, and religious narratives of direction and purpose, on the other. In recent years, however, some scientists have begun to examine patterns of convergence more deeply, raising questions both within and beyond the scope of their conjugate sciences.

7.1.1 In Relation to Emergence

If the debates over emergence provide theologians with a language to describe how God's gracious presence to all creation has fostered surprising newness and possibilities for healing and elevation in the larger evolutionary order—and to relate that claim to other explanatory conjugates—debates over contingency and convergence in evolution may help us to attain a more differentiated awareness of an orientation discernible in the concrete regularities emerging from the probability schemes proper to lower orders. Thus, while we defend “real randomness” in the dynamic openness of lower manifolds to higher emergences, we oppose the view that this is evidence of a radical randomness that implies that the created order has no purpose. In fact, the conflation of real randomness with purposelessness assumes a form of mechanistic determinism that truncates any scientific account of efficient-causality by reducing it to some original, determining event.²

² See the similar argument made in Crysedale and Ormerod, *Creator God, Evolving World*. 57-58: “Embedded in the false opposition of chance and necessity is the presumption that a world in which chance is operative will necessarily be a world that is directionless, meaningless, and without purpose. Here we

Following, instead, the heuristic and hermeneutic approach we have outlined, we propose that each explanatory conjugate is, at its best, open to particular sets of intelligible meaning in the course of cosmic evolution. We saw instances of this in the accounts of the sciences of complexity and approaches to emergence explored in the previous chapter, many of which admitted that there seems to be a drive towards increasing complexity, even when the new and more complex emergences may be fragile and imperiled. These affirmations of what, following Lonergan, we have called an “upwardly but indeterminately directed dynamism” have challenged or at least nuanced the narrative of a radical randomness understands our universe as a meaningless, indifferent reality that is ultimately hostile to life and value. Careful examination of the regularities and patterns that emerge in evolutionary trajectories makes it possible to (at least tentatively) speak more comprehensively about the God to be encountered in the nature and history of the cosmos. Here, we consider one aspect of this in relation to phenomena of evolutionary convergence.

7.1.2 Stephen Jay Gould’s *Wonderful Life*

We will focus our examination on the most prominent defender of significant convergences in evolution, the British paleontologist and biologist Simon Conway Morris. Conway Morris initially became well known for his study of the fossils of the Burgess Shale, the discovery of which in the second half of the twentieth century contributed directly to theories regarding an unmatched “Cambrian explosion” of phyletic

argue that the directionality that is thus discredited is tied to a mechanistic determinism, left over from the era of Newton and his influence.”

animal diversity in a relatively short period of time nearly 500 million years ago.³

Perhaps the most famous interpretation of this fossil record is Stephen Jay Gould's *Wonderful Life: The Burgess Shale and the Nature of History*. Gould describes how the fossil record reveals a great number and diversity of animal phyla during the Cambrian period, many of which have no direct descendants today. Arguing that there is no discernible evidence for the superior fitness of those species that did survive, Gould argues that their endurance is more likely a matter of historical contingency or even radical chance than of selective fitness.⁴

Gould frames this narrative by drawing on the cinematic device employed in the great Frank Capra film, *It's a Wonderful Life*, in which a mortally discouraged George Bailey (played by Jimmy Stewart) is dissuaded from his planned suicide when his guardian angel, Clarence Odbody (played by Henry Travers), replays various scenes from George's life that have been altered to reveal the singular goodness that his existence brought into the world. Applying this same metaphor to the evolution of life since the Cambrian explosion, Gould argues that "any replay of the tape [since the Cambrian explosion] would lead evolution down a pathway radically different from the road actually taken."⁵ Gould rejects the idea that this must lead to a world wholly devoid of meaning, when he argues instead that whatever meaning we make emerges in a world that is at best indifferent and at worst hostile to the emergence of humanity:

³ For a history of the discoveries of the Burgess shale and the rise of this particular interpretation of the fossil record there, see Simon Conway Morris, *The Crucible of Creation: The Burgess Shale and the Rise of Animals* (Oxford ; New York: Oxford University Press, 1998). 38-62.

⁴ Stephen Jay Gould, *Wonderful Life: The Burgess Shale and Nature of History* (New York: WWNorton, 1989).

⁵ Gould. 50.

Contingency is both the watchword and lesson of the new interpretation of the Burgess Shale. The fascination and transforming power of the Burgess message—a fantastic explosion of early disparity followed by decimation, perhaps largely by lottery—lies in its affirmation of history as the chief determinant of life's directions.... The modern order was not guaranteed by basic laws (natural selection, mechanical superiority in anatomical design), or even by lower-level generalities of ecology or evolutionary theory. The modern order is largely a product of contingency. Like Bedford Falls with George Bailey, life had a sensible and resolvable history, generally pleasing to us since we did manage to arise, just a geological minute ago. But, like Pottersville without George Bailey, any replay, altered by an apparently insignificant jot or tittle at the outset, would have yielded an equally sensible and resolvable outcome of entirely different form, but most displeasing to our vanity in the absence of self-conscious life.⁶

For Gould, the radical contingency that characterizes evolutionary history reveals humanity as a “‘thing so small’ in a vast universe, a wildly improbable evolutionary event.”⁷ Upon its publication, Gould’s book became a best seller, and it has exercised considerable influence on the popular conception of evolution into the present day.

⁶ Gould. 288-289

⁷ Gould. 291

7.1.3 Simon Conway Morris's Critique of Gould

However, in the years since the publication of *Wonderful Life*, Simon Conway Morris has devoted numerous article and books to combatting Gould's interpretation.⁸ Conway Morris's critiques might be divided into three distinct categories. First, he challenges Gould's interpretation of the fossil record, noting that Gould depends heavily on the earliest interpretations of the fossils, which tended too quickly to treat a number of specimens as taxonomically *sui generis* rather than locating them within existing phyla, thereby suggesting a much wider range of creaturely kinds than is supported by more recent classifications.⁹ Conway Morris argues that the order suggested by these newer groupings simply "does not support [Gould's] metaphor of an 'inverted cone of life' reflecting a dramatic decline of disparity since the Cambrian,"¹⁰ and so undercuts the narrative that most species met a random and abrupt dead-end on the evolutionary path.

Conway Morris's second critique challenges the sufficiency of speciation via divergence as the main driver of evolutionary history. Here, Conway Morris notes that Gould's emphasis on radical contingency is regarded as the most prominent alternative to

⁸ In fact, it is clear that Gould represents something of a *bête noire* to Conway Morris, whose sweeping critiques of Gould's interpretation, arguments, and writing style are repeated in numerous works written since.

⁹ Gould demonstrates these shifts by examining two particular case studies that were initially treated as representing wholly new phyla, but which are increasingly classed among other arthropods, though he notes that there is no universal consensus on this classing: "The resistance to such ideas is quite remarkable, even though in principle it is entirely consistent with our general understanding of evolutionary processes. Why should this be? I believe that the underlying reasons are twofold. First, humans have an innate desire to classify and so pigeon-hole their concepts. When does an arthropod become a true arthropod? No paleontologist would deny that the trilobites or *Marrella* are genuine arthropods, but as we shall see below some are distinctly unhappy with the inclusion of *Anomalocaris*. So what do they do? They make a new pigeonhole and say: '*Anomalocaris* must belong to a new phylum.' But this is really an evasion and solves nothing, at least in the context of evolution. Second, there are persistent claims that the origin of phyla such as the Arthropoda or supposed extinct phyla can be explained only by new mechanisms of evolution. However bold and exciting this claim appears to be, I suspect that it is without foundation." Conway Morris, *The Crucible of Creation*. 183.

¹⁰ Conway Morris. 139

the account of evolution via genetic-determinism, defended most famously by Richard Dawkins.¹¹ While rejecting Gould's account, Conway Morris also notes the problems which attend Dawkins' strong reductionism, but he notes that Dawkins' approach is not so much wrong as it is "too narrow and one-dimensional" to fully account for evolutionary history:

Here is perhaps the central paradox of genes and evolution: vast contrasts in morphology and behaviour need have no corresponding differences in the genetic code.... This view of evolution is incomplete and therefore fails in its side-stepping of how information (the genetic code) gives rise to phenotype, and by what mechanisms. Organisms are more than the sum of their parts, and we may also note in passing that the world depicted by Dawkins has lost all sense of transcendence.¹²

Thus, while the evolutionary geneticist may argue for a common ancestry among humans and flies by identifying the same gene (*Pax-6*) involved in the formation of their eyes, "it tells us nothing about the manifest differences between the eyes with which we see the fly, and the eyes of the fly which observe us as we advance with rolled newspaper in hand... [or about] how form actually emerges from the genetic code."¹³ This problem has only become more pronounced in recent years, as ongoing genetic research has suggested that the relationship between the size and complexity of an organism and its genome is far from linear.¹⁴

¹¹ Conway Morris. 5. For the most famous exposition of Dawkins' position, see Dawkins, *The Selfish Gene*.

¹² Conway Morris, *The Crucible of Creation*. 9. As is clear in the larger chapter, by transcendence, Conway Morris is appealing to higher explanatory strata and not to religious or spiritual transcendence.

¹³ Conway Morris. 8

¹⁴ "[It] has long been appreciated that the overall quantity of DNA an organism possesses provides effectively no guide to its relative complexity: single-celled organisms may contain far more DNA than a human. The enormous variation in the size of genomes has led most biologists to regard the 'excess' DNA as a sort of molecular 'junk', surplus to requirements. Another problem, and equally serious, is the news emerging from the genome projects in which the DNA is mapped and the total number of genes tallied. For

Nevertheless, while Conway Morris admits that Gould's account "is much richer [than Dawkins' genetic reductionism], especially in its appeals to a plurality of mechanisms and forces... it is also a less constant world, or at least one where emphases and priorities shift ... [and], despite its apparent vitality, I would argue that [Gould's view] is much more deeply flawed."¹⁵ In other words, where Dawkins is at least searching for an intelligible mechanism driving evolution and granting it a real if truncated sense of directionality, Gould's account comparatively abandons the search for this intelligibility altogether in favor of a radically contingent, divergent speciation.

This leads us to Conway Morris's third and perhaps most pervasive criticism: namely, that Gould's biggest claims are essentially extra-scientific musings, made all the more problematic by their reliance on the misinterpretations noted in the first phase of his critique. In Conway Morris's view, Gould's demand for a complete rethinking of evolutionary theory centered on the radical role of contingency is little more than a "master stroke of rhetoric":

Again and again Gould has been seen to charge into battle, sometimes hardly visible in the struggling mass. Strangely immune to seemingly lethal lunges he finally re-emerges. Eventually the dust and confusion die down. Gould announces

a complex animal, such as a fruit-fly (*Drosophila*) or nematode worm (*Caenorhabditis*) to function, thousands of genes are required, significantly more than for the bacteria, for which a total of about 4000 is fairly typical. Thus, in the worm *Caenorhabditis* the estimated total is just over 18 000. So far, so good, but in its own way it is a relatively simple animal. ... So perhaps 18 000 genes are about right. Now consider the fruit-fly. A sophisticated flier with its gyroscopic halteres, a complex brain with capability for memory and courtship, compound eyes, and a well-differentiated body. All in all a complex animal, and how many genes? If the worm needs 18 000 what about 30 000 for the fly? Not a bit of it: the fly actually has substantially fewer genes, totalling [sic] 13 600. So what about 'the pinnacle of creation': us? Until recently the estimates of our gene total were in the order of 100 000, but they too are now being revised downwards; some people are suggesting as few as 30 000. But perhaps we should not be so surprised. Claims for the primacy of the gene have distorted the whole of biology..." Conway Morris, *Life's Solution*. 237-238.

¹⁵ Conway Morris, *The Crucible of Creation*. 9

to the awestruck onlookers that our present understanding of evolutionary processes is dangerously deficient and the theory is perhaps in its death throes. We look beyond the exponent of doom, and there standing in the sunlight is the edifice of evolutionary theory, little changed.¹⁶

Conway Morris goes so far as to compares Gould's argument to works of speculative fiction, more concerned with entertainment than with knowledge.¹⁷

7.1.4 Convergence: Contingence, Regularity, ... and Inevitability?

Despite his strong critiques, Conway Morris does not dismiss the role of apparently random, contingent events on evolutionary trajectories. Rather, he challenges that these contingent events take place in a world that is comprised of both contingency and predictable regularities. Given this interplay, the real task for the evolutionary theorist is to

decide whether a myriad of possible evolutionary pathways, all dogged by the twists and turns of historical circumstances, will end up with wildly different alternative worlds. In fact the constraints we see on evolution suggest that underlying the apparent riot of forms there is an interesting predictability. This suggests that the role of contingency in individual history has little bearing on the likelihood of the emergence of a particular biological property.¹⁸

¹⁶ Conway Morris. 10

¹⁷ For example, Philip K. Dick, *The Man in the High Castle* (New York: Putnam, 1962), which imagines how life might have been different if the Axis Powers had won World War II and taken control of the United States. Examples of more scientifically grounded speculative fiction have also proliferated in recent years, including Randall Munroe, *What If?: Serious Scientific Answers to Absurd Hypothetical Questions*, First Edition (Boston: Houghton Mifflin Harcourt, 2014).

¹⁸ Conway Morris, *The Crucible of Creation*. 139

While a given contingent event—say, the destruction of some animal population by a large-scale natural disaster—may prevent the continuation of a particular species or even a whole phylum, there remain only a finite number of solutions to various evolutionary challenges, and so certain regularities are highly likely to reemerge in the history of adaptation. Thus, while “the evolution of the whales, is from the perspective of the Cambrian explosion no more likely than hundreds of other end points, the evolution of some sort of fast, ocean-going animal that sieves sea water for food is probably very likely and perhaps almost inevitable.”¹⁹ Contingencies and historical one-offs certainly play a role in shaping which particular creaturely lines may give rise to various possibilities, but, once life has emerged, Conway Morris argues that certain trajectories appear almost predictable.

To illustrate this point, Conway Morris provides a broad range of concrete examples from paleobiology. In fact, his books read like *florilegia*, full of the multitudes of independent convergences in evolution. Perhaps his most often cited example is the multiple emergences of the camera-eye in at least six separate evolutionary lines, including in species as distantly related as humans and octopuses, whose most recent ancestor may trace as far back as a sightless, wormlike creature some 750 million years ago.²⁰ In another memorable example, he describes the emergence of strikingly similar body morphologies from quite different evolutionary lineages, including the emergence of long, dagger-like canines in placental saber-toothed tigers and in a South American marsupial species known as thylacosmilids.²¹ Across several books, he traces the

¹⁹ Conway Morris. 202

²⁰ Conway Morris, *Life's Solution*. 151-158

²¹ Conway Morris. 130-132

multiple, independent evolutions of a range of properties including balance, vision, olfaction, hearing, echolocation, electrogeneration and reception, circulation, vocalization, and sentience. He even lists a range of behavioral convergences, including forms of agriculture by different species of ants, purposive play in dolphins, and tool-wielding among birds, wasps, apes, and other species. So long and detailed are these lists that, at times, the non-specialist may feel a bit lost in the weeds. But the overwhelming number and diversity of instances of convergence is precisely the point: as Conway Morris argues, one of the chief reasons that convergence seems to have been so overlooked by other evolutionary theorists “is its simple ubiquity: convergence is taken for granted.”²² Examples of convergence, it would seem, are so commonplace as to be rendered nearly unremarkable.

As demonstrated in the excerpts above, Conway Morris is so convinced of the pervasive and far reaching effects of convergence that he routinely describes the resulting trends among species as “predictable” and even “inevitable.” This language may initially raise teleological or interventionist alarm bells, but he argues that this predictability is explained by a variety of constraints that limit the number of viable forms at key points, curbing the seemingly boundless variations to which evolution might have otherwise given rise:

Not all is possible, options are limited, and different starting points converge repeatedly on the same destinations. Any such evolutionary journey, including navigation through protein ‘hyperspace’ must presuppose intermediary stages. And here there may be further constraints because seemingly ‘sensible’ paths may turn

²² Conway Morris, *The Crucible of Creation*. 13

out to be non-functional. The ‘landscape’ of biological form, be it at the level of proteins, organisms, or social systems, may in principle be almost infinitely rich, but in reality the number of ‘roads’ through it may be much, much more restricted.²³

This argument lies at the heart of Conway Morris’s most well-known book, *Life’s Solution: Inevitable Humans in a Lonely Universe*. The limited number of functional solutions mean that non-functioning alternatives quickly disappear, clearing the way for the emergence and recurrence of functioning schemes. The result is an interplay between regularity and contingency that provides a stable and predictable foundation for the emergence of more complex systems.²⁴

Conway Morris further argues that, at least from the perspective of hindsight, these higher, more complex emergences themselves appear convergent and predictable, pointing to “the important, but I believe relatively neglected, principle of inherency, whereby the basic building blocks of complex structures are available long before they are recruited for new and more sophisticated tasks.”²⁵ He notes that a number of critical evolutionary adaptations are prefigured in at least nascent form in the evolutionary ancestors of more complex creatures: hemoglobin, acetylcholine, and a broad range of neuropeptides have been found in plants and even in single-celled ciliates and bacteria, emerging long before the circulatory and nervous systems of the complex animals in which they would eventually play a part.²⁶ Conway Morris also points to the process of

²³ Conway Morris, *Life’s Solution*. 11

²⁴ “All life shares this one code, but this commonality has not stifled the creative potentials of life, as both the fossil record and the exuberance of the living world so clearly demonstrate. Yet for all this exuberance and flair there are constraints: convergence is inevitable, yet paradoxically the net result is not one of sterile returns to worn-out themes; rather there is also a patent trend of increased complexity.” Conway Morris. 21

²⁵ Conway Morris. 166

²⁶ Conway Morris. 235-236

horizontal or lateral gene transfer, in which genetic material is passed between either unicellular or multicellular organisms outside of the normal linear transmission through reproduction, allowing for the more-rapid aggregation of otherwise disparate genetic materials. Given the prevalence of both evolutionary co-option and horizontal gene transfer, Conway Morris argues that it would be far more surprising if complex, intelligent creatures like us did not evolve from the far simpler foundations of early life, especially over the nearly four billion years of evolutionary history on Earth.²⁷ Through the effects of both evolutionary constraints and genetic inherency, Conway Morris argues that the paths that life takes on Earth are far from random. This is not, of course, to say that they are wholly determined, but it does challenge the narrative of radical contingency and chance suggested by Gould and others.²⁸

7.1.5 Convergence and Intelligible Emergences

At the heart of this debate concerning contingency and convergence lies a familiar question: what is the intelligible relationship between the emergent levels of reality? In the previous chapter, the challenge to the meaningfulness and intelligibility of the world came “from below,” as strong reductionists claim that accounts based on higher

²⁷ See the *Introduction* to Simon Conway Morris, *The Runes of Evolution: How the Universe Became Self-Aware* (West Conshohocken, PA: Templeton Press, 2015).

²⁸ In fact, though Conway Morris is somewhat hesitant to affirm the existence intelligent life elsewhere in the universe, he argues that, if there is, we can expect that they would exhibit many of the same features as human beings, including blood that appears red from its hemoglobin, dual circulatory systems, brains attuned to musical patterns, camera-eyes sensitive to light, etc. All these features have emerged numerous times in evolutionary history on our own planet, and the foundations of these complex systems are inherent in earlier forms of life. Moreover, Conway Morris argues that there are likely links between the emergence of many of these complex systems and the emergence of intelligence, though he argues that some forms of intelligence—like, for instance, human rationality—may be more discovered and culturally and familiarly transmitted than inherited. See Conway Morris, *Life's Solution*. *Passim*, though most imaginatively presented at 331-332. Regarding the link between camera-vision and intelligence, see Conway Morris. 147-196, especially 194-196. Regarding the claim that rationality may be discovered rather than inherited, see *Introduction* in Conway Morris, *The Runes of Evolution*.

complexity are nothing but the cumulative effects of lower levels in a world of deterministic physicalism. Here, the challenge to the meaningfulness of the higher levels seems to come “from above,” as biologists following Gould identify a breakdown in the lawfulness of the universe at higher levels. As Conway Morris describes it:

To the first approximation, the world is a predictable place; if it weren't, then our space craft would not be able to use the mass of planets as gravitational slingshots to propel them to precise points even in the outer reaches of the solar system, if not beyond. Nor would the lethal gas chlorine and the explosive alkali sodium combine to be sprinkled safely as salt over a lamb chop. Even what are chaotic manifestations—such as the metaphorical flapping of a butterfly's wing in China generating a hurricane that tears across the Caribbean—may overlook the facts that, while the precise reason that a tropical storm first arises will never be known, the turbulent hurricane is a predictable structure and the decadal history of these events also has a given probability. Science is, therefore, adept at describing and predicting the world around us, but, oddly, this power seems to evaporate when we come to biology. To be sure, the overarching truth of evolution by descent and modification is not in dispute, but, to the first approximation, the processes are regarded as random—think of mutations, or consider the standard view of the historical path as a minefield of the unexpected, as in mass extinctions. Evolution, so the credo runs, is without path or purpose: the end points are indeterminate—think of that most curious of evolutionary flukes, humans. Or so it would appear.²⁹

²⁹ Simon Conway Morris, ed., *The Deep Structure of Biology: Is Convergence Sufficiently Ubiquitous to Give a Directional Signal?* First edition (West Conshohocken, Penn: Templeton Foundation Press, 2008). VII.

As Conway Morris suggests, the argument for a worldview shaped by radical contingency seems to rest on a misunderstanding of the kinds of intelligibility with which modern biology is concerned. Unlike Aristotle's biology, preoccupied with the necessary and universal, contemporary biology seeks to understand what, following Lonergan, we have referred to as the interplay between classical and statistical intelligibility.³⁰ It is largely for this reason, then, that Conway Morris zeroes in on the neglected topic of convergence, which "brings into focus a profound tension between the basic rules of organization, if you like the geometry of life, and the innumerable historical pathways that paleontologists in particular revel in discovering."³¹

7.1.6 Convergence, Meaning, and Theology

Still, some of Conway Morris's critics are apt to dismiss his strong emphasis on convergence and even evolutionary direction and purpose as extra-scientific, stemming more from his Christian faith than from his scientific studies. Of course, Conway Morris raises similar charges against Dawkins, Gould, and the rest of what he refers to as "Darwin's Priesthood," whom he describes as evincing an "almost unbelievable self-assurance, [a] breezy self-confidence, ... [employing] a sophistry and sleight of hand in the misuse of metaphor, and more importantly a distortion of metaphysics in support of an evolutionary programme."³² We would note that it is beyond the scope of the biological conjugate to speak broadly on a particular meaning and purpose of history or a

³⁰ Curiously, many of Conway Morris's critics also seem to misapprehend genetic intelligibility, or the intelligibility proper to developmental systems and the successive stages within them as well, which emerges with biological life in particular.

³¹ See the Introduction to Conway Morris, *The Runes of Evolution*.

³² Conway Morris, *Life's Solution*. 314

lack thereof. However, this is not to say that the biological account of world order is irrelevant to the theological account of how grace, nature, and sin play out in the flesh of the evolutionary world, to which question we now turn.

We would do well to recall at the outset that the term ‘convergence’ refers only to the independent evolution of similar morphologies, structures, and abilities in different species at different places and times. Taken alone, then, there is nothing about our recognizing convergence that automatically commits us to a position on the meaningfulness of the world. Similarly, within our Christian theological framework, it is not obvious that convergence or divergence are equated with any single term in the grace/nature/sin triad. Rather, it is only insofar as attending to the interplay of these natural forces play into the intelligibility and directionality of the whole world process that their theological import may be discerned.

To begin, we would note that, by balancing the account of contingency and divergence through a greater attention the ubiquity of convergence, Conway Morris’s account suggests a world that is thoroughly intelligible. He emphasizes that, though adaptations occur from random genetic mutations, the course of evolution is marked by life’s solutions to the challenges to life and to flourishing that are raised by different ecosystems. Points of convergence appear precisely because there are a limited number of ways to meet any particular evolutionary challenge, and so the interplay between creatures and their environment gives rise to solutions that reflect the intelligibility of creatures suited to an intelligible world. And, as Conway Morris argues, nowhere is this more apparent than in the convergence of multiple creaturely adaptations for the

development of sentience and intelligence. Intelligence arises specifically as a well-suited adaptation to an intelligible and, at least in some ways, predictable world.

He does not, however, erase the role of contingent events in history, which remains vital to understanding the world in which we live. Thus, we would also point out the importance of Gould's emphasis on contingent historical events, which disrupt an otherwise overly mechanistic view of the world that we have associated with classical, Aristotelian scientific preoccupations with the universal and necessary at the expense of statistical intelligibility. In fact, Elizabeth Johnson and others have approvingly remarked on the value of Gould's insights in their work insofar as it suggests a world that is open to genuinely new and unpredictable possibilities, a world in which free action may meaningfully play out.³³ However, in our estimation, Gould too strongly undermines the goodness and intelligibility of nature in its own right.

³³ Johnson, *Ask the Beasts Darwin and the God of Love*. 173-174. "A favored imaginative game among scholars in the field is to rewind the tape of life's evolution back to the beginning, and let it roll again. Would the community of life look as it does now? No. Millions of small biological events would never repeat in the exact same way at the same time, and while the eye and the wing might well emerge again since they have done so many times in the course of evolution, the precise figuration of bodies and relationships of ecosystems would be different. Seen retrospectively, an intelligible story of life's emergence can be constructed, which is what Darwin did. But prospectively there is no telling what might happen.... The creative agency of the Spirit of God does not shut down this openness, but enables it. 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, all the while supporting unfolding events as they weave into regular patterns toward the realization of an ever more complex whole.... God lets the world be what it will be, he goes on, not intervening arbitrarily in its evolution but participating, lovingly, in its becoming. Creative divine sovereignty and creaturely freedom, of which chance is one instance, do not compete. To the contrary: the genuine interplay of chance and law in the unscripted evolution of life is due to the generous way the Giver of life creates the world. Thanks to this gracious Love, the natural world freely participates in its own creation." Johnson makes no direct mention of Conway Morris's work, but, in addition to Gould's *Wonderful Life*, she also moderates the strength of Gould's claim by citing other theological sources, including William R Stoeger, "The Immanent Directionality of the Evolutionary Process and Its Relationship to Teleology," in *Evolutionary and Molecular Biology: Scientific Perspectives on Divine Action*, ed. Robert J. Russell et al., Series on "Scientific Perspectives on Divine Action" 3 (Vatican City State : Berkeley, Calif.: Vatican Observatory ; Center for Theology and the Natural Sciences, 1998).

Conway Morris helps correct this imbalance, by way of understanding an intelligible if complex world, shaped by the limits and constraints of physical, chemical, and biological processes. This trajectory includes both some predictable particulars (e.g. hemoglobin as a critical element of complex creatures) but also a larger trajectory moving towards increasing complexity—although it remains marked by destructive episodes throughout. By balancing contingency and predictability, Conway Morris offers plausible hypotheses, as well as insights that are fruitful for a theology of nature. In fact, Celia Deane-Drummond notes that his account of convergence in evolution helps to restore the sense of purposiveness in creation that has long-grounded a specifically-Catholic defense of the enduring goodness and value of nature despite the realities of sin and death in the world.³⁴

This defense of the goodness of the vector of nature is critical for our theological project, for it grounds the natural goodness of each creature according to its tripartite finalities: absolute, horizontal, and vertical. Successful adaptations are the result of particular mutations flourishing within their concrete context. Over time, these successful mutations along paths stabilized by convergent regularities allow for the emergence and maintenance of new and higher emergences and levels of complexity. Conway Morris's account importantly resists the genetic reductionism imposed by Dawkins and others, who make the mechanism of evolution obscure, monadic, and individualistic by ignoring the effects of emergent relations and influences at higher levels. Therein, they tend to

³⁴ In particular, Deane-Drummond draws our attention to the way intelligible patterns of convergence in evolution may be particularly well-suited to the renovation of the scientific foundations for a Thomist natural law theory today. Celia Deane-Drummond, "Plumbing the Depths: A Recovery of Natural Law and Natural Wisdom in the Context of Debates about Evolutionary Purpose," in *The Deep Structure of Biology: Is Convergence Sufficiently Ubiquitous to Give a Directional Signal?* ed. Simon Conway Morris, First edition (West Conshohocken, Penn: Templeton Foundation Press, 2008), 195–217.

depict organisms in such a way that they seem to give rise to themselves, rather than emerging as the product of an ecological network. Furthermore, this overemphasis on genes and gene transmission has also led to the disturbing trend towards forms of social Darwinism, as behaviors of even complex creatures including humans are shoehorned into a genetic calculus within a kind of zero-sum game, a problem that we will take up more directly in the next section.

By contrast, Conway Morris's account more clearly evinces the role of numerous relationships in the shaping of each creature. While elaborating the relation of absolute finality is beyond the scope of biology, he clarifies how creatures evolve in relation to both a horizontal and a vertical finality involving communities of creatures over long periods of time. Though the mutation of genetic sequences is itself random, in the pattern of mutations over time, we come to recognize the emergent intelligibility of life's pursuit of solutions to the challenges of different environments. Sensory organs emerge independently across animal phyla as creatures become progressively more attuned to the challenges of their environment. As organs undergo manifold developments, they set the appropriate underlying conditions, thus heightening probabilities to such a degree that the distinct potential intelligibilities present throughout the world are actualized: light energy become sight, vibrations become sound, benzene rings become smells. As the sensoria of the diverse creatures emerge, the intelligible world realizes an increasing isomorphism with intelligent minds, which already emerge as "embodied" and "embedded"³⁵ "The sense in act is the sensible in act."³⁶ Of course, conditioned recurrence schemes are

³⁵ See our discussion of Michael Silberstein in the previous chapter.

³⁶ Originally found in Aristotle's *De Anima*, this quote became a touchstone for both Aquinas and later Lonergan.

affected by probabilities of both emergence and of survival, and depend on the defensive circles that do or do not happen to emerge.

No wonder, then, that Conway Morris provides further material for fleshing out our account of vertical finality through his emphasis on the principle of inherence. As Conway Morris noted, a great many of the building blocks of higher order systems—circulatory, nervous, digestive, etc.—are found already in the mature form in simple, single-celled organisms. Within the context of those organisms, they perform a variety of functions that are critical to the maintenance of those organisms, but, as evolutionary history unfolds, they realize much higher and more complex functions. This does not obliterate their functioning in the lower, nor does it imply that the lower exists only for the sake of the higher: As Conway Morris describes: “[W]hether the haemoglobin is in the blood of a cow, the clover it is cropping, or in the cyanobacteria forming the scum of a nearby pond, the protein is doing the same thing, taking care of oxygen.”³⁷ This is true not only for component parts like hemoglobin, but also for the creatures themselves: Even while Conway Morris defends the possibility of talking about something like “progress” in evolutionary history, he readily admits that “the bacteria are still with us, and that without them the planet would soon grind to a halt in the absence of their recycling abilities....”³⁸ It is precisely in their meeting their own horizontal bacterial ends that they “recycle” the materials of the world in such a way as to promote the emergence and maintenance of life. In fact, it was only through millions of years of cyanobacteria

³⁷ Conway Morris, *Life's Solution*. 235-236

³⁸ Conway Morris. 307. The use of the word progress is especially fraught. At numerous points, Conway Morris quotes Stephen Gould's infamous description of the word progress among biologists as “a noxious, culturally embedded, untestable, nonoperational, intractable idea that must be replaced if we wish to understand the patterns of history.” See Gould's chapter (pp. 319–338) in Matthew H. Nitecki, *Evolutionary Progress* (Chicago: University of Chicago Press, 1989).

and other anaerobic life “recycling” the materials of the early Earth that this planet became capable of supporting any more complex organisms, including plant life. Thus, it is no exaggeration to say that the cyanobacteria themselves were the terraforming agents that made Earth hospitable to virtually all the other creatures that have called it home over billions of years. Conway Morris observes appreciatively that the critical role played by these creatures and the reality of numerous shared proteins and structures reveals that we share a much deeper connection even with the most basic forms of life throughout the universe: “[I]t is apparent that evolutionary novelty is often only skin-deep. This is because its emergence relies more on co-option and redeployment than invention.”³⁹

Overall, Conway Morris’s balancing of contingency and convergence adds a great deal to our search for the marks of grace in the world. His account evokes a view of nature as intelligible and directed, which resonates with our emphasis on the enduring goods of nature in its own right. At the same time, he recognizes the importance of contingent effects to shape local and particular ecological histories without spiraling into chaotic randomness. Therein, he provides a biological view of the world that correlates well with our emphasis on both general divine action in the good ordering of the whole and special divine action as God’s loving relationship to creatures creates new possibilities for life and growth.⁴⁰ In elaborating the multiple, independent convergences

³⁹ Conway Morris, *Life’s Solution*. 166

⁴⁰ Appreciation for this notion is at the heart of Celia Deane-Drummond’s criticism of Wolfhart Pannenberg’s undermining of God’s general action in the providential order of nature: “Yet it is worth asking if Pannenberg has been too ready to dismiss any understanding of directionality as implicit in the natural order, for his own rendering of purposefulness is necessarily transcendent, understood in eschatological terms, read into the history of nature in the light of experience. It is also worth asking if he has adequately considered the possible constraints within which evolution works, the subject of the present discussion. More particularly, we might ask if he has subsumed all understanding of general divine action of God into forms of special divine action. While the former makes more sense in the context of consideration of the natural world, the latter makes more sense in the context of human history. Pannenberg is no doubt reacting to the opposite more liberal tendency—that is, to deny any existence of special divine

of various structures and capabilities, he also paints a picture of a world that is capable of being redeemed, even when catastrophic events may seem to cut short the possibilities for life in any one place. Furthermore, like Terrence Deacon's account in the previous chapter, Conway Morris highlights how emergences and convergences in history are normed not by some *Deus ex Machina*, but rather by the networks of relations that overlap and become more complex over time, guiding life towards particular regularities and promoting a fecund stability. Finally, emphasizing the influence of whole networks of relationships on the course of evolution through the functioning of local ecologies, Conway Morris resists the problems associated with both Gould's overemphasis on contingency and Dawkins' gene-driven selfishness to alienate human action from their intelligible, meaningful, and purposive contexts.

7.2 Cooperation

In this section, we turn to a different locus of debate over the interpretation of evolutionary history, namely, regarding the understanding of cooperation and the importance placed on its role in evolution. While the narrative of evolution driven by individual fitness and genetically-driven selfishness seemed to rule the day both among many scientists and in the popular imagination for the majority of the twentieth century, the dominance of this narrative has come increasingly into question in recent decades. In large part, the challenge arose along with more mathematically-based evolutionary biologists, whose research has suggested that there are instances in which cooperation

action." See Deane-Drummond, "Plumbing the Depths: A Recovery of Natural Law and Natural Wisdom in the Context of Debates about Evolutionary Purpose." 198-199.

among organisms may prove to be a more effective strategy for survival and flourishing than pure selfishness.

Some of the most important of these developments have been rooted in advances in the field of game theory, which examines the strategic interaction of decision-makers by analyzing motives, preferences and outcomes in various situations. Perhaps the most famous example of game theory is the prisoner's dilemma, the logic of which has often been associated with the selfish, gene-driven view of evolutionary success, especially as championed by Richard Dawkins. The dilemma arises in a scenario in which two criminal co-conspirators (typically referred to as A and B) have both been arrested and are being interrogated in complete isolation from each other. There is enough evidence for each to be convicted only of a lesser charge, but prosecutors are trying to build a case for a more serious charge. Each of the co-conspirators is then presented with an opportunity to provide evidence against the other and is incentivized both by the offer of a reduced sentence and by the knowledge that the other is being offered the same opportunity to offer evidence. There are four possible results in this situation:

- (1) Both A and B offer evidence against the other, and both receive a two-year sentence.
- (2) A takes the deal but B remains silent, and A goes free while B receives a three-year sentence.
- (3) A remains silent but B takes the deal, and A receives a three-year sentence while B goes free.
- (4) Both A and B stay silent, and each receives only a one-year sentence on the lesser charge.

According to what is typically described as “rational, self-interested calculus,” the obvious decision is to defect—that is, to betray the other—because the possible reward for defection outweighs the possible reward for cooperation.

When approximations of this model have been empirically tested or observed, however, participants in various games do not always choose the “rational, self-interested” path, leading many to question the sufficiency of the model itself. A number of challenges have arisen in the field of evolutionary theory in particular, for, if defection represents the more successful or more fit strategy, we would expect to see cooperative strategies weed themselves out over time. But this has simply not been the case. In fact, there is evidence that, at least in some cases, cooperation may play a decisive role in supporting major evolutionary advances. This proposition has drawn the interest of not only biologists, but also ethicists, philosophers, and theologians, not to mention economists.

7.2.1 Cooperation vs. Altruism: A Critical Distinction and Brief History

For the purpose of our discussion, we will focus on one of the most recent and influential accounts of this multidisciplinary conversation as collected by the mathematician and evolutionary biologist Martin Nowak and the Anglican priest and theologian Sarah Coakley. Their volume, *Evolution, Games, and God: The Principle of Cooperation*, brings together a range of different voices and opinions regarding the evidence for and the potential significance of the evolutionary phenomenon of cooperation.⁴¹ One of the chief, initial hurdles was to address the “untidy semantic usage” of key terms, including

⁴¹ Martin A. Nowak and Sarah Coakley, eds., *Evolution, Games, and God: The Principle of Cooperation* (Cambridge, Massachusetts: Harvard University Press, 2013).

especially the terms “cooperation” and “altruism,” which are all too often used interchangeably in this conversation, especially among biologists.⁴² They define cooperation as “a form of working together in which one individual pays a cost (in terms of fitness, whether genetic or cultural) and another gains a benefit as a result.”⁴³ Altruism, then, represents one particular type of costly cooperation “in which an individual is motivated by good will or love for another (or others).”⁴⁴ Thus, while forms of cooperation may be identified in a range of different organisms, “from self-replicating molecules to groups of molecules working together, from individual replicators to chromosomes, from bacteria to eukaryotic cells, from asexual reproduction to sexual reproduction, and so on up to the movement from primate societies to human societies,” altruism may only be predicated of sufficiently complex creatures including but not (necessarily) limited to human beings.⁴⁵

The earliest essays in the volume suggest that, despite the recent preoccupation with selfishness and defection, evolutionary biologists have long been aware of the potential significance of cooperative behaviors. Thus, John Hedley Brooke notes that Darwin himself was aware of the critical role that cooperation could play in natural selection.⁴⁶ Arguing against utilitarian thinkers like John Stuart Mill, who tried to explain

⁴² Nowak and Coakley. 5

⁴³ Nowak and Coakley. 4

⁴⁴ Nowak and Coakley. 5

⁴⁵ Nowak and Coakley. 2

⁴⁶ At the outset, he quotes the following well-known passage from Darwin’s *Descent of Man*: “‘There can be no doubt that a tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good would be victorious over most other tribes; and this would be natural selection (Darwin [1879] 2004, 157– 58).” Cited in John Hedley Brooke, “‘Ready to Aid One Another’ Darwin on Nature, God, and Cooperation,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 37–59. 37

human morality in terms of learned behaviors and self-interest, Darwin argued that the foundations of morality could be traced back to our shared ancestry with other social animals. Citing numerous examples, including the “protoreligious” dog who aims to please his master, Darwin saw human morality as a composite of nature and nurture: “‘Ultimately our moral sense or conscience becomes a highly complex sentiment—originating in the social instincts, largely guided by the approbation of our fellow-men, ruled by reason, self-interest, and in later times by deep religious feelings, and confirmed by instruction and habit’ ([1879] 2004, 157).”⁴⁷ Here, Darwin’s account suggests what we might call emergent cooperation, as archetypal lower forms of cooperation provide a foundation for higher instances of human altruism.

Darwin was not alone in seeking to root moral sentiments in the natural order, either. However, the subsequent history of their discussion muddled the conceptual waters significantly. As Thomas Dixon notes, starting with Auguste Comte’s *System of Positive Polity*, the term altruism came into vogue as a description of a “group of other-regarding instincts, which [Comte] located physically toward the front of the human brain,” and which functioned as a key term in Comte’s proposal for an atheistic “Religion of Humanity.”⁴⁸ The popularity of Comte’s account launched a broad discussion of altruism within a variety of different disciplines and specialties, leading to significant problems of equivocation in contemporary interdisciplinary dialogues. Dixon helpfully identifies three main meanings associated with altruism:

⁴⁷ Brooke. 55-56.

⁴⁸ Thomas Dixon, “Altruism: Morals from History,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 60–81. 60-61.

Some, including the term's originator, Auguste Comte, have used "altruism" to refer to selfless or other-regarding instincts or intentions. Others have defined "altruism" in terms of actions rather than intentions. This second approach was spread through the influence of the English evolutionist Herbert Spencer's writings from the 1870s onward. It has also become the standard use in the biological sciences today, which normally define behaviors as altruistic if they increase another's chances of reproductive success at the expense of the actor, regardless of intentions (Okasha 2005; Foster 2008;). Finally, "altruism" is sometimes invoked, in opposition to "individualism," as the name of any ethical principle that asserts an identity between moral goodness and the good of others. From the 1850s onward, "altruism" was frequently used in this third sense, as a term for a wide range of humanistic and socialistic ideologies (and, later, even for Christianity too). These three different sets of "altruism" concepts can be described as psychological altruism, behavioral altruism, and ethical or ideological altruism, respectively (Sober and Wilson 1998, 6– 8; Dixon 2005).⁴⁹

During the late nineteenth and early twentieth centuries, these terms became increasingly obfuscated as they were coopted for a variety of different religious and social programs and philosophies, which often married Darwinism, liberal Christianity, and romantic gender theory into one unholy mess.⁵⁰ Drawing together the lessons from these earlier

⁴⁹ Dixon. 62.

⁵⁰ Despite all these dangers, however, there were also more nuanced and successful attempts to engage evolutionary perspectives on altruism in theology. Heather D. Curtis highlights one success story by reference to the Scottish naturalist and evangelical minister, Henry Drummond, noting that, for him and those who followed him, "emphasizing evolutionary altruism [enabled] Christian theologians to avoid the inadequacies of alternative perspectives that place God wholly outside the natural order." See Heather D. Curtis, "Evolution and 'Cooperation' in Late Nineteenth and Early Twentieth Century America: Science, Theology, and the Social Gospel," in *Evolution, Games, and God: The Principle of Cooperation*, ed.

attempts to connect ethical and religious arguments with natural science, Dixon warns against several potential pitfalls for contemporary conversation, including: a false ethical naturalism that tries to derive ought from is, the equally problematic extremes of moral emotivism or consequentialism, and the elevation of an ethics of self-sacrifice and altruism that loses sight of virtuous self-care and love.⁵¹

While wary of some of these perennial dangers of interdisciplinary discussion regarding cooperation and altruism, Coakley and Nowak nevertheless defend the importance of this dialogue for shifting the ossified narratives around genetic selfishness as the primary or even sole driver of biological evolution. Moving past the historical surveys that form the first part of the collection, they note that what most strongly differentiates contemporary biological accounts of cooperation and altruism from their predecessors is the marked differences effected through the mathematization of evolutionary biology in recent years. Within the selfishness paradigm of evolution, success is measured in terms of the individual gene, cell, and organism to reproduce its genes in a fiercely competitive world that very much resembles Hobbes' "war of all against all." The more advanced modeling techniques available to biologists today make it possible to ask how cooperation persists in a system that seems by design—so to speak—to weed out non-competitive behaviors and traits and, moreover, to test a variety of explanatory hypotheses about this cooperative perdurance in ways beyond the imaginative reconstruction and projection suggested in Gould and Conway-Morris's work.

Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 82–95.
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⁵¹ Dixon, "Altruism: Morals from History." 76-78.

7.2.2 Nowak's Five Rules Governing Forms of Cooperation

In his own contribution to the volume, Nowak describes and analyzes five different rules governing forms of cooperation. As noted earlier, these forms of cooperation do not include simple acts of collaboration for mutual benefit, as, for instance, has been observed in the collaborative hunting techniques of certain species of grouper and octopus, who work together to flush smaller fish from crevices in coral reefs and then block their escape into the surrounding shallow seas.⁵² Relationships such as these are obviously beneficial to both species, and so do not trouble the accepted model of evolutionary self-interest. Rather, each rule of cooperation applies to instances where one partner suffers a loss of individual fitness as part of the transaction.

The first rule is called “kin selection” or “inclusive fitness” and is most linked with the work of John Maynard Smith. This rule states that, if an individual acts in a way contrary to their own fitness, this action must confer a greater or equal advantage on its genetic relatives, thus yielding an overall genetic advantage even for the one suffering a loss. This explanation was expressed mathematically in W.D. Hamilton's Rule, which states that “the coefficient of relatedness, r , must exceed the cost to benefit ratio of the [cooperative] act: $r > c / b$ ”.⁵³ This rule has been tremendously influential in evolutionary theory, as it provides a way to subsume cooperative phenomena under the dominant selfishness paradigm. As Coakley described in a recent lecture, Hamilton's rule has been the “key unifying story of evolution, a fulcrum of meaning, which has in effect

⁵² See “Blue Planet II,” *Coral Reefs* (BBC Natural History Unit, November 12, 2017).

⁵³ Martin A. Nowak, “Five Rules for the Evolution of Cooperation,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 99–114. 100

replaced the holistic interpretation of nature supplied in much earlier generations by classic natural theology.”⁵⁴ Nowak’s research does not challenge this rule outright, but rather suggests that it is inadequate to account for the broader range of instances of cooperation that exist in the evolving world.

The second rule, which is based largely on the contributions of Robert Trivers, is called “direct reciprocity,” and it is based on the predicted outcomes of multiple encounters between two individuals in an evolutionary population. This rule is modeled by running repeated simulations of the prisoner’s dilemma in which the behavior between rounds influences choices in subsequent rounds. Within game theory, there are different strategic models for “winning” these encounters sufficiently often to justify their evolutionary endurance. However, as Nowak describes: “Direct reciprocity can only lead to the evolution of cooperation if the probability, w , of another encounter between the same two individuals exceeds the cost-to-benefit ratio of the altruistic act: $w > c/b$.”⁵⁵ Thus, it can really only account effectively for instances of cooperation between individuals who are approximately equally matched and who are likely to have a stable and enduring relationship.

The application of the third rule, “indirect reciprocity,” is limited only to humans and some higher animals. Unlike direct reciprocity, indirect reciprocity allows for an asymmetry between the giver and receiver and for the unlikelihood or even impossibility of repeated encounters. Instead, indirect reciprocity requires only that the generous act be observed by some members of the larger complex social unit to which the giver belongs,

⁵⁴ Sarah Coakley, “Evolution, Cooperation, and the Question of God: Is There a Future for Natural Theology” (Conference Presentation, X Fliedner Conference, Comillas Pontifical University, October 24, 2019), <https://www.conferenciasfliedner.org/es/X-conferencia-fliedner>.

⁵⁵ Nowak, “Five Rules for the Evolution of Cooperation.” 102

thereby building up the reputation of the giver. This model becomes especially important and effective in societies with language, which, though “gossip” and other forms of information spreading, the impact of reputation can be magnified many times over: “For direct reciprocity you need a face. But for indirect reciprocity you need [only] a name.”⁵⁶

The fourth rule is referred to as “network reciprocity” or “spatial selection.” It is designed to account for instances of cooperation in real, complex societies, where it is unrealistic to expect that cooperators and defectors are equally distributed throughout a population. Instead, it depends on a concrete culture of cooperation attaining within an evolutionary population, such that defection does not naturally dominate as individual cooperators form clusters that enhance the success of their cooperation. The key is that the benefit to cost ratio must exceed the average number of neighbors per individual in the cluster.

This brings us to Nowak’s fifth and undoubtedly most contentious rule, “group selection.” Whereas, in the first four rules, the explanatory unit remains the individual and their success, group selection focuses on the success of whole groups. Nowak describes how modeling reveals the strength of groups of cooperators according to this rule, as follows:

A population is subdivided into groups. Cooperators help others in their own group. Defectors do not help. Individuals reproduce proportional to their payoff. Off spring are added to the same group. If a group reaches a certain size, it can split into two. In this case, another group becomes extinct in order to constrain the total

⁵⁶ Nowak is fond of quoting this formulation from his Harvard colleague David Haig. See, for instance, Martin Nowak and Roger Highfield, *SuperCooperators: Altruism, Evolution, and Why We Need Each Other to Succeed*, Reprint edition (New York, NY: Free Press, 2012).

population size. Note that only individuals reproduce, but selection emerges on two levels. There is competition between groups, because some groups grow faster and split more often. In particular, pure cooperator groups grow faster than pure defector groups, while in any mixed group defectors reproduce faster than cooperators. Therefore, selection on the lower level (within groups) favors defectors, while selection on the higher level (between groups) favors cooperators. This model is based on “group fecundity selection,” which means groups of cooperators have a higher rate of splitting in two. We can also imagine a model based on “group viability selection,” where groups of cooperators are less likely to go extinct.

While individual defectors may get a “free ride” in mixed populations, communities with high levels of cooperators are increasingly likely to succeed and may edge out groups with higher numbers of defectors.

7.2.3 Challenges to and for Accounts of Cooperation

Many of the opponents of this fifth model in particular argue that these phenomena ought still to be explained merely according to strongly individual genetic calculus. However, the strength of Nowak’s mathematically grounded approach has been his ability to demonstrate that pure cooperator groups grow markedly faster than pure defector groups. Moreover, as Nowak has argued, it seems that cooperation plays a critical role in explaining the “constructive” capacity of evolution, even going so far as to argue that it might deserve recognition as “a third fundamental principle of evolution besides mutation and selection.” As Nowak concludes: “New levels of organization evolve when the

competing units on the lower level begin to cooperate. Cooperation allows specialization and thereby promotes biological diversity. Cooperation is the secret behind the open-endedness of the evolutionary process. Perhaps the most remarkable aspect of evolution is its ability to generate cooperation in a competitive world.”⁵⁷

As Nowak indicates, game theoretical modeling has increasingly suggested that cooperation may play a crucial role in evolution. Moreover, some newer game theoretical models further suggest that the frequency and impact of cooperation increases when other compounding factors—e.g. the introduction of a neutral option beyond cooperation and defection or the introduction of even mild punishment for defection—are considered. Similarly, Christopher Hauert argues that most evolutionary opportunities for cooperation are better modeled by games with lower stakes than the Prisoner’s Dilemma (e.g. the “Snowdrift Game” or *SG*), and that these lower stakes games increase the likelihood of cooperation even further.⁵⁸

While Nowak and Hauert make a strong case for regarding some form of cooperation as a significant influence in evolutionary history, how this biological claim relates to any particular philosophical, ethical, or religious claim is less clear, and many of the other contributors to the volume raise concerns about any hasty generalizations therein. For instance, while he positively regards cooperation’s potential to complexify

⁵⁷ Nowak, “Five Rules for the Evolution of Cooperation.” 110

⁵⁸ This game describes a scenario in which two cars are stuck in the same snowdrift, and the drivers of each car are trying to achieve the best result in relation to the other driver’s behavior: “If the other driver shovels, it is best to shirk, but when facing the potential for a lazy counterpart, it is better to start shoveling instead of remaining stuck in the snow.” Compared with the relatively rare occurrence of situations akin to PD—especially in less complex organisms than humans and other animals of high intelligence—Hauert describes a broad range of biological examples that appear to match the snowdrift game in their fundamentals. Christoph Hauert, “Mathematical Models of Cooperation,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 115–31.

reductionist accounts of evolution, Jeffrey P. Schloss challenges whether authentically altruistic actions—which he refers to as “countterreproductive sacrifice”—may be properly included as a subset of cooperation so defined, especially since some altruistic actions may also damage the fitness of the group itself. In his view, to the extent that we render all altruism as a rational choice for some form of fitness, we render them as forms of sophisticated selfishness.⁵⁹ In a similar theological objection, Timothy Jackson argues that agapeic self-sacrifice within the Judeo-Christian tradition is wholly incommensurable with evolutionarily-rationalized self-interestedness.⁶⁰ Friedrich Lohmann identifies a related concern within Kantian ethics, though he is somewhat more hopeful about the ability of deontological ethics to relate these phenomena without equating them through its focus on intentionality rather than on biological predilection.⁶¹

Other contributors raise additional concerns about how an account of cooperation that is so broad as to be applicable to both slime molds and humans alike can avoid

⁵⁹ “Both other- regarding motives and genuinely sacrificial consequences are intimately associated with what we take to be the highest forms of love, yet the latter— a necessary bridge between cooperation and altruism— seems impossible by the logic of selection. The above section described cooperative trends that are not strictly inferable from selection or game theory but can be postdictively interpreted in their light. This does not appear to be the case with countterreproductive investment in others, which legitimately runs afoul of the ostensibly necessary truth that entities failing to replicate biologically will simply not persevere.” Jeffrey P. Schloss, “Unpredicted Outcomes in the Games of Life,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 201–20. 212

⁶⁰ “...I reject eudaimonism and evolutionary game theory as erroneous: they both conflate doing good with doing well, and past causal etiology with present moral purpose. These mistakes are the result of a single common failing: overestimating the power of eros, variously characterized as the pursuit of happiness or, in the case of all species, natural selection. I do not doubt the existence of the pursuit of happiness or natural selection, nor do I deny that they bear derivatively on ethics, but I do contend that they are not the teloi or normative bases of all ethics.” Timothy P. Jackson, “The Christian Love Ethic and Evolutionary ‘Cooperation’ The Lessons and Limits of Eudaimonism and Game Theory,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 307–25. 308. As Jackson indicates, his objection is rooted in the work of the Swedish Lutheran theologian Anders Nygren, especially as laid out in his book, *Agape and Eros*.

⁶¹ Friedrich Lohmann, “A New Case for Kantianism: Evolution, Cooperation, and Deontological Claims in Human Society,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 273–88.

falling into the patterns of equivocation and reduction. However, while these dangers are real and persistent, some contributors argue that they need not be insurmountable.

Philosopher Ned Hall suggests an imaginary conversation between Suzy the “Sophisticated Christian Theist” (SCT) and Billy the “Reductionist Atheist Physicalist,” arguing that, at least regarding the interpretation of larger patterns of cooperative human behavior, they might be able to come to some agreement, so long as they hold to the “philosophically most sensible versions of each position.”⁶² For Suzy, this entails that her Christian theism be shaped by (1) an epistemology that takes seriously evidentiary reasoning and seeks to reconcile diverse truth claims and (2) a metaphysics that clarifies that the transcendent otherness of God from the things of this world.⁶³ For Billy, this entails that his (admittedly strong) reductive physicalism allows that “the concepts and distinctions most useful to any given inquiry” need not be supplied by physics, even if they are wholly reducible to physics as the most fundamental explanatory account grounding all others.⁶⁴ Given these provisos, Suzy and Billy may both recognize the explanatory power of biological accounts of evolutionary cooperation without succumbing to what Hall calls a “cross-platform” fallacy, in which the applicability of an explanatory model to a range of phenomena is confused with the reduction of that phenomena to that explanatory account.⁶⁵ This is not, of course, to say that their

⁶² Ned Hall, “How Not to Fight about Cooperation,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 234–50. 235

⁶³ Hall. 235-236

⁶⁴ Hall. 240

⁶⁵ Hall’s account is in some regards quite similar to another contributor, Justin C. Fisher, who notes how evolutionary science may contribute to philosophical conversations including debates over mind-body dualism, free will, and the complexity of consciousness and human behavior, so long as each party remains within own explanatory lane. In the free will debate, for instance, Fisher notes that the explanatory biological accounts of cooperation clash with certain libertarian notions of free will but that philosophical compatibilism allows for the recognition of free acts embedded in the causal structure of the world; thus,

agreement about the explanatory legitimacy of cooperation dissolves all disagreement: As Hall notes, Suzy and Billy will still disagree about what “*ultimately grounds* the human capacity for selflessness,” be that God’s agency or merely physical and neurological correlates.⁶⁶ However, while Hall provides a basic framework for dialogue between diverse persons, the question remains: beyond their ability to be modeled by similar mathematical tools, is there a sufficiently common base shared between the phenomena identified by mathematicians, biologists, psychologists, philosophers, and theologians that all of them may be productively grouped together under the single title of “cooperation?” And, if so, what is the logic that structures the connections between these accounts such that they avoid reductive collapse?

7.2.4 Cooperation in an Emergentist Perspective

Addressing himself to this challenge, Philip Clayton suggests the (now familiar) emergentist framework, in which we find the resources to affirm the legitimate explanatory power of a methodological reductionism while, at the same time, recognizing the genuine newness occasioned by ontological emergence:

From an emergentist perspective... the game theoretical models do not by themselves complete the explanatory task. Intentional cooperation among human agents is not fully explained by the analogy with simpler biological systems any more than mating rituals among the higher primates are explained by the law of the

there need be no “special tension” between it and game theory approaches to biology. Justin C. Fisher, “What Can Game Theory Tell Us about Humans?” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 220–33. 224

⁶⁶ Hall, “How Not to Fight about Cooperation.” 247. Emphasis original.

conservation of energy or the Schrödinger wave equation. On our view, the explanatory task involves discovering not only shared principles of action but also the specific differences that characterize each species and environment. Although one always hopes to discover general laws that hold across a large number of biological systems, accounting for the specific behavioral patterns of a given organism or population remains an equally crucial element of scientific work. The need to be concerned with specific features is a consequence of the fact that the biosphere is organized as a hierarchy of levels of increasing complexity.⁶⁷

Thus, while emergence may affirm the indispensability of the lower manifolds of evolutionary history to the functioning of each scheme of recurrence, we also recognize that further explanatory accounts must match the particular complexities that emerge at each intelligible level. As Clayton continues:

This standard for scientific explanation has important ramifications for the study of cooperation at every level at which cooperative behaviors occur in the biosphere. It requires that one name individual chimpanzees and track the idiosyncrasies of individual behavior (Goodall 1986). It focuses attention on the specific features of reconciliation behaviors in higher primates, as in the work of Frans de Waal (1989, 1996, 1998). It requires one to conceive cooperation in complex animal societies as a by-product of the coevolution of culturally learned behaviors and genetically transmitted predispositions (Durham 1991; Deacon 1997). When one comes to the study of humans, it requires special attention to the ways that uniquely human

⁶⁷ Philip Clayton, "Evolution, Altruism, and God: Why the Levels of Emergent Complexity Matter," in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 343–61. 355-356.

concepts arise (Tomasello 1999) and become the “horizons of meaning” for human existence in the world (Konner 1982). Ultimately, it raises the question of what it means for humans to inhabit worlds constructed, in part, out of their own imagination and projection (Heidegger 1962).⁶⁸

Within an emergentist worldview, our understanding of the unfolding of a phenomenon like cooperation functions heuristically, directing our investigations of similar phenomena at higher level. However, these further investigations are normed by the methods and conventions of the higher level, which are irreducible to the intelligibilities at the lower.

By situating the phenomenon of cooperation within our hierarchically emergent worldview, we are now in a better position to say how philosophical and scientific reflection on cooperation may be integrated into our own account of grace, defined as the created base of a relationship in each creature that opens them up to God’s transformative love and to deeper relationships with other creatures in accord with the distinct types of finality: absolute, horizontal, and vertical. However, it would be far too facile to say that cooperation, insofar as it represents greater collaborative relations both within and among ranges of distinct genera and species, must be an unambiguous sign of grace, for cooperation may work to bring about good or evil. While mathematical modeling may help us to identify common underlying patterns that influence and shape cooperative behaviors at multiple levels, the question of the goodness must be settled according to the particularities of the creature in question.⁶⁹

⁶⁸ Clayton. 356-357

⁶⁹ Of course, part of the goodness of any cooperation is unknowable by us since we lack the universal perspective of God’s wisdom. There may be many ways in which particular instances of cooperation or defection play vital roles in realizing the eternal wisdom of God’s providential plan for the whole cosmos

7.2.5 Natural Kinds and “Normative” Judgments

As we have argued previously, in order to understand the particularities of each creature in the goodness of its creation, it is necessary that we consult the full range of conjugate explanations discovered by the various ongoing scientific investigations. This means, however, that all sciences are involved in making probable judgments about what is normal and good for each kind of creature. This argument is echoed by Jean Porter who argues that studies in evolutionary cooperation presume some form of a natural teleology proper to each creaturely kind in order to “show that at least some judgments about what is good, advantageous, and worthwhile are rooted in objective reality rather than being reflections of contingent human desires.”⁷⁰ This teleology is supplied not theologically, but by a critically grounded metaphysically, because this depends predominantly on “a close link between intelligibility and normativity.”⁷¹ In short, she confirms that, in order to understand any instance of cooperation in relation to the “fitness” of any particular creature, we must understand what all constitutes that fitness; and the answer to which question will be tied to the kind of creature we are examining.

Steeped in the natural law tradition of Catholic ethics, Porter draws especially from the Scholastic appropriation of Aristotle’s natural kinds.⁷²

that will elude us until and perhaps beyond the glory of the beatific vision. Nevertheless, we may still recognize how this is prefigured already here and now in the economy of grace.

⁷⁰ Jean Porter, “Nature, Normative Grammars, and Moral Judgments,” in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 289–306. 290

⁷¹ Porter. 290

⁷² We may note the parallel between Porter’s use of natural law here and Deane-Drummond’s arguments for natural law in relation to the intelligibility and teleology of convergent evolution in the last section. As noted in our Chapter Two, Deane-Drummond draws on Porter’s scholarship in her treatment of the significance of observed proto-morality in higher animals in Deane-Drummond, *The Wisdom of the Liminal*, 2014.

[The] characteristic features of human life— or of any other kind of living creature—are explained in terms of their contributions to a species-specific way of life. This presupposes, in turn, a kind of realism about natural kinds, according to which well- formulated concepts of natural kinds are grounded in real qualities or aspects of the things in question, in virtue of which they count as the kinds of things that they are. It presupposes, in other words, that a living creature instantiates a specific form, in and through which it exists as an individual entity of this or that determinate kind. By the same token, this view presupposes that the forms of things can be grasped through concepts, albeit imperfectly, and moreover that these concepts are genuinely explanatory. That is to say, they help us to make sense of the operations of natural things in ways that would otherwise be inaccessible to us.⁷³

In order to understand what is “good” for a creature, then, it is necessary to understand the kind of creature in question and how it lives and flourishes within its particular context. In selfish-gene theories, the good of the creatures is easily measured both in terms of the preservation of the creature’s own health and life and the maximization of their genetic offspring. As noted in Nowak’s overview of the different kinds of cooperation, the notion of flourishing expands significantly in increasingly complex groups of creatures. especially once we move to the level of group selection, where the explanatory unit shifts from the individual to the group. As Porter remarks:

[Our] concept of reproductive fitness is itself transformed in subtle but important ways, reformulated in terms of individual promotion of the reproductive fitness of a

⁷³ Porter, “Nature, Normative Grammars, and Moral Judgments.” 290

group or a kind rather than narrowly understood in terms of the generation of one's own kin. And this, in turn, suggests a more comprehensive teleological account of what it is for a population of living creatures to flourish and to perpetuate itself, an account that allows us to formulate well-being and flourishing in terms of a collective form of life in which individuals play diverse and complementary roles and achieve their individual perfection in these terms.⁷⁴

In this sense, identifying instances of cooperation among and between species, especially those living in complex communal arrangements, necessitates an understanding of the perfections that are proper to a given creature and to the larger community, which involves complex group dynamics.

Porter suggests that this Scholastic natural law framework is especially apt to the scientific and the theological understandings of cooperation, in part because the framework was developed during a period in which Scholastic theologians were facing a challenge similar to that faced by theorists of cooperation. As she describes:

[T]he twelfth and thirteenth centuries comprised a period of far-reaching reforms in legal and sacramental practice, together with corresponding attempts to develop comprehensive accounts of jurisprudence and theology within which these reforms could be defended and carried forward. In this context, they tended to frame normative analysis within broadly juridical categories, defining kinds of actions as blameworthy or meritorious. This tendency was as marked among the theologians as the legal scholars—indeed, it was if anything more marked among the theologians because of their focus on the concept of sin, which, again, prompted a

⁷⁴ Porter. 303-304

close analysis of the components of human action. Yet this period was also marked by intense attention to the inner life of the individual and to the value and appropriate expressions of inner freedom. In many respects, these tendencies arose out of the same matrix of causes and were mutually reinforcing. With respect to the questions we are considering, however, these tendencies stood in tension with one another in such a way as to shape what became the defining issue for debates over merit and sin—namely, what is the relation between the exterior act, so carefully defined in institutional and legal contexts, and the inner intention, so vitally important to the life of the individual?⁷⁵

In other words, Scholastic natural law theorists were also concerned with understanding how humans pursue their own particular goods within a community and how they influence and are influenced by each other and by the history into which they are born.⁷⁶ At least in with respect to humans, this demands an understanding of the interplay of grace, nature, and sin as human beings pursue their natural and supernatural ends, if often circuitously. As we have throughout this dissertation, we would simply emphasize that this world of human action and interaction is itself situated in a much larger co-

⁷⁵ Porter. 300.

⁷⁶ While Porter links her argument vis-à-vis a theological understanding of cooperation with the Scholastic development of natural law in relation to the sacrament of penance, it would seem that the sacrament of the Eucharist may be more helpful still, especially as we wish to move beyond natural law and to reflections on the relatively and absolutely supernatural elevations brought about through grace. While penance is associated most strongly with the healing function of grace, the sacrament of the Eucharist effectively mediates grace both as healing and elevating. Moreover, by the High Middle Ages, the sacrament of penance (or reconciliation) had become confined to auricular one-on-one encounters with priests whose ordination empowered them to mediate forgiveness. At the same time, Aquinas was developing an account the specific grace of the sacrament of the Eucharist as the *unitas mystici corporis*, thus centering the theme of cooperation in a more obviously central way. While this would seem to merit additional reflection, we will not attempt to do so here.

evolutionary context, thus calling for an expansion and integration of our previously anthropocentric account of grace.

Building on Porter's insights, we would argue that the connection between natural law and cooperation represents a particularly apt place for our theology of grace to engage with other disciplines, as our theology is especially geared towards identifying the particular goods of each creature considered in relation to their absolute, horizontal, and vertical finality. While the absolute finality may remain the province of theology alone, naming the horizontal and vertical finality of creatures beyond mere self-reproduction requires a deeper understanding of various creaturely kinds. This suggests that theological reflection may play a critical role in relation to the natural scientific study of cooperation in evolution since, as Alexander Pruss points out, "modern science specializes in explaining nonnormative facts in terms of further nonnormative facts."⁷⁷ Pruss does not deny the normative character of the probable judgments of the sciences as regards the data of their fields, but rather he challenges that the identification of at least some forms of cooperation—especially among higher and more complex social beings—requires an ethically normative judgment regarding the good of the individual and the group that goes beyond the limits of what the natural (and, generally, the social) sciences are equipped to judge.⁷⁸ Thus, eschewing that part of Aristotelian science that allowed for explanation of normative or nonnormative facts in normative terms, the modern natural sciences have "constricted the range of facts to be explained and the range of admissible

⁷⁷ Alexander Pruss, "Altruism, Normalcy, and God," in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 329–42. 329

⁷⁸ We would further note, that, if we were to deny the normativity of probable judgments within other scientific disciplines, we would undermine the very conjugate explanations that we have up to this point argued are so vital to the development of a theology adequate to the challenges posed by an ecological and evolutionary worldview.

explanations” within each highly specialized discipline.⁷⁹ While specialization has been tremendously fruitful, especially insofar as it has allowed for the refinement of different methodologies, it has disallowed for the kinds of normative judgments that undergird the identification of a morally altruistic act, which, as noted above, depends on both the intentions of the actor and the moral value towards which that cooperation is directed. Without this normativity, cooperation and especially altruistic cooperation breakdown as meaningful categories: While many people have risked their “reproductive success” for the benefit of Nazism and white nationalism, surely we would not identify this as genuine altruism.

While Pruss notes that some form of Aristotelianism proves especially helpful in distinguishing genuine goods in relation to cooperation and altruism, he strongly suggests that an agnostic philosophical ethics and metaphysics may still prove insufficient. He argues that some form of theism is needed and points towards two possible candidates:

The first kind of theistic explanation, championed, for instance, by Alvin Plantinga (see, for example, Plantinga 1993), is a reductive account, but one where the facts reduced to are not scientific ones. On this view, the proper function of something, say a hammer, a car, or a flower, just is the function for which its creator intended it.... The second approach is more metaphysically involved and is based on Aristotelian metaphysics. On this account facts about normalcy or proper function in organisms cannot be reduced further. These facts are grounded in features of the nature of the organism.⁸⁰

⁷⁹ Pruss, “Altruism, Normalcy, and God.” 330

⁸⁰ Pruss. 338

This Aristotelian metaphysical theism helps to structure the kinds of normative judgments needed to make sense of cooperation in different populations. However, neither of these approaches is adequate if they are rooted in a solely natural theological approach, for natural theology faces further explanatory difficulties in relation to what he calls “radical moral altruism”:

If there were an evolutionary account of the normalcy of altruism, it would only be a limited altruism that would be normal. Moreover, the evolutionary account would, if I am right, require the presence of an altruism limiter. A failure of the limiter would then be a defect leading the individual to extend her benevolence to genetically distant unhelpful individuals or to severely disabled members of her own community, thereby undercutting the selective advantages conferred by biological altruism.⁸¹

As Pruss argues, any merely natural scientific explanatory account that would seek to harmonize the accounts of cooperation suggested at multiple emergent levels will have a hard time explaining how such “maladaptive behaviors” can recur throughout human history. At the same time, he notes that these heroic acts of self-sacrifice are generally regarded as morally estimable, and we regard them as good for the society nevertheless. Here, Pruss introduces a further distinction into his account: “[W]hile earlier I was talking of a pair of concepts, the normal and the abnormal, in fact, there are three concepts: the normal, the abnormal (or subnormal) and the supernormal.”⁸² The perdurance of these forms of “supernormal” sacrifice suggest not an Aristotelian theism, but rather cohere

⁸¹ Pruss. 339

⁸² Pruss. 340

particularly well with Christian theistic explanations of the normalcy of cooperation: on such accounts, it is no surprise that radical moral altruism is normal or, more likely, supernormal, rather than abnormal, given that our altruistic activity is not only an image of the activity of a generous God who creates us ex nihilo without deriving any benefit from this, but is the image of a triune God whose nature is the radical mutual self-giving of three divine persons, one of whom died that we might live.⁸³

Here, beyond an account of natural kinds to provide a heuristic for the ongoing investigation of cooperation at every level of evolution, we recognize a need for an account of “supernormal” or, as we are accustomed to saying, “supernatural” realities.

7.2.6 Relatively or Absolutely Supernatural?

While Pruss identifies a pattern of “supernormal” behavior that seem to break with the pattern of higher cooperative emergences in some key way, we would argue that more needs to be said about this break to clarify how it does and does not represent a rupture with the order of grace that we have been developing so far. In one sense, this self-sacrificial love that Pruss identifies is precisely the kind of act that the Christian theological tradition has always named grace and which, in a broadly Thomist theology, may be understood as a supernatural act that flows out of a supernatural habit infused through God’s grace. It is absolutely supernatural, in that it is not merely the next stage in a sort of logical, evolutionary development which ought itself to be subsumed in some higher form. Rather, it is a supernatural expression of God’s love, poured out in our

⁸³ Pruss. 341

hearts. This form of radical, absolutely supernatural love is precisely the grace of charity that flows from our absolutely supernatural elevation through the indwelling of the Holy Spirit.⁸⁴

At the same time, as we have argued that grace brings about the healing and completion of every level, we are able to recognize that this absolutely supernormal/supernatural reality of self-sacrificial love belongs to the one economy of grace which flows forth from God's intimate relationship with all of creation and which empowers its upward dynamism from within. The logic of this self-sacrifice is perhaps only intelligible to and through the theological conjugate informed by the model of efficacious self-sacrifice made evident on Christ's cross. In this sense, the lower conjugates cannot properly account for the intelligibility of these acts. However, at the same time, we reject that this constitutes some new order of grace or new history of salvation apart from that which God has been bringing about in the midst of the good creation from the beginning of time through the universal and invisible mission of the Holy Spirit and which was realized in a special way in the visible mission of the Incarnation, intended from all eternity, and the passion that followed from the wholly

⁸⁴ We would further note that these "supernormal," absolutely supernatural acts of holy love may, perhaps, be better understood according to the category of friendship. Neither cooperation nor altruism really include the crucial analogy for charity, first introduced by Aquinas, of friendship as conceived by Aristotle. This form of friendship reflects not only "wishing well for the other for the other's own sake," but also a sense of wishing the good of oneself and the other within a common orientation towards goodness and, for Christians, towards God. This emphasis on the deep, prior connection between friends and its capacity to overflow in life-giving ways seems to go beyond the limits of what can be subsumed under the more limited meaning of altruism. This is especially true in the case of the friendship into which we are invited through the grace that makes us adopted children of the Father and partakers in the intra-Trinitarian friendship to which Jesus invites us through the Spirit: "This is my commandment, that you love one another as I have loved you. No one has greater love than this, to lay down one's life for one's friends. You are my friends if you do what I command you. I do not call you servants any longer, because the servant does not know what the master is doing; but I have called you friends, because I have made known to you everything that I have heard from my Father. You did not choose me but I chose you. And I appointed you to go and bear fruit, fruit that will last, so that the Father will give you whatever you ask him in my name. I am giving you these commands so that you may love one another" (John 15: 12-17).

good God's entry into a world still marked by the brokenness of sin. Self-sacrificial love of this kind may be the highest expression of divine love in the cosmos and, therein, be properly accounted for only at the theological level, but this does not undo the graced, emergent relationships that undergird this order.

7.2.7 Staking a Theological Claim Among the Sciences

Thus, we would argue that a specifically Christian theology of grace in all creation has the distinct possibility of cooperating with the full range of sciences to attend to, describe, and attempt to explain the multiple, complex creaturely goods proper to different creatures. Theology cannot be content to remain in its own lane in a timid epistemological framework that Sarah Coakley aptly names "lazy no-contesters."⁸⁵ This leads to the dismissal of religion by scientifically-minded people, reinforces the problematic aspects of the (especially North American) separation of church and state and the privatization of religion, and encourages the view of religious belief as irrational, which has the added effect of valorizing irrationality among some religiously inclined persons. By contrast, as Coakley vigorously maintains, collaborative research on evolutionary cooperation has suggested that there remains a vital role for Christian wisdom in the sciences and in every domain of public life:

In short, if my intuition is correct here, the cooperative tendencies of evolution themselves suggest a natural *praeparatio* in the processes of selection for the potential later heights of saintly human self-sacrifice (only ultimately

⁸⁵ Sarah Coakley, "Evolution, Cooperation, and Divine Providence," in *Evolution, Games, and God: The Principle of Cooperation*, ed. Martin A. Nowak and Sarah Coakley (Cambridge, Massachusetts: Harvard University Press, 2013), 375–85. 381

comprehensible as a response to divine grace), whereas the “eyes of faith,” on the religious side, discern the phenomena of cooperation as already indications precisely of trinitarian and Incarnational effects.⁸⁶

While Coakley seems also to observe the traditional reservation of the language of “grace” to describe God’s work in particularly human contexts, it is clear that, like many of the other theologians we have considered throughout this dissertation, she shares the conviction that God’s gracious and intimate presence is transforming the world in its every aspect:

God’s providential impinging on the evolutionary process, on this view, is not a miraculous or external *additum*, an occasional tinkering with evolutionary developments from the outside but, rather, the intimate, undergirding secret of the whole maintenance of the created order in being... [W]e now know with ever greater precision, given the aid of the mathematical calculus of game theory, that evolutionary processes do occur within certain particular patterns of development. Even epistemically, then, we can now chart processes of remarkable evolutionary regularity, and, ontologically, there seems no irrationality in positing the existence of a transcendent (and immanent) divine providence, albeit one that kenotically “selfhides” in the spirit of Incarnational presence.⁸⁷

⁸⁶ Coakley. 382

⁸⁷ Coakley. 378. It should be noted here that Coakley’s use of “kenosis” stands in stark contrast to its use either among deist or process theologies: “First, then, it is vital to avoid, in the case of precultural evolution, the presumption that God competes with the evolutionary process as a (very big) bit player in the temporal unfolding of natural selection. Once we are released from that false presumption, God is no longer— and idolatrously— construed as problematically interventionist (or feebly failing in such) along the same temporal plane as the process itself. Rather, God is that without which there would be no evolution at all; God is the atemporal undergirder and sustainer of the whole process of apparent contingency or randomness, yet— we can say in the spirit of Augustine— simultaneously closer to its inner workings than it is to itself. And as such, God is both within the process and without it. To put this in more richly trinitarian terms: God, the Holy Spirit, is the perpetual invitation and lure of the creation to return to

In emphasizing God's immanent, triune presence to the whole cosmos, we would suggest that Coakley's account is largely congruent with our own proposal to name this presence and its effects through a broader and deeper theology of grace in both human and cosmic history alike.

While research on cooperation in evolutionary science remains in its relatively early stages and is still hotly contested within the biological sciences, there is good reason for theologians—and, we might add, Christians in general—to take a particular interest in this conversation. Although we must remain mindful that the history of this conversation in the 20th century suggests a number of pitfalls for religion and science both, the investigations into these evolutionary mechanisms between and among creatures provides vital information into the effects of God's gracious presence in the complexification of cosmic history. As we have noted, theologians have a dual task in this conversation, as they must both attend to the underlying forms of cooperation at the lower levels of our grace-filled world and must insist on differentiating emergent altruism from the overreaches of reductive biologisms. However, couching our understanding of cooperation and altruism within an emergent worldview enables us to give a properly theological explanation of this point by the familiar pattern of emergent regularities at lower levels which provide a stable foundation for the liberation of the whole evolutionary order in the flowering forth of higher levels.

its source in the Father, yet never without the full—and suffering—implications of incarnate sonship. Now once we see the possibility of understanding the contingency of precultural evolution in this way, we need not—as so much science and religion dialogue has done in recent years—declare the evolutionary process as necessarily deistically distanced in some sense from God (see, e.g., Polkinghorne 1989, 45: God gets out of the way so that evolution can happen contingently, and Polkinghorne calls this *kenosis*). Rather, let me propose in contrast—in a rather different understanding of divine “self-emptying”—that God is kenotically infused (not by divine loss or withdrawal, but by effusive pouring out into every causal joint of the creative process, yet precisely without overt derangement of apparent randomness.”

7.3 Conclusions

7.3.1 Convergence and Cooperation

In this chapter, we have tried to clarify where and how we comprehend these graced patterns emerging in cosmic and evolutionary history by demonstrating that the emergent patterns of gradual evolutionary convergences over time evoke the probability of a world likely to give rise to recurrence schemes that provide the conditions for the emergence of rich and highly complex kinds of life and intelligence. This corresponds emphatically with our conviction of the goodness of nature as underpinning and encouraging the dynamism of creaturely interrelations under the influence of God's grace. Inasmuch as we heartily acknowledge the importance of contingent events in history, we affirm that this contingency, granted very large numbers and very long intervals of time, is to be understood as part of the interplay of classical laws and statistical schedules of emergence and survival. We have agreed with the case made by Simon Conway Morris against the insistence of Stephen Jay Gould and others upon radical contingency and cosmic indifference, since Conway Morris has uncovered multitudinous data warranting a different and more plausible explanation than Gould's conjecture, which apparently outstrips the evidence in support of his claims. Gould seems to deny the basis of intelligibility uncovered by the data of evolutionary trajectories both (1) with respect to the emergence of historical biological phenomena from physical and chemical phenomena, and (2) with respect to the human apprehension of meanings and values in accord with the intelligible trajectories of lower order emergences. Conway Morris's challenges to Gould's conclusions were rooted in paleo-biological and taxonomic

explanation; they also provided theologians with a foundation for further reflection on these data. For example, his account of inherence provided concrete biological instances of vertical finality, as complex chemical neurotransmitters and animal organs functioned in the health and vitality of earlier and simpler creatures in evolutionary history but also played a critical role in the emergence of more complex and intelligent forms of life in ongoing evolutionary emergences.

We then turned to a discussion of cooperation and altruism in light of recent advances in mathematically-based biology, especially as organized in the collaborative efforts of Martin Nowak and Sarah Coakley. First, we reviewed their clarification of key terms and concepts, noting the particular importance of maintaining the distinction between the more general category of cooperation and the specific instances of altruism, which require a clear identification of the specific difference of emergent capabilities of intentionality. As many of the contributing authors emphasized, the failure to acknowledge this distinction has led to disastrous consequences, including yet not limited to: support for the fallacies of ethical and biological naturalisms, the reduction of human morality to genetic determinism, etc. However, Philip Clayton explained how Nowak's account of cooperation may be more helpfully appropriated within an emergentist framework that clarifies how simpler and lower forms of cooperation set the stable foundation for later and more complex emergences while resisting the equivocation of these instances. Moreover, following Jean Porter, we observed that this emergentist account of cooperation requires a critical realist metaphysics that is capable of identifying something like Aristotelian "natural kinds," at least insofar as identifying instances and

patterns of cooperation and especially of altruism require some understanding of what precisely is good and normative for each creature involved in the relationship.

Finally, we affirmed that some instances of “supernormal” or “supernatural” altruism have been discovered that are so radical that they seem to defy the explanations offered on the basis of evolutionarily emergent cooperation. These instances accord with those kinds of self-sacrificial acts that theology has always considered as made possible by supernatural virtues to which human beings of themselves cannot lay claim; and they appear only at the levels of emergent consciousness that we have identified in human beings alone. While we affirmed that the intelligibility of these instances can only be explained at the level of theological conjugates, through the eyes of faith, we maintain that they belong to the single economy of grace that supervenes on and elevates the whole of creation and can reach this distinct perfection in human beings.

7.3.2 Broader Conclusions

Throughout these chapters, we have tried to cast light upon the proper place of theology as a science within the academy. We have also tried to describe how, in light of the environmental challenges identified in *Laudato Si*, an effective ecological conversion requires critical collaboration with the natural and human sciences in a mutual pursuit of an ever fuller knowledge of the whole created world. As we have suggested earlier in this presentation, the relationship between the sciences is organized by hierarchical emergence within a dynamically evolving world order, which we have framed using Lonergan’s account of generalized emergent probability. Theologians must seek to grasp this emergent intelligibility in which a conditioned series of assemblies constitute an

environment with its species that function in accord with classical law, from which, so long as that environment continues to flourish, would give rise to a “cumulative sequence of elements, where each element had its probability of emergence from the probability of survival of previously realized assemblies and elements” such that higher levels depend on the lower ones.⁸⁸

We have also tried to underscore that, to paraphrase Lonergan, the higher levels may be more perfect, but the lower levels are more essential, since the stability and regularity that emerges at the lower level make possible the emergence of greater complexity over time. Just as in the intelligible world, so it is in the intelligent mind: The lower sciences describe the intelligibility of the world proper to the level of their questions, and set the stage for the recognition of higher order patterns in higher order sciences. These lower sciences hold tremendous explanatory power, as significant new discoveries in these lower sciences can create ripple effects throughout the whole order of sciences which are scaffolded upon them. At the same time, these higher sciences recognize patterns of meaning that would remain unintelligible empirical residue for the lower levels.

As a higher science in this sense, systematic theology is supposed to identify patterns in these lower levels in an effort to contribute to the greater human understanding of the whole of creation. This presupposes that there is always an empirical residue of unintelligibility proper to each lower manifold, which the science that investigates nature on that level cannot adequately make sense of in terms of its own basic terms and relations. This holds true of every science up to that of theology; and

⁸⁸ This quotation and its accompanying paraphrasing comes from Lonergan, “Mission and the Spirit.” 24.

theology, in a sense, has to come to terms with the ensemble of sciences that are relevant to the specific questions raised for theology at any given time. However, the theological conjugates will entail the use of both: (1) *general* categories correlative to the realm of nature (including both non-human and human phenomena) insofar as its conjugates prescind from the reality of grace as God's unmerited favor, and (2) *special* categories correlative to all that derives from or depends on grace, which supervenes everywhere on the spheres of nature. Concretely, there also exists the objective surd of sin that infects and disrupts both human and non-human nature; this surd neither makes sense on its own nor can it be integrated into our understandings of world intelligibility without producing a nightmarish view of reality.⁸⁹ It is a central issue for this dissertation that grace is specifically integral to the divine redemption of human and non-human domains, because both are by nature objectively loveable.

Because of its employing both general and special categories in an effort to grasp the full meaning and intelligibility of the cosmos, theology differs from other conjugate accounts in two key ways. First, with respect to the kind of empirically, intelligibly, and more or less probably verified data handled by the other sciences, theology understands these data, in principle, as a contingent symbol of the transcendent God as One, the Alpha and Omega, origin and end, Lord and Master of the created universe.

⁸⁹ That is, so long as sin is treated as part of the intended order of nature, we cannot understand the ultimate goodness and intelligibility of the whole of creation. As Lonergan also affirmed: "Without faith the originating value is man, and the terminal value is the human good man brings about... Without faith, without the eye of love, the world is too evil for God to be good, for a good God to exist. But faith recognizes that God grants men their freedom, that he wills them to be persons and not just his automata, that he calls them to the higher authenticity that overcomes evil with good.... For faith and progress have a common root in man's cognitional and moral self-transcendence.... Faith places human efforts in a friendly universe." See Lonergan, *Method in Theology*, 2017. 113

Second, and by no means less significantly, beyond these general categories supplied by the various human, social, and natural sciences, Christian theology is indebted to both general and special revelation, including the myriad effects of God's historical action experienced and implicitly or explicitly born witness to in a variety of ways by persons in all religious communities on the planet, whether they happen to be Christian or not. This fact has given rise to data requiring the research, interpretation, history, and dialectic—operations entailed by the full-blown reception and interpretation of the meanings and values, which have been revealed in diverse manners over time, and which the Christian tradition has compendiously referred to “hearing the Word of God.” Such ever more differentiated and increasingly collaborative ‘listening’ to the Word demands that theologians go beyond the limited matrices of intelligibility accessible to their senses to grasp something of the higher meaningfulness that ultimately culminates in beatific knowledge and love.

Moreso, perhaps, than the other sciences, systematic theology has eventually to attend to the functional specialty of communication. Therein, theology is tasked with sharing, not just the intelligibility of the whole cosmos based on the data of sense and consciousness, but also the fundamental goodness of the world as created by the absolutely unconditioned God, the ground of all intelligibility and all being in the universe. Christians believe that the God who is cosmic ground is also a tri-Personal God—Father, Word/Wisdom/Son, Holy Spirit. Ultimately we personally encounter each Person in virtue of the contingent and supernatural realities that may be conceived as created participations in the interpersonal relations among the Holy Three, a sharing that enables not only redemption, but also the proleptic elevation of all creation into the

sphere implied in the phrases of the Apostles Creed, “the resurrection of the body and the life everlasting,” that cannot be reduced to the created and finite whole that we are able to encounter through our senses. What we have tried to clarify, here, is that the functional specialty of communications is also and especially tasked with communicating these theological data to the sciences in a way that can structure a more dialogical engagement between theology and the sciences. For, while the sources and methods of theology reflect at least some data deemed inadmissible in the other sciences, insofar as theology really does come to true insights about God and the world, these insights ought to resonate with the lower sciences which theology sublates, even if the fullness of that intelligibility lies beyond the purview of the lower sciences.

The overarching thrust of this entire thesis is based on the express and authoritative affirmation by Catholic Christianity that the universal and unconditional love of God for the totality of the universe is coeval with God’s gift of the Holy Spirit, who is sent incognito to heal *all* of creation on account of the life, death and resurrection of Jesus from the ravages of the objective surd of sin that has been inextricably woven into the unfolding of creation and redemption in both human and the broader cosmic history. We have tried to envisage the understanding of each and every facet of a hierarchically organized universe as an expression of the good Creator God, even as, in the present age, it is impossible to ignore how this creation is marked also by its brokenness. Our effort here has been to explore ways of collaborating with secular sciences for expanding the theology of grace beyond human persons in order to elaborate an integrally planetary and cosmic theology of grace. While we have only been able to lay the most basic foundations for such a theology here, we hope to have contributed in

an anticipatory way to a much greater synthesis of the differentiated viewpoints explored in these chapters and to have suggested new possibilities for a more mutually-enriching dialogue between theology and the sciences, and, therein, to have aided humanity's larger efforts to meet the particular existential and ecological crises in our time.

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