2001

The Evolving Face of God as Creator: Early Nineteenth-Century Traditionalist and Accommodationist Theological Responses in British Religious Thought to Paleonatural Evil in the Fossil Record

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THE EVOLVING FACE OF GOD AS CREATOR: EARLY NINETEENTH-CENTURY TRADITIONALIST AND ACCOMMODATIONIST THEODICAL RESPONSES IN BRITISH RELIGIOUS THOUGHT TO PALEONATURAL EVIL IN THE FOSSIL RECORD

A Dissertation
Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy

by
Thane Hutcherson Ury
April 2001
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ABSTRACT

THE EVOLVING FACE OF GOD AS CREATOR: EARLY NINETEENTH-CENTURY TRADITIONALIST AND ACCOMMODATIONIST THEODICAL RESPONSES IN BRITISH RELIGIOUS THOUGHT TO PALEONATURAL EVIL IN THE FOSSIL RECORD

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Date completed: April 2001

The Topic

From the early Reformation through the early 1800s, Gen 1-11 was consensually understood as providing a perspicacious, historical account of how God brought the world into being. Tenets of belief included six literal 24-hour days of creation and a catastrophic global Flood, and most often the conviction that Gen 1:31 implies that no evil of any type existed prior to the Fall. New geological interpretations in the early nineteenth century, however, pointed toward an earth history that seemed anything but very good, instead suggesting a harsh concatenation of deep-time prelapsarian pain, struggle, destruction of the weak, predation, diseases, plagues, catastrophic mass extinctions, and death in the subrational creation. Thus, a new theodical dimension arose which the Church had not had to...
address prior to this time; i.e., paleonatural evil, as posited by a deep-time interpretation of the fossiliferous portions of the geologic column. If those entities which are commonly labeled as natural evil are deciphered to have existed long before the arrival of humanity (and thus sharing no causal nexus with original sin), then believers would have to justify why they see the Creator as good in light of concomitants in His handiwork which seem prima facie so counter-intuitive to how an omnibenevolent and omnipotent Creator might reasonably be expected to create.

The Purpose

Thus, in the early nineteenth century, questions arose as to the compatibility of paleonatural evil with Gen 1-11 and an omnipotent, omnibenevolent Creator. To what extent would embracing an "evolver-God" impact the primary attributes of God such as omnibenevolence? Would traditional understandings of omnibenevolence need to be recalibrated to comport with a deep-time interpretation of the fossil record? Who were the first believers to recognize this as a potential theodicy issue, and how did they respond? The purpose of this study is to assess the theodies of some the first thinkers to recognize and respond to the problem of paleonatural evil.

The Sources

Give this context this dissertation seeks to discover, codify, analyze, and assess the theodical formulations of two groups of early nineteenth-century British groups; i.e., the traditionalists and accommodationists. Do they see natural evil as intrusive or non-intrusive to the original created order? If the Fall happened in space and time, to what extent did it impact the created order? Contrasting accounts of divine creative method, between the traditionalists and accommodationists, provide conceptual perspectives by which to trace the
evolving face of God (i.e., to detect a changing understanding of His beneficence from the period of the Reformation to the early nineteenth century). Further, an attempt is made to (1) adjudicate whether the theodicy of the traditionalists or accommodationists is more compatible with the early Protestant understandings of God's beneficence as revealed through His method of creation; and (2) to surmise how the early nineteenth-century dialectic between these groups can inform the same debate in the third millennium, which, in the wake of two additional centuries of geological discoveries, will continue to amplify the dialogue on paleonatural evil.

Conclusion

Traditionalists and accommodationists, past and present, broach the problem of paleonatural evil quite differently. The present study highlights ten areas of contrast between these two groups of theists, perhaps the most important being how each deals with the question of what omnibenevolence and a very good created order mean if nature has been read in tooth and claw for deep time. When pondering the God of the Lagerstätten, is one likely to see a paternal, caring, loving Creator—the same omnibenevolent Creator revered by the early Reformers? Considering the staggering levels of paleonatural evil yet to be revealed, it must be asked what concessions, if any, would be exacted of divine benevolence in order to preserve an all-loving God? Once the time-honored perspicuity of the Genesis account is allowed to be recalibrated by an extra-biblical philosophical yardstick, is Evangelicalism setting a precedent for incremental accommodations to subsequent edicts of scientism? If Evangelicals accept one inch of such a source as ultimate authority, what coherent rationale can be given for not going further?
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<td>American Philosophical Quarterly</td>
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<td>ATJ</td>
<td>Asbury Theological Journal</td>
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<td>BAAS</td>
<td>British Association for the Advancement of Science</td>
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ACKNOWLEDGMENTS

It is impossible to recall all the numerous acts of grace and generosity which have made the present study a reality, but some cannot be overlooked. Laura, my soul mate of 18 years, as an earthly conduit of God's sanctifying grace toward me: You are nulli secundus. While your encouragement, patience, and steadfast love did not speed up the writing process, neither did they waiver. No just compensation exists on this side of heaven for the sacrifices you have endured. And while I can never redress your many years of self-abnegating love, you now have a husband whose appreciation for you and your gifts has increased by several orders of magnitude.

Thanks Mom and Dad for setting the stage for this endeavor. My most searing mission-field memory is seeing the sun rise, year after year, on your frames huddled over the Word. Whatever lacunae existed in my understanding of the message you proclaimed was augmented in seeing the Gospel incarnated in your ministry. As with all saints, it was your lives which made it so easy for so many, including myself, to believe in the only wise and living Creator.

Cameron, Bethany, Bryce, and Lauren, please believe me that it was torture to be shackled to my keyboard when I would have settled for any excuse to be with you. The Lord has sustained all six of us, through these years, the loss of a sibling, and woefully truncated summer vacations. Thank you for constantly reminding us grown-ups exactly how Genesis was meant to be received.

I wish to thank my best friend and brick of a brother, Bill. Thanks for raising the bar in our Wilmore years and later for showing me that, far from being an oxymoron, "Christian scholarship" is indeed a catalyst to a level of informed worship that few are willing to pursue. Perhaps this study will assist your worship of God as loving Creator in the same manner that your study of Trinitarian personhood has been propaedeutic in my theological formation.

Whoever invented superlatives had my friend and dissertation director, John Baldwin,
in mind. Like a father teaching a son to drive, you directed me down the theological highway, patiently helped me map out the philosophical and historical terrains in the land of paleonatural evil, warned me not to eisegete the road signs, gently steered me away from catastrophe, and reminded me that in driving down the middle of the doctrinal road, one tends to get hit by traffic going in both directions. John, thank you for the many hundreds of hours over the years, theodicyizing over fried rice, hunting for fossils, rooming at conferences, and ravaging used bookstores. A more unique dissertation director has never existed. Other committee members, Drs. Randall Younker and Peter Van Bemmelen, were a tremendous source of encouragement.

Thanks to the library staffs at Andrews, Notre Dame, Bethel, and countless other institutions which inter-library-loaned rare works. Thanks to CSF (now AIG) in Acacia Ridge, Australia, who provided everything from coffee to copying, as I ransacked their library. Very special thanks must be extended to Mark Root, Bonnie Proctor, and Mabel Bowen. Mark, your assistance in securing hundreds of articles and out-of-print materials over the last five years is evident on every page. My indebtedness to you can be neither calculated nor repaid, but only appreciated and cherished with profound gratefulness. Bonnie, thank you for going over my manuscript with such tough love. Only you and I will ever know how much embarrassment you saved me. Mabel, you were there from the very first day, clear through the defense, always going the second mile in looking out for me as if I were your only concern—a labor of love if there ever was one. *Kenosis* is the most apt word for you.

I wish to thank the Bethel College Administration for patience, gracious subsidy, reasonable teaching loads, and moral support throughout the entire process. Mike Holtgren, you could hardly have been more accommodating as a Dean or more supportive as a brother. Thanks Dennis, Duane, and Bob for giving me the kind of support and encouragement which only comes from real brothers, and for protecting me from the deconstructive proclivities which have crept into the Church at large.

My perception of the Creator has been profoundly transformed in the last decade, renuancing my whole perspective of what it means to call Him and His creation very good. Should the following pages in some residual manner bring honor to the Architect of reality (if by nothing more than effectively employing a hermeneutics of retrieval which suggests the true genesis of natural evil), then this life-consuming project will be justified.

xiv
CHAPTER I

INTRODUCTION

The leading idea which is present in all our researches, and which accompanies every fresh observation, the sound which to the ear of the student of Nature seems continually echoed from every part of her works, is--Time!--Time!--Time!—George Poulett Scrope, Memoir on the Geology of Central France

The joy we young men then felt when we saw that wretched date B.C. 4004, replaced by a long vista of millions of years of development.—Karl Pearson, Charles Darwin

We find no vestige of a beginning,—no prospect of an end.—James Hutton, Theory of the Earth

Background to Deep Time as a Theodicy Problem

The mention of the name Darwin today raises a near-instant association with evolution, so firmly are the two mingled in contemporary thought. No less axiomatic, the word evolution usually kindles images of the Darwinian centerpiece, natural selection over deep time. Yet evolution-like scenarios can be traced as far back as the seventh century

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Thus, many thinkers have suggested ancestral rungs up the *scala natura* from sub-


According to Davis Young, many Christians fear the idea of antiquity since "they cannot understand why God should have taken so long to make the world" (Davis Young, *Christianity & the Age of the Earth* [Grand Rapids: Zondervan, 1982], 150). Young thus reduces the debate to a mere concern over inerrancy and fear of deep time. Yet Nigel Cameron sees such as misleading, stating that while "creationists *tend* to take a more literal reading" of Gen 1-11, "it is not true that their position *depends* on such a reading" (Nigel M. de S. Cameron, *Evolution and the Authority of the Bible* [Greenwood, SC: Attic Press, 1983], 48). Cameron suggests that creationists' concerns go much deeper than crass literalism, in that accepting deep time, with its requisite prelapsarian death and natural evils, will lead to "the abandonment of much of the traditional structure of Christianity. This is what the debate is really about" (ibid.).

Pre-Darwinian nomenclature hinting at biological progression includes, "transformism," "developmentalism," "continuity theory," "descent theory," "doctrine of progression," "development hypothesis," and "physical transmutation" (adherents being called mutationists); all denying the fixity of species. See Gertrude Himmelfarb, *Darwin and the Darwinian Revolution* (London: Chatto & Windus, 1959), 387, n. 1. Care must be exercised to disambiguate subtle nuances when these referents are used in different contexts; e.g., the common failure to distinguish between early nineteenth-century belief in nature's evolution, and that of species.

When starting his search for precursors to evolutionary theory, Henry F. Osborn is led back to the Pre-Socratics, and is "astonished to find how many of the pronounced and basic features of the Darwinian theory were anticipated even as far back as the seventh century B.C." (Henry F. Osborn, *From the Greeks to Darwin*, 2d ed. [New York: Charles Scribner's Sons, 1929], xi; cf. 41-60). Osborn culls most of his data from Edward Zeller, *A History of Greek Philosophy*, trans. S.F. Alleyne (New York: Longmans, Green, and Co., 1881). The monist Anaximander (611-547 BC) believes humans descended from fishes; and Empedocles (490-435 BC), a pluralist, has been called "the father of evolution" (Richard Lull, *Organic Evolution* [New York: Macmillan, 1947], 6; cf. Osborn, 91-97). Assessing the furor over Darwinism, Matthew Arnold remarks to John Judd: "Why, it's all in Lucretius [99-55 BC]" (John Judd, *The Coming of Evolution* [Cambridge: Cambridge University Press, 1910], 3). Charles Darwin thus epitomizes Sir Francis Darwin's axiom that "in science the credit goes to the man who convinces the world, not to the man to whom the idea first occurs." Sir Francis Darwin, *First Galton Lecture before the Eugenics Society*, April 1914.
rational creation on up to humans. Though a hunt for precursors can get out of hand, there is little scholarly dissent, that prior to Darwin, philosophical shifts toward


2Despite numerous models preparatory to Darwinism's eventual reception, Peter Bowler's caveat against misleading "precursor-hunting" must be heeded (Evolution: The History of an Idea [Berkeley: University of California Press, 1984], 20). The fact that Goethe and Moses are recruited as Darwinian forerunners justifies this caution. See Emanuel Rádl, The History of Biological Theories (London: Oxford University Press, 1930), 1-2. Rádl notes that some have been "blinded" by Darwinism, and their insufficient analysis of his theory has led to an unbridled proclivity to find "in almost every philosophical writer . . . a masked Darwin" (ibid., 7). For similar cautions and overviews of the milieus bracketing The Origin, see John Hedley Brooke, Science and Religion: Some Historical Perspectives (New York: Cambridge University Press, 1991); idem, "Precursors of Darwin?" in The Crisis of Evolution, ed. John Hedley Brooke and Alan Richardson (Milton Keynes, England: Open University Press, 1974); Himmelfarb, Darwin and the Darwinian Revolution; and Millhauser, Just Before Darwin.

3Two tomes are decisive in establishing a fertile epistemic framework for The Origin, in that they furnish the deep-time notion without which any talk of "development" is impossible. These geological works are: James Hutton, Theory of the Earth (Edinburgh:
randomness and dysteleology were already "in the air," and had been chipping away systematically at the edifice of an entrenched teleology.

While history's various transformist scenarios do not receive a sympathetic hearing in early Protestant circles, ever since the publication of *The Origin*, the idea that God created mankind and animals through some evolutionary process has enjoyed increasing acceptance in Christendom. There may be irony here, because Darwin's brand of evolutionism, as we shall see, may exact a potentially higher theological price than that of his "precursors." Additionally, his theory's emphases upon natural selection, descent with modification, and downplaying final causality,


1Millhauser, 58-85.

2An aggressive attempt to undermine teleology appears in David Hume, *Dialogues Concerning Natural Religion* [1779], ed. Norman Kemp Smith (Indianapolis: Bobbs-Merrill, 1947), hereafter cited as *Dialogues*.


4A nebulous word like evolution has enough semantic latitude to connote either human emergence from the random, purposeless causes, or any change within species. Theists of varying stripe have been willing to attach divine agency to most evolutionary constructs. Deistic naturalism, for example, posits a remote Watchmaker. Theistic evolution defends a God who creates via some Darwinian manner. Progressive creationism advocates a more interventionist Creator. One common denominator of these positions is a God who works within an deep time frame. For a helpful attempt to clarify these key terms, see David Lane, "Special Creation or Evolution: No Middle Ground," *Bibliotheca Sacra* 151 (January-March 1994): 11-31.
include elements lacking in antecedent proposals; namely, his theory allegedly holds up to the rigors of scientific method, and claims to be fortified with the coveted imprimatur of geological fact.\(^1\)

The epistemological bases for these assertions could be endlessly debated. However, the Darwinian construct was a continuation of the challenges to natural theology brought on by the findings of the new geology for the five decades preceding *The Origin*. This new paradigm struck at the heart of the thought of William Paley and other natural theologians. Several theological crises arose as a result, and influenced the young Darwin, whose later ideas were to be all the more readily received due to Lyell's prelude.

Prior to Darwin, the neo-geological paradigm had already begun to supplant the optimistic Paleyan view. In varying degrees, the result was that, (1) atelic, if not erratic, processes had unseated the perfect, finished cosmos of natural theology; (2) chance and mutation had displaced purpose and design; and (3), nature's stage came to be viewed as a deep-time "gladiator's show."\(^2\) These notions potently undercut for many the popular Miltonian vignette of a peaceable kingdom from some bygone golden age. The world could no longer be considered, in Calvin's words, a theater of God's glory.\(^3\) While classic Reformation dogma holds to an Edenic sin that corrupted all creation, this perspective was

\(^1\)Here it is not meant that transitional forms were evident in the fossil record; quite the opposite was true. Darwin freely acknowledged the absence of "connecting links" as "the most obvious and forcible of the many objections which could be urged against [his] theory" (*The Origin*, 438). What is meant is only that the new geology supplied the deep time within which Darwinian gradualism could theoretically take place.

\(^2\)Thomas Huxley, *Evolution and Ethics* (New York: Appleton, 1897), 200. Huxley crystallizes the view in his day of nature being seen as a savage theater of selfishness and carnage.

\(^3\)John Calvin, *Institutes of the Christian Religion*, trans. Ford Lewis Battles and ed. John T. McNeil (Philadelphia: Westminster, 1960), 72 [1.6.2]. Hereafter cited as *Institutes*. Calvin believes that "since he has been placed in this most glorious theater to be a spectator of [God's works], it is fitting that [man] prick up his ears to the Word, the better to profit" (ibid.).
to be mortally wounded by the pre-Darwinian geologists' hammers. The alleged 
prelapsarian carnage those hammers unearthed induced John Ruskin to lament: "If only the 
Geologists would let me alone, I could do very well, but those dreadful Hammers! I hear 
the clink of them at the end of every cadence of the Bible verses."¹ After decades of 
reflection on such dreadful clinks, Alfred Lord Tennyson began to see geology as one of 
two "terrible Muses."² But Darwin's pen provided the real finishing blow, after which any 
notion of the time-space corruption of an original perfect creation became increasingly 
eschewed as a mere pre-enlightened Augustinian gloss, and indefensible, if not 
irresponsible and naive, in the light of modern geology.

During this time the practice and fruits of higher criticism were major contributors 
to the receptivity of the evolutionary paradigm among leading British parson naturalists. 
Doubts were cast on the historicity, authorship, and chronology of most of the Bible, with 
the Pentateuch suffering the most scholarly censure. All inferences to the supernatural 
were being called into question, including a denial of a literal six-day creation and a global 
Flood, in favor of a hermeneutic of category translation.³ It is indeed an irony of 
nineteenth-century history that many clergy were at the forefront of the push for 
accommodation which contributed so effectively to the evisceration of biblical authority. 
Nowhere is this more clearly seen than with the appearance of a provocative anthology 

¹ John Ruskin to Henry Acland, May 24, 1851, The Works of John Ruskin, vol. 36, 
(1819-1900) is a social reformer, art critic, and prolific author. 

² Alfred Lord Tennyson, "Parnassus" [1889], in The Poems of Tennyson, ed. 

³ The notion of category translation will be addressed in chapter 4.
appearing on the heels of the *The Origin*, entitled *Essays and Reviews*. Its contributors, mostly Anglican clerics, were sympathetic to German higher criticism, and held that the Bible should be interpreted like any other book. When coupled with Darwin's new theory, this volume set the agenda for the new liberal theology and its wholehearted promotion of Johann Semler's epic-making bifurcation between "Scripture" and "the Word of God."2

Orthodox in his early years,3 Darwin came to feel "that the Old Testament was no more to be trusted than the sacred books of the Hindoos."4 As with many other Christians in the mid-nineteenth century, Darwin's orthodoxy was undermined initially by his acceptance of Lyellian geology;5 eventually leading to "a wholesale doubt of the orthodox interpretation of Christianity."6 Thus, the incipient and fragmentary findings of geology

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1Frederick Temple, ed., *Essays and Reviews* (London: John W. Parker and Son, 1860). Another seminal work to be included in the genre of iconoclastic works following soon after *The Origin* would be *Lux Mundi* [1889], ed. Charles Gore (London: John Murray, 1904).

2See Johann Semler, *Abhandlung von freier Untersuchung des Canon*, 4 vols. (Halle: C.H. Hemmerde, 1771-75). Theology Chair at Halle, and father of German rationalism, Semler was the first to use 'liberalis theologica.' According to John Hurst, in Semler's hands Scripture "became the carcass around which the vultures of Germany gathered to satisfy the cravings of their wanton hunger" (*History of Rationalism* [New York: Eaton and Mains, 1865], 145).


5Gould refers to Hutton and Lyell as heros, and the latter as the "codifier of modernity" and deep time; and "the historian of time's cycle" (*Time's Arrow, Time's Cycle*, 5-6, 167). Gould offers the important reminder that the philosophical presuppositions of Hutton and Lyell perhaps dictated what kind of field observations they made.

6Mandelbaum, "Darwin's Religious Views," 365. Prior to Lyell, doubts had already taken root due to the tenets of the then-prevalent school of thought called catastrophism, often aligned with the thinking of the Neptunist, A.G. Werner, but more correctly associated with the Frenchman, Georges Cuvier. Catastrophism posits that changes in the earth's crust, including the fossils contained therein, were formed relatively rapidly by violently physical forces. While allowing for a biblical Flood and a more recent creation, this position still
and paleontology provide a compelling evidential backdrop against which pre- and post-
Darwinian inter-ecclesiastical discussions, on both sides of the Atlantic,¹ regarding divine
allows for deep time within which numerous catastrophes have taken place. This brand of
catastrophism, sometimes called Cuvierianism, is to be carefully distinguished from biblical
catastrophism which posits a single worldwide cataclysm, viz., the Genesis Flood.

¹For British responses, consult Alvar Ellegård, *Darwin and the General Reader: The
Reception of Darwin's Theory of Evolution in the British Periodical Press* (Göteborg: Acta
Universitatis Gothenburgensis, 1958); Charles Gillispie, *Genesis and Geology: A Study in the
Relations of Scientific Thought, Natural Theology, and Social Opinion in Great Britain,
1790-1850* (New York: Harper, 1951); Bert James Loewenberg, "The Controversy Over
Reactions to Darwin: The English Catholic Press's First Review of the 'Origin of the Species',"
*Church History* 41 (1972); James R. Moore, *The Post-Darwinian Controversies: A Study of
the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870-
1900* (Cambridge: Cambridge University Press, 1979); J. David Yule, "The Impact of Science
on British Religious Thought in the Second Quarter of the Nineteenth Century" (Ph.D.

For American reactions, compare Paul Boller, Jr., *American Thought in Transition: The
Impact of Evolutionary Naturalism, 1865-1900* (Chicago: Rand-McNally, 1969); Dennis Royal
Davis, "Presbyterian Attitudes Toward Science and the Coming of Darwinism in America,
1859-1929" (Ph.D. dissertation, University of Illinois at Urbana-Champaign, 1980); John De
Jong, "American Attitudes Toward Evolution Before Darwin" (Ph.D. dissertation, State
University of Iowa, 1962); Thomas Glick, ed., *The Comparative Reception of Darwinism;
David Hull, Darwin and His Critics: The Reception of Darwin's Theories of Evolution by the
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III, "The Reception of Darwinism at the Theological Seminary and the College at Princeton,
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Freeman Johnson, "The Attitudes of the Princeton Theologians Toward Darwinism and
Evolution from 1859-1929" (Ph.D. dissertation, University of Iowa, 1968); Herbert Kramer,
"The Intellectual Background and Immediate Reception of Darwin's *Origin of Species*" (Ph.D.
dissertation, Harvard University, 1948); Denis Lamoureux, "Between The Origin of Species' and
'The Fundamentals': Toward a Historiographical Model of the Evangelical Reaction to
Darwinism in the First Fifty Years" (Ph.D. dissertation, Toronto School of Theology, 1991);
Bert James Loewenberg, "The Reaction of American Scientists to Darwinism," *AHR* 38 (1933):
687-701; idem, "Darwinism Comes to America, 1859-1900," *MVHR* 28 (1941): 339-368;
Samuel Neel, "The Reaction of Certain Exponents of American Religious Thought to Darwin's
Theory of Evolution" (Ph.D. dissertation, Duke University, 1942); Ronald Numbers,
*Darwinism Comes to America* (Cambridge, MA: Harvard University Press, 1998); Carl Patton,
(1936): 445-462; Stow Persons, ed., *Evolutionary Thought in America* (New York: George
Braziller, 1956); Sidney Ratner, "Evolution and the Rise of the Scientific Spirit in America,"
*Philosophy of Science* 3 (1936): 104-122; Windsor Hall Roberts, "The Reaction of the
American Protestant Churches to the Darwinian Philosophy, 1860-1900" (Ph.D. dissertation,
creative method and providence must be surveyed.¹

For the objective of this dissertation it is vital to note that long prior to The Origin, the type of providential transmutation theory proposed by some natural theologians generated increasingly thorny conundrums for "the tender Victorian conscience."² In relation to the origin of natural evils the majority consensus in historical Christendom, discussed below, was that these evils result from, or are at least drastically increased by, an historical Edenic Fall. Early geological studies, however, hammered home quite a different message, forcing the Church to consider whether natural evil long preceded mankind's arrival, thus drawing into question the penal extent of the Fall. Some came to view these evils as either necessary by-products for bringing humanity into being, or as catalysts to soul-building. But others, as will be noted below, wonder why the Judeo-Christian God would design and employ such an apparently profligate, if not pernicious, process to be His


original method of choice by which to create. Additionally, some are curious as to what extent notions such as an "evolver-God" impacts traditional notions of omnibenevolence and omnipotence. Initial conclusions from the geosciences were compounding already-existing questions of theodicy, dysteleology, and divine profligacy. As indicated in chapters 3-5, geological data began forcing a recalibration of divine creative method to the extent that the time-honored notion of divine omnibenevolence was coming under unprecedented scrutiny. Darwin's theory merely amplified an extant, geologically-induced perception of an incongruity between God's goodness and the internecine process classically described by Tennyson, in which "a thousand types are gone" by extinction. This poet crafted perhaps

\[\text{1It will be seen in chapter 4 that the Scriptural geologists raise such questions.}\]

\[\text{2Bertrand Russell highlights this incongruity: "Religion . . . has accommodated itself to the doctrine of evolution . . . We are told that . . . evolution is the unfolding of an idea which has been in the mind of God throughout. It appears that during those ages . . . when animals were torturing each other with ferocious horns and agonizing stings, Omnipotence was quietly waiting . . . Why the Creator should have preferred to reach His goal by a process, instead of going straight to it, these modern theologians do not tell us" (Religion and Science [New York: Oxford University Press, 1961], 73). David Hull also notes, "[The] process is rife with happenstance, contingency, incredible waste, death, pain and horror . . . The God implied by . . . the data of natural history . . . is not a loving God . . . He is . . . careless, indifferent, almost diabolical" ("The God of the Galápagos," Nature 352 [August 8, 1992]: 486). Cf. Stephen Jay Gould, "Darwin and Paley Meet the Invisible Hand: The Price of Perfect Design Is Messy, Relentless Slaughter," Natural History (November 1990): 8-16.}\]

\[\text{3Tennyson, In Memoriam, 373. See chapter 3 of the present study for an analysis of this poem. Grimmer yet, David M. Raup notes that of all species in the major fossiliferous portions of the post-Cambrian strata, "only about one in a thousand species is still alive--a truly lousy survival record: 99.9% failure!" (Extinction: Bad Genes or Bad Luck? [New York: W.W. Norton, 1991], 3-4). Richard Lewontin also affirms that "at least 99.9% of the species that have ever lived are now extinct" ("Adaptation," Scientific American 239 [September 1978]: 213). Irven DeVore asks: "What kind of God works with a 99.9 percent extinction rate?" quoted in Karen R. Long, "Astronomy Might Be Refashioning Images of God," Times-News Weekender [Erie, PA], May 1, 1999, 9A. Raup and Lewontin's deep-time frame, within which such alleged profligacy took place, is extrapolated from presuppositions not shared by all scientists. Outdoing Raup, B.P. Sutherland paints an even bleaker picture for the surviving .01%: "Even after the thousand have been sacrificed for the sake of the one, that one is ineffective, incomplete, and fails to reach its true end" ("The Fall and Its Relation to Present Conditions in Nature," JASA 2 [December 1950]: 14).}\]
the nineteenth century's most poignant phrase for describing the angst of natural history's apparent wantonness by depicting nature's rapacity as drenched "red in tooth and claw."¹ Such daunting carnage would later inspire Darwin's note, "What a book a Devil's chaplain might write on the clumsy, wasteful, blundering low & horridly cruel works of nature!"² How could a God who supposedly cares for every sparrow,³ have deliberately employed a long, painful, and extinction-laden process as the best of all possible methods of creation and economy of nature? Holmes Rolston states that, "If God watches the sparrow fall, God must do so from a very great distance."⁴ Furthermore, it might be justifiably asked: Is this the type of Creator before whom Moses and David would worship and dance rejoicefully? In sum, nineteenth-century science seems to ask whether it is perhaps the "fossil, rather than evolution, that undermines confidence in the Bible,"⁵ which in turn raises questions about God's goodness. Thus, Darwinism amplifies already existing theodical impasses.

¹Tennyson, "In Memoriam," 373.


³Matt 10:29-31. The thrust of this passage has consensually been understood to indicate that God knows and cares for His children who suffer.


Statement of the Problem: Paleonatural Evil

As indicated above, both catastrophist (Cuverian)\(^1\) and uniformitarian (Lyellian) interpretations of the geologic record are a harsh porthole to earth's history, envisioning millions of years of painful struggle, death, and mass extinctions. But pre-geological Christians generally held to the idea of a 'golden age' which was devoid of all imperfections.\(^2\) Yet once the Church was told that fossils were not just peculiarly shaped stones,\(^3\) but rather relics of no longer extant plants and animals, former notions of nature as static, and once perfect, were seriously challenged. How could the world be regarded any longer as the flawless creation christened by God as "very good," if in reality our earthly habitat was in a constant state of flux and travail, and characterized chiefly by deep-time serial catastrophism? Paul's description of nature in bondage to corruption,\(^4\) could no longer be interpreted as a description of the aftermath of the Fall, but rather as the natural condition of the world long antecedent to Adam and Eve's lapse. If the light of the new

\(^{1}\)Cuvier is the one most often associated with this view. See chapter 3, below.


\(^{3}\)See Conrad Gesner (1516-1565), *De Rerum fossilium, Lapidum et Gemmarum maxime, figuris et similitudinibus Liber* [A Book on fossil objects, chiefly stones and gems, their shapes and appearances] (Tiguri, 1565). In Gesner's day the term *fossil* refers to that which is dug up. The digger, thus, is put in a position where he must classify uncovered objects as organic or inorganic in origin. Fossils seen today as the remains of creatures gone by were initially interpreted merely as unique stone formations. See Martin Rudwick, *The Meaning of Fossils: Episodes in the History of Palaeontology* (New York: Science History Publications, 1976), especially pp. 1-48. Cf. Wesley's view in chapter 2, below.

\(^{4}\)Rom 8:21.
geology was in fact illuminating a deep time of "meaningless, cruel suffering and death," to use a similar characterization by a twentieth-century author, then this kind of present world seems to be essentially the same world as the one that God had originally intended and created.

As suggested above, Darwin's thesis does not generate the theodicy issue, but merely augments already existing tensions over paleonatural evil. Thus, the problem with which this dissertation is concerned is how select early nineteenth-century thinkers addressed the question: To what degree, if any, do deep-time geological constructs entail elements potentially incongruent with traditional ideas about God's character? While this question had yet to be compounded by Darwinism, it asks to what degree were early nineteenth-century British theists theodicizing over issues like deep-time serial catastrophism, natural selection, destruction of the weak by predation, pain and decay in the sub-rational creation and extinction? Was the futility of nature and the travail of the animal kingdom God's original design for creation?

According to Gen 1:31, God declares all His creation to be "very good." From a textual perspective, this implies that the Creator in Genesis is pleased with His handiwork, and that no evil of any type yet existed. Del Ratzsch captures a potential dichotomy for the modern evangelical in this regard. Since this verse has God pronouncing His entire

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3The term 'evangelical' is not easy to define in a way that will satisfy all. Most could agree with Norman Geisler that in applying labels, "we must be aware that such labels are not absolute in the sense that they precisely define all those who hold to one position or another. They represent the core position of each of the various categories, but there is a divergence of viewpoints within the categories, and some theologians may even hold to different elements of more than one category" (*Decide for Yourself: How History Views the Bible* [Grand Rapids: Zondervan, 1982], 7). No definition or representative of evangelicalism can escape
creation to be very good, says Ratzsch, "no Christian picture can abandon . . . this initial, unfallen goodness. Yet theistic evolution\(^1\) would have us believe that . . . whole species . . . are done to death--roadkill on the evolutionary highway."\(^2\) This statement highlights what might be called the paleonatural evil dimension of the problem of this dissertation. Jacques Monod describes this highway trip as "a horrible process," stating that he is "surprised that a Christian would defend the idea that this is the process which God more or less set up in order to have evolution."\(^3\) According to the late-nineteenth-century writer, Jacob the death of a thousand qualifications. However, since Geisler is accepted as one of evangelicalism’s leading apologists, it is a fair assumption that his beliefs on "core positions" would be generally reflective of evangelicalism. An essential rubric for Evangelicals is a strong view of Scripture, believing it to be "divinely inspired in its very words, including matters of history and science" (ibid.); Scripture has ultimate authority in whatever it teaches, which of necessity assumes a hermeneutic of original intention. Evangelical core positions can be discerned across sectarian lines, such that "there is thus a sufficiently clear family resemblance" between the various styles of Evangelicalism to allow a degree of generalization concerning its theological methodology" (Alister E. McGrath, A Passion for Truth: The Intellectual Coherence of Evangelicalism [Downers Grove, IL: InterVarsity Press, 1996], 23).

\(^1\)Various angles are taken on what constitutes theistic evolution, but very generally speaking, it is a position that holds that God, to ensure some intended outcome, designed the initial conditions of nature’s laws to follow some Darwinian-type processes over deep time. A similar position, progressive creation, affirms progress rather than process, yet, like theistic evolution, also allows for suffering, death, and numerous catastrophic mass extinctions with no penal connection, as well as category translations of the creation days and the Genesis Flood. See Lane, 12-15.


\(^3\)Laurie John, interview by Australian Broadcasting Commission, June 10, 1976, quoted in Ted Peters, "Evolutionary Evil," Dialogue 35 (Fall 1996): 243. Similarly, Theodosius Dobzhansky states: "The universe could have been created in the state of perfection. Why [then] so many false starts, extinctions, disasters, misery, anguish, and finally the greatest of evils--death? The God of love and mercy could not have planned all this. Any doctrine which regards evolution as predetermined or guided collides head-on with the ineluctable fact of the existence of evil" (The Biology of Ultimate Concern [New York: New American Library, 1967], 120). Dobzhansky, who calls himself both a creationist and an evolutionist, later adds, "What a senseless operation it would have been, on God’s part, to fabricate a multitude of
Schurman, [A.B.] Davidson, refers to natural selection, as "the Satan of the evolutionary powers." Other maltheistic statements could be given, but such are sufficient to establish the problem which this dissertation addresses.

**Purpose of This Study**

Given the description of the problem above, the purpose of this dissertation is to discover, codify, analyze and assess the general contours of representative early nineteenth-century British theodical responses to the issue of the Creator's omnibenevolence in light of the paleonatural evil suggested by a deep-time interpretation of the fossil record. This dissertation focuses on the following three leading British traditionalists: George Bugg, Andrew Ure, and George Young; and three equally prominent British accommodationists: William Buckland, John Pye Smith, and Hugh Miller.

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\[^{1}\text{[A.B.] Davidson, quoted in Jacob Schurman, *The Ethical Import of Darwin* (New York: Charles Scribner's Sons, 1888), 153. Schurman gives no first name or reference but this is most likely the well-known Edinburgh Old Testament scholar, Andrew Bruce Davidson (1831-1902).}\]

\[^{2}\text{To the best of my knowledge, the term "paleonatural evil" is used for the first time in this dissertation. Correspondence with informed scholars seems to corroborate this. Paleonatural evil is used here to refer to ancient natural evils recorded in the geologic column, such as mass extinctions, evolutionary cul-de-sacs, and pre-Adamic predation and death. Paleonatural evil includes any deep-time physical event, entity, or state of affairs leading to the suffering, death, or significant detriment of sentient beings. These would be predominantly attributed to impersonal causes like avalanches, fires, floods, crop-killing frosts, denudations, glacial surges, hailstorms, mud slides, turbidities, tsunamis, storms, earthquakes, tornados, uninhabitable climates, plate tectonics, volcanic eruptions, meteor impacts, or anything involving the destruction of habitats. To these could be added ultraviolet or ionizing radiation, famines, disease-causing bacteria, plagues, viruses, parasites, predation, most diseases, and congenital deformities. Within a deep-time framework, and thus paleo by definition, these would be evils for which human agency is not responsible (though it could be contended that all of the above could be caused by non-human agency; i.e., God, Satan, or fallen angels).}\]

\[^{3}\text{These three individuals are also known as "Scriptural geologists."}\]
Primary sources will be analyzed to determine the understanding of these six thinkers on the time frame for creation and the origin of natural evil (i.e., their theodicy), their response to fossiliferous strata as a deep-time phenomenon, and the bearing of paleonatural evil on the character and attributes of God. The central purpose for analyzing these two groups is to discover and contrast the foundations and expressions of their theodical formulae. Locating our six *dramatis personae* on this continuum will inform our larger assessment of the congruency of the geologically-induced theodicies of the early nineteenth century with a good God's method of calling the creation into being as principally understood by early classic Protestantism; particularly by theologians such as Luther, Calvin, and Wesley.

**Justification for Selecting This Topic**

Although providential evolutionists have labored tirelessly since the nineteenth century to forge a *via media* between the conventional interpretation of the geological column and the Mosaic record, surprisingly, there has been no substantial analysis of the problem of paleonatural evil. Commenting on the purpose of this dissertation, Kenneth Cauthen states that "most current writing by Christians and other theists simply do not take seriously enough..."
the question [paleonatural evil] you wish to investigate."¹ John Hedley Brooke wonders whether some nineteenth-century figures "have not been so preoccupied with salvaging some notion of design per se, that they have (sometimes at least) glossed over the theodicy problem."² This is not to say that pre- or post-Darwinian theologians are incompetent. But for a variety of reasons some scholars either ignore the problem, traffick in structured ambiguity, or are merely imprecise, as Gregory Elder observes in a recent study.³ Such imprecision is characterized by a "retreat into a calculated religious vagueness" and a phlegmatic "wait-and-see-what-happens" attitude, with writers generally failing to address the underlying theological issues. Terence Mortenson concurs, stating that,

One of the biggest criticisms of the [Bridgewater] treatises⁴ was their overly optimistic handling of the difficult problem of pain, disease, disaster and death in creation. Generally, they either ignored the problem or dealt with it superficially,

¹Kenneth Cauthen to author, June 10, 1996. Cauthen believes that any resolution of theodical tension will come from the process theodicists.

²John Hedley Brooke to author, May 9, 1996. Theodicies can be attributed to others who may see the issue, but evidence no substantive theodical reflection or compelling answers. Thus, James R. Moore finds theodicies in Robert Chambers, Asa Gray, James Iverach, James McCosh, Thomas Malthus, Aubrey Moore, Joseph Van Dyke, and George Wright (The Post-Darwinian Controversies, 330-332, 344). James Secord believes this can be misleading (James Secord, "Behind the Veil: Robert Chambers and Vestiges," in History, Humanity and Evolution, ed. James R. Moore [Cambridge: Cambridge University Press, 1989], 171, 190, n. 23). Residual theodical "musings" are found in each of Moore's figures, but they do not approach the sensitive treatment of, say, Darwin's disciple, George John Romanes, or the more substantive reflection of other contemporaries. According to Brooke, theologians were "routinely praised for their openness to evolutionary theory . . . [but] were not as sophisticated in their comments as is often implied." For example, in advancing God's immanence to the point of an "all-or-nothing affair," thinkers like Aubrey Moore may have actually made "the theodicy problem worse" (Brooke to author, May 9, 1996).

³Elder, 62-65.

⁴See chapter 5 of present study.
attributing the evil in a mysterious way to divine beneficence.⁵

These assertions indicate that while an abundance of works on theodicy in general have accumulated in recent years, including a large number on contemporary natural evil in particular, the specific issue of paleonatural evil has received scant attention, with no major works addressing the topic. Although there is some recognition of the issues and related problems,² no one deals comprehensively with the issue. This situation opens a place for this dissertation.³ Barry Whitney, the world's leading authority on theodicy agrees, notes that this dissertation's "proposed theme is not


²Cameron, Evolution and the Authority of the Bible, gives two chapters to this area, claiming that theistic evolutionists have never seriously pondered the issue of theodicy, let alone offered a theodicy consistent with evangelical presuppositions. Karl Krienke, "Theodicy and Evolution," PSCF 44 (1992): 255-257; and Richard W. Kropf, Evil and Evolution: A Theodicy (Cranbury, NJ: Associated University Press, 1984), attempt to address the issue. Krienke does not address the origin of evil. His thesis that God allows suffering "in order to make possible true love," implies that true love is not possible without suffering. Kropf addresses the issue in a Teilhardian mode, yet neglects other options. Kropf admits that this work "was not meant to be academic at all," was written with "no library on hand," and was written "more from the heart" (Richard W. Kropf to author, April 17, 1996). Kropf also conceded that "God has created this world through evolution," and that "there is no other coherent view" (unpublished essay, "Evolution and the Way of the Cross").

³In order to assess whether there has been any substantial study on the theodical implications of deep-time fossils, the author contacted many North American and European scholars asking whether they knew of any monograph[s] on the issue. The general consensus is that this is a void urgently needing to be filled. Benedict Ashley affirms that "[It] is a topic badly in need of an in-depth, monographic treatment, either philosophical or theological" (Benedict Ashley to author, June 28, 1996). Peter Bowler and John Hick agree that it is a "largely neglected" area (Peter Bowler to author, June 6, 1996; and John Hick to author, August 7, 1997). Edward Madden declares that this topic has helped him "see more forcefully than heretofore the devastating implications of evolutionary theory for traditional theism," and that some sort of theodicy has to be directed specifically to this problem; adding, "I encourage you to pursue this dissertation topic under a full head of steam" (Edward Madden to author, August 10, 1997). John Brooke sees the present study as an "important and timely investigation" (John Brooke to author, May 9, 1996).
one about which much has been written, at least not in a detailed, focused study. It needs doing."¹ Charles Birch writes that the present topic "could be important because classical theism tends to avoid the subject or leave it as a mystery. It should be faced head on."²

**Scope and Delimitations**

In order to attempt an in-depth and focused thematic study of a massive, nearly untapped field of research, this dissertation’s scope will of necessity be restricted to a treatment of representative early nineteenth-century British theodical formulations relating to paleonatural evil. This study, therefore, represents only a first step in addressing the issue of paleonatural evil. Moreover, because theodical issues are at the intersection of several disciplines, and deserve multifaceted exploration beyond the parameters of any single study, many fruitful aspects related to this area will have to await future research. Lastly, minimal evaluative judgments, if any, will be made regarding the conventional paleontological and geological interpretations of the scientific data referred to in this dissertation. My purpose is to discover how the new geology impacts theodical reflection.

**Research Methodology**

The dissertation adopts a three-step approach. First, the Western philosophical tradition will be explored to see how it has addressed theodicy in general, and natural evil in particular. The study also investigates how early classic Protestantism understands the benevolence of God as revealed in His method of creation, and more importantly how key Reformers answer the "when" and "why" questions regarding the beginnings of natural evil.

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¹Barry Whitney to author, July 28, 1996. Colin Russell affirms this project by stating that it "could hardly be more timely. Nor could it be more challenging" (Colin Russell to author, July 16, 1996). Jay McDaniel sees this topic "as an excellent one . . . and relatively unchartered" (Jay McDaniel to author, April 5, 1996). Hugo Meynell writes: "I think the topic is a splendid one" (Hugo Meynell to author, March 9, 1996).

²Charles Birch to author, July 4, 1996.
Building on this historical, philosophical, and theological foundation, the second step of this study is analyze early nineteenth-century British theistic scholarship with respect to the problem of paleonatural evil. Does this nineteenth-century field of scholarship recognize the issue? If so, to what degree are their theodicies informed by exegesis, and in what sense can their responses be codified? Do ideological, consensual trends emerge in the two groups of thinkers studied?

Third, the theodicies discovered in this scholarship will be compared to early Protestant views of God's benevolence as deduced from His method of creation. Martin Luther, John Calvin, and John Wesley will be the principle exemplars of this mind-set.

Review of Literature

General Background

Introductions to Theodicy

Few areas in theological and philosophical studies have received a more multifaceted treatment than the problem of evil.¹ In recent years numerous treatises have appeared, popular² and technical,³ to complement quite a few pre-Lyellian works,⁴ and studies in the


Modern process theologians, seeing traditional theodicies as impotent in a neo-Darwinian world, have made theodicy a central part of their ideological platform.\(^2\)

**Works Addressing Evolution and Natural Evil**

A key issue in the dialogue, perhaps *nulli secundus*, regards whether natural evils are


prelapsarian or are intrusions resulting from the Fall. Nigel Cameron, Werner Gitt, Henry Morris, John Rendle-Short, A.J. Monty White, and A.E. Wilder-Smith are representatives of the intrusion model. Leaning in the other direction of natural evils being normal, and thus non-intrusive, varying nuances and emphases can be found in contemporary works by accommodational


2. Werner Gitt, Did God Use Evolution? (Beilefeld: Christliche Literatur-Verbreitung, 1993). He says: "The anti-biblical character of evolution becomes quite clear when its advocates elevate death to be the creator of life... The evolutionary 'strategy' [is] pain and tears, gruesomeness and death. Anybody who regards God as the cause of evolution by assuming such a method of creation, distorts God's nature into something contrary to itself" (ibid., 37, 39).

3. Many of Henry Morris's writings have the following theodical reservations in mind: "Surely an omniscient God could devise a better process of creation than the random, wasteful inefficient trial-and-error charade of the so-called geological ages, and certainly a loving, merciful God would never be guilty of a creative process that would involve the suffering and death of multitudes of innocent animals... The wastefulness and randomness and cruelty which is now so evident (both in the groaning creation of the present and in the fossilized world of the past) must represent an intrusion into His creation, not a mechanism for its accomplishment" (Creation and the Modern Christian [El Cajon: Master Book Publishers, 1985], 42).

4. John Rendle-Short, Man: Ape or Image (San Diego: Master Book Publishers, 1984). "It is essential to our understanding of good and evil that we appreciate the immense differences between the world as originally made, and as it is after the ravages of sin... God created the world good—beautiful, totally devoid of sin, disease, or death... At the Fall man sinned and in so doing separated himself from God and brought death, devastation, and decay upon himself, the animal kingdom, and the whole inanimate world" (ibid., 166).


6. A.E. Wilder-Smith, Is This a God of Love? (Costa Mesa, CA: TWFT Publishers, 1991); idem, The Time Dimension (Costa Mesa, CA: TWFT Publishers, 1993). Wilder-Smith cannot conceive of a Creator who "would have crowned his creation by producing man over the dead bodies of billions of innocent lower forms of biology, who through no fault of their own, were eaten or otherwise tortured to death by the stronger and better adapted" (ibid., 61).
thinkers such as Richard Bube,1 Dick Fischer,2 Alan Hayward,3 Joseph Le Conte,4 George Millin,5 Hugh Ross,6 Don Stoner,7 and most of the contributors to Zygon.8 Gary Embberger,9 Keith Miller,10 and a few others do not lend themselves to easy classification, since they acknowledge ancient natural evils, but seem more sensitive to the impact of these on the Church’s understanding of


2Dick Fischer asks if all carnivores had to wait for sin before deploying their claws and fangs into tasty red meat: "Can you envision black clouds of hungry buzzards egging Eve on? Does that sound plausible? . . . The fossil record is replete with over half a billion year’s worth of animal death" (The Origins Solution [Lima, OH: Fairway Press, 1996], 82-83).


5George Francis Millin, Evil & Evolution: An Attempt to Turn the Light of Modern Science on to the Ancient Mystery of Evil (New York: Macmillan, 1896).

6Hugh Ross, Creation and Time: A Biblical and Scientific Perspective on the Creation-Date Controversy (Colorado Springs, CO: NavPress, 1994).

7Don Stoner, A New Look at an Old Earth (Paramount, CA: Schroeder Publishing, 1992). Stoner states that "The evidence says that there was animal death before Adam. . . . Nowhere does the Bible say that animals die as a consequence of human sin. . . . Animals would be dying even if Adam had not sinned" (ibid., 47, 50).

8In 1988 an entire issue was devoted to the topic, "Evolutionary Biology and the Problem of Evil," Zygon 23 (1988).


divine goodness.¹¹

Numerous studies exist which are tangential to, yet congruent with, this study's main theses, and can be perused beneficially. Included here are works attempting to establish the parameters of Scriptural authority,² or delineate proper critical and exegetical method on key creation texts.³ Similar studies seek to clarify biblical limits on what constitutes life or living

¹Cornelius Hunter's *Darwin's God: Evolution and the Problem of Evil* (Grand Rapids: Brazos Press, 2001) is sure to generate discussion along theodical lines, especially since he suggests that for Darwin, evolution was itself a theodicy to preserve God's goodness (173).


See also the appropriate sections in such scholarly commentaries as, C.E.B. Cranfield, A *Critical and Exegetical Commentary on the Epistle to the Romans*, ICC.
things, probing distinctions between animal and plant death, and issues of entropy. Past and present works on animal pain prove helpful, especially if they address directly the extent to


3Bishop Gore sees this as a serious protest against God. Charles Gore, The Reconstruction of Belief (New York: Charles Scribner's Sons, 1926), 160-163. Consulting select studies on animal pain, then, is crucial to supplement the present study. Classic works include, Richard Dean, An Essay on the Future Life of Brutes, Introduced with Observations upon Evil, Its Nature, and Origin, 2 vols. (Manchester: J. Harrop, 1767); and Oliver Goldsmith, A Philosophical Survey of the Animal Creation, wherein The general Devastation and Carnage that reign among the different Classes of Animals are considered in a new Point of View . . ., translated from the French (Dublin, 1770).

which creation is implicated in the Fall. Works on disease and predation open up other vistas related to paleonatural evil. While perhaps overamplifying nature's gruesome side, other works


can be canvassed and critiqued regarding the validity of even referring to nature as cruel.¹

Hints of Paleonatural Evil in the Poets²


²While artistic expression may seem out of place in theodical discourse, omitting poetry and painting would be to ignore a key piece of the theodical puzzle. Several artists, taking their cue from deep-time geologists, rendered the gloomy implications of deep time for the laity.


⁵Thomas Carlyle, Sartor Resartus (London: George Bell and Sons, 1898). Carlyle’s character, Herr Teufelsdröckh, laments that the universe was "one huge, dead, immeasurable Steam-engine, rolling on, in its dead indifference, to grind me limb from limb"; a "Mill of Death"; and 'I lived in a continual, indefinite, pining fear; tremulous, pusillanimous, apprehensive of I knew not what: it seemed as if all things in the Heavens
nature red in tooth and claw, continues to find expression late in the Twentieth century.1

The pulse of numerous works of literature in the Nineteenth century allude to issues addressed in this dissertation. Even though allusion may be merely residual, as with Francis Parkman and Mark Twain2, the bottom line is that there has long been an awareness of the incongruity between the God of tradition and the god unearthed by geology. Karl Rahner speaks most aptly when writing that "Everywhere, everywhen, and everyhow, it seems, this problem [suffering] has been near the heart of the important work of significant writers."3

**Expressions of Paleonatural Evil on Canvas**

The brush, as mighty as the pen, has been variously wielded to capture nature's paroxysms.4

above and the Earth beneath would hurt me; as if the Heavens and the Earth were but boundless jaws of a devouring monster, wherein I, palpitating, waited to be devoured" (ibid., 196-197). James Thomson, *The City of Dreadful Night* (Yellow Springs, OH: Kahoe & Spieth, 1926). Himmelfarb accurately describes this work as "exploring the horror of a purposeless, heartless, mindless universe, where 'Death-in-Life is the eternal king'" (321). Thomson "did not know whether to be more horrified at the thought of a God who was the 'Creator of all woe and sin! abhorred, malignant and implacable!' or at the thought that there was indeed no God, 'no Fiend with names divine'" (James Thomson, 33). Frank Norris muses on nature's "colossal indifference" toward man's striving to overcome this relentless, "gigantic engine, a vast power, huge, terrible; a leviathan with a heart of steel, knowing no compunction, no forgiveness, no tolerance; crushing out the human atom..." (*The Octopus* [Garden City, NY: Doubleday, Doran & Company, 1928], 1:174).


4Martin Rudwick, *Scenes from Deep Time*, makes a valuable contribution in compiling into one source the nineteenth century's most renowned artists in this area.
Regarding works reflecting an awareness of deep time, and in stark contrast to Edward Hicks's *Peaceable Kingdom*, compare the work of Henry De la Beche,1 Eugene Delacroix,2 William Dyce,3 John Martin,4 George Nibbs,5 Edouard Riou,6 George Stubbs,7 W.F. Volliner,8 and Webb.9

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1Cf. De la Beche, "Duria Antiquior," oil on canvas, 1830. Unless otherwise noted, all the following works are oil on canvas.


3Dyce's famous painting, "Pegwell Bay," 1858, was described by a later critic as "pervaded by gloom" (D.S. MacColl, *Nineteenth-century Art* [London, 1902], 115). John Hedley Brooke believes Dyce aimed to "depict the futility of human life against the gloomy backdrop of comet and cliff, each of which spoke of aeons of time [i.e., deep time], dwarfing one's ephemeral existence into insignificance" (*Science and Religion*, 227). The tandem elements in the painting which evoked emotional response were the "terrible Muses" of Donati's comet and the chalk cliffs. See Marcia Pointon, "Geology and Landscape Painting in Nineteenth-century England," in *Images of the Earth: Essays in the History of the Environmental Sciences*, ed. L.J. Jordanova and Roy Porter (Chalfont St. Giles: British Society for the History of Science, 1979), 99 f.


7See George Stubbs, "The Lion and the Horse," mezzotint, 1769.

8The frontispiece to W.F.A. Zimmermann, *The Wonder of the Primitive World* (New York: Charles Pfrirshing, 1855), has an apropos etching, but no artist's name is given.

Published Studies

Accommodationist literature

The early nineteenth century saw the arrival of several pre-Darwinian works which address paleonatural evil. However, in contrast to the coming intensification of the problem, these works seem sketchy by comparison. Darwin’s grandfather, Erasmus Darwin, reflects on the problem.1 William Buckland and Thomas Chalmers allot an appreciable amount of space to the issue in their Bridgewater Treatises.2 Many others with either geological acumen, or comparable prowess in other areas, who engage theodical issues, include John Pye Smith, and Robert Chambers, Edward Hitchcock, Hugh Miller, George John Romanes, and Alfred Russel Wallace.3 More recently, a

1Erasmus Darwin, The Temple of Nature; or, the Origin of Society: A Poem, with Philosophical Notes (London: St. Paul’s Churchyard, 1803), canto IV, lines 130-171.


handful of German scholars have recognized the problem, including Sigurd Daecke, Carsten Bresch, Rainer Isak, Reinhard Junker, Karl Schmitz-Moormann, and Christoph Wassermann.¹

Traditionalist literature

Several of the so-called Scriptural Geologists,² including James Mellor Brown, George Bugg, William Cockburn, Henry Cole, Thomas Gisborne, John Murray, and George Young³ recognize elements of paleonatural evil, death, and suffering as pivotal in the debate on origins. Strong affinity with this traditionalist perspective can be found in H.S. Boyd⁴ and William Kirby.⁵

Clark, 1859), and a response from Gillespie, The Theology of the Geologists, 41-74.


Several more modest treatments exist which at least recognize the impact that paleonatural evil and issues like sin-death causal nexus have on God's character, thus meriting close attention.¹

Contemporary divergent views regarding a theology of nature

Noteworthy beginning efforts have been made to construct "a theology of nature."

Calvin DeWitt, William Dumbrell, George Hendry, Jay B. McDaniel, Wolfhart Pannenberg, Claude Stewart, and R.J. Thompson, have made helpful contributions, albeit from very divergent theological perspectives,² with none substantially addressing paleonatural evil.


²William Kirby, On the Power, Wisdom, and Goodness of God, as Manifested in the Creation of Animals, and in Their History, Habits, and Instincts, 2 vols. (London: William Pickering, 1835). Kirby is best known not only as one of his day's leading entomologists, but also as the lone young-earth creationist among the Bridgewater authors.
Works on social theodicy or social Darwinism, which at first blush might appear unrelated to the topic at hand, are another genre from which useful material can be quarried.¹

Unpublished Studies with a Bearing on This Dissertation Topic

The idea of paleonatural evil has received passing or implicit mention in unpublished works. Among studies assaying the idea of a Creator using evolutionary-like process,² there are several valuable theses,³ as well as studies on profligacy,⁴ paleoentropy,⁵ and death before the Fall.⁶


²Several scholars graciously supplied the author with personal, unpublished materials with portions bearing on paleonatural evil. They include, Anne Clifford, "Darwin's Revolution in The Origin of Species: A Hermeneutical Study of the Movement from Natural Theology to Natural Selection" (n.d.); Paul Draper, "God, Evil and Evolution" (March 12, 1997); William Hasker, "Theism and Evolutionary Biology" (April, 18, 1996); D. Russell Humphreys, "The Age of the Earth Is a Vital Issue" (March 10, 1996); David Knight, "The Context of Creationism in Darwin's England" (June 6, 1996); Paul Masani, "On God and Theodicy" (May 18, 1994); Eman McMullin, "Evolutionary Contingency and Cosmic Purpose" (April 18, 1996); Arthur Peacocke, "The Ubiquity of Pain, Suffering and Death" (June 4, 1996); Michael Ruse, "Evolution and Religion: Warfare, Armistice, or Friendship?" (July 29, 1996); Robert John Russell, "Theistic Evolution and Special Providence: Does God Really Act in Particular Events in Nature?" (March 8, 1996); and Thomas Tracy, "Evolution, Divine Action, and the Problem of Evil" (July 11, 1997).

³Several scholars graciously supplied the author with personal, unpublished materials with portions bearing on paleonatural evil. They include, Anne Clifford, "Darwin's Revolution in The Origin of Species: A Hermeneutical Study of the Movement from Natural Theology to Natural Selection" (n.d.); Paul Draper, "God, Evil and Evolution" (March 12, 1997); William Hasker, "Theism and Evolutionary Biology" (April, 18, 1996); D. Russell Humphreys, "The Age of the Earth Is a Vital Issue" (March 10, 1996); David Knight, "The Context of Creationism in Darwin's England" (June 6, 1996); Paul Masani, "On God and Theodicy" (May 18, 1994); Eman McMullin, "Evolutionary Contingency and Cosmic Purpose" (April 18, 1996); Arthur Peacocke, "The Ubiquity of Pain, Suffering and Death" (June 4, 1996); Michael Ruse, "Evolution and Religion: Warfare, Armistice, or Friendship?" (July 29, 1996); Robert John Russell, "Theistic Evolution and Special Providence: Does God Really Act in Particular Events in Nature?" (March 8, 1996); and Thomas Tracy, "Evolution, Divine Action, and the Problem of Evil" (July 11, 1997).

³David Brian Austin, "Regularity and Randomness as Elements of Theodicy" (Ph.D. dissertation, Southern Baptist Theological Seminary, 1989), 117-269; De Jong, 26-27; Samuel David Hughes, "The Problem of Evil as Discussed in the Gifford Lectures from 1889-1986" (Ph.D. dissertation, Baylor University, 1989); Kramer, "The Intellectual Background and Immediate Reception of Darwin's Origin of Species"; and J. David Yule, "The Impact of Science on British Religious Thought in the Second Quarter of the Nineteenth Century".
Complementing past studies, a handful of recent dissertations are worthy or mention, in that they exhibit an awareness (though often indirectly) of paleonatural evil as a theodical issue. Michael A. Corey addresses evolution and natural evil, but his research parameters are almost exclusively from the perspective of post-Darwinian scholarship, and does not offer any detailed, systematic presentation of the major schools of theodical thought or their chief apologists. In addition, Corey makes his intention very clear that he is "issuing a vigorous argument for the truth of Deistic Evolutionism." In addition, Corey makes his intention very clear that he is "issuing a vigorous argument for the truth of Deistic Evolutionism."

Terence Nichols writes from the perspective that "physical evil in creation antedates the...

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4Benedict Ashley, "Is Creation Wasteful?" typewritten MS.

5Piatt, "Entropy Prior to the Fall."


2Michael A. Corey, "Evolution and the Problem of Natural Evil: A Theological Response to Evolution-Generated Pain and Suffering That Seeks to Preserve the Divine Goodness Through the Use of a Deistic Interpretation of Modern Neo-Darwinism" (Ph.D. dissertation, The Union Institute Graduate School, Cincinnati, 1996). Corey's 10-page bibliography offers only 12 pre-Darwinian works. This is not to say that historical figures are not cited (for Cicero, Galen, Aquinas, Leibniz, Hume, Paley, Cuvier, Darwin and Mivart are referenced), but only that he does not develop any detailed pre-Darwinian context. To be fair, Corey's primary thrust is not historical, but neither is it theodical, despite the title of his work.

3Ibid., 28.
emergence of humanity by millions of years," and that "humanity was created originally in an unfallen creation which was not confined to our time or our dimensionality."¹ He contends that in the light of modern physical theories it is possible to conceive both of a resurrected creation and a parallel primordial (Adamic) creation existing in a higher dimension and in a primordial moment, and to then understand how the sin of humanity could have occasioned the disharmony of earthly creation as well.²

Rodney Stiling traces an historical trajectory of the Church’s receding faith in a global Flood.³ He briefly cites the problem of suffering,⁴ and thus his thesis intersects with this study in that he is aware that nineteenth-century geological theory impacts traditional theodicy.⁵ Troy Lane Weber attempts to show "that the theory of evolution in no way acts as a rational or intellectual impediment to the production of Augustinian theodicies."⁶ More specifically, he seeks to construct what he calls a "Neo-Augustinian theodicy."⁷ To advance any

¹Terence A. Nichols, "Miracles as a Sign of the Good Creation" (Ph.D. dissertation, Marquette University, 1988), 5-6.
²Ibid., 5-6. Nichols can thus posit that human sin is responsible for pre-human disharmonies in creation, including all physical evils, but at the same time claim to "attempt to retrieve a Pauline and a biblically based theodicy" (ibid., 7). Such meta-temporal theodizing allows him to see the Big Bang as a result of the Fall (ibid., 274). Nichols does not engage geological theories, but seems to merely assume uniformitarianism as a given. As a Catholic he is prompted to engage both Scripture and pre-Reformation Church history.
³Stiling, "The Diminishing Deluge: Noah’s Flood in Nineteenth-century American Thought". Neither Stiling nor his mentor, Ron Numbers, deals with the group known as the Scriptural geologists.
⁴Ibid., 218-225.
⁵My copy of Stiling’s dissertation does not include any type of bibliography.
⁷Ibid.
Augustinian-type theodicy Weber knows that he must engage evolutionary theory, but he does not invoke historical geology, or mention any of the key figures covered in the present study.2

Marcos Terreros, in his important study on human death before the Fall,3 apports only three pages to theodicy proper,4 and makes passing mention of the distinction between natural and moral evil, yet his entire study can be seen as a theodical-type work. While invoking the rubric of deep time, and pinpointing the importance of geological theories as having set the stage for the reception of Darwin,5 Terreros does not deal with historical geology. His main focus is on the impact to mainline Evangelicalism of allowing death to have preceded and Edenic Fall in relation to the Gospel. In the present study it will be evident that the issue of death before sin is only one of many similar pronounced points of contention between the traditionalists and accommodationists, and thus Terreros's study can be seen as complimentary to the present study.6 However, in view of the fact that Terreros's primary focus is on death before sin in relation to atonement theory, the field is left open to examine natural evil farther back in deep time, and as relating to the character of God.

In his study on British Scriptural geologists from 1820-45, Terry Mortenson sees the problem

1Ibid., vii.

2Weber's nine-page bibliography mentions only five pre-Darwinian sources.

3Marco Terreros, "Death Before the Sin of Adam."

4Ibid., 244-247.

5Ibid., 91-97. Terreros includes all the appropriate players (Hutton, Cuvier, and Lyell), but does not utilize any of their primary sources. He does refer to William Buckland and John Pye Smith (two key figures in this study), but does not deal with them in depth, uncover their theodicies, or refer to fellow accommodationists and their nemeses, the Scriptural geologists.

6While Terreros's 58-page bibliography is particularly helpful: most of the approximately 40 pre-Darwinian sources are from early Church history.
of evil is a key issue in early nineteenth century geological debate. However, his main thesis does not allow him to develop the theme. He assesses their geological competence, identifies the reasons they oppose deep-time concordisms, and thus why they were rejected by some of their contemporaries. The present study pursues a trajectory parallel to, but quite different from Mortenson, seeking to discern the major schools of thought in the early nineteenth century which recognize and respond to paleonatural evil. Mortenson's work, like Terreros's, can be seen as complimenting the present study.

Therefore, as this review of the literature indicates, the topic of this dissertation is recognized as an area needing investigation. This study aims to begin filling this void by highlighting and contrasting the differences between early nineteenth-century British traditionalists and accommodationists apropos to the question of paleonatural evil.

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2The primary works in Mortenson's 38-page bibliography, in striking contrast to the dissertations mentioned above, consist almost exclusively of pre-Darwinian source material.

3By employing a hermeneutics of retrieval regarding the forgotten or ignored literature of the controversy, and highlighting the nature of the disagreements between both groups, it is hoped that there are lessons which can be applied beneficially to contemporary Evangelicalism.
CHAPTER II

THEODICY IN HISTORICAL PERSPECTIVE:
FUNDAMENTAL BACKGROUND
ISSUES AND PERSPECTIVES

O, Cruelty! who could rehearse--Thy million dismal deeds, Or track the working of the curse-- By which all nature bleeds?

--Martin F. Tupper,
The Complete Poetical Works of Martin F. Tupper

These are really terrible faults, and those who do not realize and see them are blinder than moles.

--Luther, Genesis

General Introduction

Amidst life's paradoxes, few prompt more reflection or kindle more despair than the problem of evil.¹ A stumbling block ever since Job, layman and scholar alike have asked: "If the Christian God exists, why are there so many bad things?" For centuries the query, capable of being posed in numerous ways, has been a prominent arrow in the atheologian's quiver,² and an agent of nausea bedeviling the faithful.³

¹A fuller picture comes below regarding how natural evil has been understood historically, but for the moment evil will be regarded simply as whatever is detrimental or antithetical to God's goodness as Creator and His original intentions for sentient life.

²An atheologian is one who argues against God's existence. In the early third century, Tertullian notes that "the question of the origin of evil" was a common theme raised by heretics" ("The Five Books against Marcion," in Latin Christianity: Its Founder, Tertullian, ed. Alexander Roberts and James Donaldson [Grand Rapids: Eerdmans, 1980], 272).
Theodicy is the philosophical category which addresses the compatibility of a good God who co-exists with, allows, orchestrates, or even initiates various forms of suffering, disease, and death. The word synthesizes two Greek words, Θεός (God) and δίκαιος (justice), and is first used by Gottfried Leibniz (1646-1716) to connote the justification of God's goodness and power despite the ubiquity of evil and pain. In lay terms the dilemma is referred to as the problem of suffering, the problem of evil, or the problem of pain.

According to Stephen Davis, "there is little doubt that the problem of evil is the most serious intellectual difficulty for theism." If so, then a candid look at the enigma should be obligatory for all theists, and seen as an issue worthy of judicious reflection and good-natured debate. But surprisingly, few Christians wrestle with the issue to the point where they personally grasp the stakes; fewer yet are able to respond satisfactorily to the problem of evil. This reticence to theodicy may stem from a general anti-intellectualism, or a subconscious hunch that a theodicy is "the most ambitious of all human intellectual enterprises and the one that seems most destined to failure."

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Capon aptly warns, therefore, that theodicizing is reserved "for people with very strong stomachs."¹ Perhaps others resonate with Emil Brunner's suggestion that there even may be something arrogant implied in a creaturely defense of the Creator to other creatures.²

Responses to the problem of evil, as with any issue of philosophical gravamen, oscillate on a spectrum between extremes. For example, some non-theists use natural evil as the main showpiece in their polemic against theism,³ seeing it as "positively obscene."⁴ Some theists, on the other hand, offer answers requiring a reinterpretation of evil, or revision of seminal divine attributes in question.⁵

Central Issues in Christian Theodicy

All world religions, in the main, have in some manner addressed the problem of evil. Among them, however, the theodicy of classical Christianity has been subjected to more scrutiny due to its distinct emphases on an all-loving and all-powerful deity. A Hindu can merely resort to bad karma to explain evil; the Buddhist, while allowing for moral culpability, holds that evil is an inevitable by-product of existence; and in the West, 

¹Capon, 18.


³The writer heard Michael Ruse state in a recent lecture: "I'm not a Christian because I can't reconcile a benevolent God with the problem of evil." Indiana University of South Bend, February 11, 1998.

⁴Hugo Meynell to author, March 9, 1996.

⁵The three attributes which dominate the discussion are God's providence, power, and love, through which a host of subsidiary characteristics and attributes derive their meaning.
various forms of theistic finitism attempt to expiate God of the problem by advocating that His power is limited.1 These three responses, while not tending to provide comfort for the human condition, are nonetheless perfectly consistent with their respective starting presuppositions.

By way of contrast, it is precisely because of certain presuppositions defended by traditional Christianity, that the problem of evil is even generated in the first place. The three premises are as follows: (1) God is infallibly benevolent;2 (2) God is not limited in power;3 and (3) evil exists. Affirming only one or two premises of this triad creates no problem. Yet, classic Christian theism has been obliged to affirm all three, thus necessitating a theodicy which successfully reconciles the apparent incongruity in affirming the truth of all three affirmations. In other words, there would be no "problem," at least not one as intense, were it not for a God with the attributes of absolute goodness,
love, and power; a personal God who is portrayed elsewhere as a loving "Father" who is supposedly concerned even over the sparrow and the lilies of the field.

Traditional Evangelicalism generally attempts to account for evils as intrusions due to sin. In strong dissent, however, conventional geological theory points to all manner of pre-human evil, death, extinctions, profligacy and contingencies which seem prima facie incompatible with a compassionate Creator-God. In the shadow of so many apparent maltheisms, how is the modern Christian able to consistently proclaim God’s love and goodness? Is this just a classic example of "the will to believe"? Attention must be turned now to the essential rubrics which give rise to the problem.

The Classic Epicurean Dilemma

While Boethius frames concisely the theodicy question, "If there be a God, from whence proceed so many evils?", a classic and fuller formula is given earlier by Epicurus:

God either wishes to take away evils, and is unable; or He is able, and is unwilling; or He is neither willing nor able, or He is both willing and able. If He is willing and is unable, He is feeble, which is not in accordance with the character of God; if He is able and unwilling He is envious, which is equally at variance with God; if He is neither willing nor able, he is both envious and feeble, and therefore not God; if He is both willing and able, which alone is suitable to God, from what source then are

1Unless qualified, references to God in the remainder of this dissertation will mean the God of classic Christian theism, as understood by and articulated in the early Church creeds, and more recently, as understood and reaffirmed by the early Reformers.


3It is the burden of the remainder of this chapter and the next to substantiate this.

evils? or why does He not remove them?  

Martin Gardner refers to this argument as "deadly and incisive," and one which has been repeated endlessly by philosophers of all persuasions. He suspects "that in every age and place, if you asked an ordinary atheist why he or she did not believe in God you would get some version of Epicurus's argument." David Hume, the Scottish empiricist skeptic, claimed that "Epicurus's old questions are yet unanswered," and some would claim that they never will be.

Several questions can be culled from Epicurus's impasse above, which point to a quadrilateral of issues to which evangelical theodists must respond:

1. What is the historical (or otherwise) origin of evil?
2. What is the effective cause of evil?
3. What is the purpose of evil?
4. What is the justification for permitting gratuitous natural evil?

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2Martin Gardner, *The Whys of a Philosophical Scrivener* (New York: Morrow, 1983), 243. Even the Boethius quote above has been thought to be a mere paraphrase of Epicurus.

3David Hume, 198.

4However, chiding theists for not knowing the origin or purpose of evil may say more about an atheologist's biographical, psychological or sociological state, rather than an actual or possible apologetic against God regarding evil. George Mavrodes notes that even if Epicurus's or Hume's "questions remain unanswered, no significant theological consequence can be drawn from it" (*Belief in God: A Study in the Epistemology of Religion* [New York: Random House, 1970], 92). This comment applies best with a logical defense rather than a theodicy.

5Adapted from Mavrodes, 91. Gratuitous evil is often referred to as inscrutable, pointless evil. Such evil, while logically permissible within a theistic paradigm, is said to
If a good God exists, why does He allow evil? Did this massive concatenation of evils take Him by surprise? If so, then omniscience is passé. If God is unable to eradicate evil, then any reference to His omnipotence is immediately undermined, and all Scriptures which infer an unrestricted divine power are either obsolete or in need of category translation. If God is unwilling to eradicate evil, then reference to His goodness brings hollow comfort in times of need, and prayer becomes meaningless ritual.

Evangelicals generally have judged the abandonment of either omniscience, omnipotence or omnibenevolence to be too costly. Therefore, it must be asked if responses to evil exist which do not levy such a high cost, and which allows the Church to be consistent in promoting God's goodness and love? Before turning to various proposed solutions, distinctions must be noted between (1) logical and evidential forms of the problem of evil; (2) moral and natural evil; and (3) a defense and a theodicy.

Logical and Evidential Forms of the Problem of Evil

Philosophers have found it expedient to differentiate between the logical and evidential forms of the problem of evil. The logical form simply asserts that there is no strictly logical incompatibility between the affirmations that a good God co-exists with evil. be pointless because it could have been absent without either diminishing some greater good or allowing some greater evil. In the discussion on paleonatural evil, it could be posited that a loving God could have some inscrutable reason for allowing millions of years of intense prelapsarian, sub-human suffering, but there seems to be no morally exonerating excuse for His having done so, or one which can be discerned, thus making such suffering appear pointless.

Yet, still, as will be highlighted in this study, some have been willing to revise the traditional attributes of divine character, to accommodate the eons of contingency, survival-of-the-fittest, and mass extinctions of natural history and methodological naturalism.

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One need merely supply an additional premise, for example, that this good Deity has some self-sufficient reason to allow evil, or that there is some greater good which is attainable only at the price of necessary and/or temporary evil. It is the task of philosophical theology to address the metaphysical minutia of the logical problem. Mavrodes asks a pertinent question in this regard: "Why should it be necessary to know what God's good reason is in order to know, or to believe reasonably, that He has a good reason for permitting evil." In other words, it seems that atheologians assume the following invalid premise in their argument: Before one is warranted in believing in an all-good God, the theologian must know/convey what good reason God has for allowing evil and its continuance. Mavrodes notes that it should come as no surprise if theologians do not know the particulars of divine justification; "in fact, we might be a little surprised if they did."

Thus, it seems the theodicist should only be held accountable for offering an internally consistent, system-coherent, feasible response to the problem of evil, rather than an exhaustive one. Further, it seems far too strong for atheologian, H.J. McCloskey, to claim that "God cannot be both all-powerful and perfectly good if evil is real. . . . Both cannot [co]exist"; or that it is "logically impossible for this question to be resolved." On the contrary, in William Alston's mind, "It is now acknowledged on (almost) all sides that

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1Mavrodes, 93.

2Ibid.


4Ibid., 99.
the logical argument is bankrupt." Yet another issue "is still very much alive and kicking," which is known as the evidential argument for evil.

The evidential form of the problem of evil is much more existential, than the logical form, which, as we have just seen, seeks merely to establish logical compatibility between God and evil. Thus, while it might be shown that there is no logical contradiction between an evil-allowing but still good Being, the gratuitous evil(s) of world history bode ill for classic theism, and lend evidential credibility to atheism. To establish this point, William Rowe asks us to imagine a distant forest where lightning strikes a dead tree sparking a forest "fire in which a fawn is trapped, horribly burned, and lies in terrible agony for several days before death relieves its suffering." What point, he ponders, does suffering such as this serve? Some theists could state that in some way this is the result of a fallen natural order. But this response becomes harder if the prelapsarian natural order is essentially identical to the present one and is one regarded as originally intended by God. Consider the several hundred million year block of suffering implied by geologic and evolutionary theory. Peter Van Inwagen believes that no one takes seriously the idea that sentient beings "could evolve naturally without hundreds of millions of years of ancestral suffering. Pain is an indispensable component of the


2Ibid.

3See Daniel Howard-Snyder, passim.


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evolutionary process." While all this suffering might not be as intense as a burning fawn, with good warrant the atheologist can ask what purpose such sub-human suffering serves in God's creative campaign. Assuming the reality of this pain, what prevents God from lessening the pain just a little? Surely He could attenuate slightly sub-rational pain without diminishing some greater good. What possible purpose is served in gratuitous sub-rational suffering throughout deep time?

Such issues are at the heart of the evidential form of the problem of evil, three of which are quite crucial to the theses of this dissertation. First, this dissertation has to do with the evidential argument from evil. Second, to the degree that conventional geology establishes deep time, then by definition this discussion must consider paleonatural evil. Third, in using the example of the act of nature which killed the fawn, an important distinction is made between natural and moral evil. Taking these three together, then, this dissertation investigates the early nineteenth-century theodicies for the evidential problem of paleonatural evil. To understand what is involved in a theodicy for natural evils, two additional distinctions need to be made.

**Distinctions Between and Definitions of Moral and Natural Evil(s)**

While life is fraught with intense evils, the concept of evil does not always lend

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2Before advancing, it must be noted that not all agree that fawns can experience suffering, or if so, it is suggested that their suffering is not equivalent to human suffering.

3For a definition of paleonatural evil, see below or the glossary.
itself to easy classification. Typically, theodicists attempt to distinguish between two types of evils; namely moral and natural.\(^1\) Moral evil denotes volitional wrongful acts of free, rational beings; in short, immorality, and would include, for example, lying, stealing, murder, torture, rape, and traits such as cowardice, greed, selfishness, viciousness, and sadism. Moral evil presupposes an absolute meta-ethical standard by which all alleged moral evils would be weighed.

Natural evil\(^2\) is to be distinguished from moral evil, and typically indicates an act of nature rather than an action or consequence directly attributable to rational free agency.\(^3\) To the extent that such evil and/or suffering results from impersonal causation there seems to be no moral culpability. Such natural evils are merely the result of what Hume calls "the inaccurate workmanship of all the springs and principles of the great machine of nature."\(^4\) Yet "inaccurate workmanship" is certainly not becoming of Evangelicalism's God, and instead breeds doubt regarding divine goodness. For example, Daniel Migliore affirms that, "The shocking cruelty, terrible wastefulness, and apparent arbitrariness of the manifold occurrences of evil in nature can lead to doubt and even

\(^1\)Other types of evil referred to include state evil, mental evil, and passive evil.

\(^2\)In philosophical literature it is common to find euphemisms for natural evil, including "physical evil," "non-moral evil," "surd evil," "cosmic evil," and "unchosen evil."

\(^3\)The use of 'human agency' is resisted here, in lieu of the metaphysical possibility that natural evils can be attributed to a powerful, rational, supra-human agency; i.e., a malevolent god, God, Satan, demons, or fallen angels. Reference to such supra-human agency is often labeled as Augustinian, and is part of what is called the "free-will defense." David O'Connor refers to this as the "Satan hypothesis" (*God and Inscrutable Evil: In Defense of Theism and Atheism* [Lanham, MD: Rowman and Littlefield, 1998], 114 f., 144-147).

\(^4\)David Hume, 209.
despair about the providential care and goodness of God.¹

Natural evils typically include the following types of entities: earthquakes² and accompanying tsunamis,³ tornados,⁴ landslides, storms,⁵ mudslides, earthflows, plate-tectonics, rock-falls,⁶ meteor and asteroid impacts, volcanic eruptions,⁷ gas disasters,⁸


²In 1556 an earthquake took 830,000 Chinese lives, while one in 1920 in Kansu, China, took 180,000 lives. See Don DeNevi, *Earthquakes* (Millbrae, CA: Celestial Arts, 1977), 56, 67. The famous 1755 Lisbon quake that claimed 80,000 lives, and which was previously considered, according to Davis, to be "the paradigm evil event referred to by theodicsists" (Encountering Evil, 6), comparatively was much less devastating than the Chinese quakes.

³Cf. Henry Morris and John Whitcomb, *The Genesis Flood: The Biblical Record and Its Scientific Implications* (Philadelphia: Presbyterian and Reformed, 1961), 264. Tsunamis "have been known to attain velocities of 400 or more miles per hous and heights of 130 feet" (ibid.). The 1883 Krakatoa quake resulted in drowning 40,000 people, and in 1876 a tsunami swept across the Bay of Bengal killing 200,000 (ibid.). Similar events occurred in the Aleutian Island region, Ceylon, Hawaii, Chile, Japan, California, Alaska, and New Zealand, often with "serious loss of life and extensive property damage" (ibid.).

⁴A September 21, 1923, tornado, in the Tokyo-Yohohama area, killed an estimated 40,000 people. Other elements to be factored in are the destruction of property, loss of animal life, and an estimated 13 people injured for every 1 killed in the tornado. See Frank Lane, *The Elements of Rage* (Philadelphia: Chilton Books, 1965), 57, 59.

⁵David Hume believes that such a geophysical or meteorological irregularity is never "so great as to destroy any species; but is often sufficient to involve the individuals in ruin and misery" (210).

⁶In 1792, a rock-fall killed 15,000 on the Japanese island of Kyushu (ibid., 232). In 1958, 40 million cubic meters of rock tumbled into Lituya Bay, destroying an entire forest.

⁷The volcanic eruption in August of 1883, of Krakatoa (now Indonesia), resulted in tidal waves that killed more than 36,000 people. Spyridon Marinatos, "Thera: Key to the Riddle of Minos," *National Geographic* (May 1972): 715.

⁸In August of 1987, 1,700 human, and thousands of animal lives were extinguished by an abrupt expulsion of carbon dioxide from Lake Nyos, Cameroon, West Africa (G.W. Kling et al., "The Lake Nyos Gas Disaster in Cameroon, West Africa,"
wildfires, avalanches, flash floods, hail, draughts, famines, pestilence, disease-causing bacteria, parasites, plagues, viruses, or any physical ailments, deformities, and suffering which are not attributable to human free choice. Predacious animals, prey suffering, animal cruelty, species extinction, and other entities which might be considered profligate and painful are often included as natural evils. Natural evil, like moral evil, presupposes an absolute standard by which all such alleged evils can be adjudicated.


1Though beneficial for light, heat, power, cooking, and purification, here we have in mind things like forest fires which destroy thousands of acres and burn countless animals alive.

2On January 10, 1962, an estimated 6,000,000 cubic yards of ice and debris killed 3,500 West Peruvians. Several mountain villages were crushed instantly, including Ranrahirca, which one moment "was a happy thriving township of a thousand or so buildings and over 2,000 people, the next it was a vast graveyard covered with an impenetrable gray carpet" (ibid., 112).

3In 1421 a sudden inundation killed 100,000 Hollander. See Andrew Ure, A New System of Geology (London: Longman, Rees, Orme, Brown and Green, 1829), 479.

4In 1953, a Canadian hailstorm over Alberta killed 60,000 ducks (ibid., 89-90).

5See R.A. Bryson and T.J. Murray, Climates of Hunger (Madison: University of Wisconsin, 1977), 95, 104-105. Here reference is made to drought affecting 20,000,000 people. Locust predators die off during such conditions, and in the summer of 1978 there were 50 locust swarms over Ethiopia and Somalia, some plagues spreading over 40 square miles.

6Some of these "evils" could be attributable to free agency like famine, for example, where humans fail to plan ahead or utilize competent farming and irrigation techniques.

7In 1873 and 1919, swarms of crop-devouring grasshoppers in Kansas were thick enough to block out the sun. See Edwin Yamauchi, "Ancient Ecologies and the Biblical Perspective," JASA 32 (December 1980): 193. Swarms can contain ten billion locusts, with a possible loss of 80,000 tons of food, since each locust consumes its weight in food every day.

8Barbara Tuchman refers to the Black Death of 1347-51, which wiped out over 25 million people, as "the most lethal catastrophe in recorded history" (A Distant Mirror [New York: Alfred A. Knopf, 1978], 91).
Atheologians, as mentioned above, have not successfully delineated such a standard.

**A Defense Approach vs. a Theodicy**

Given the above two ways of framing the problem, we then see that it is possible for a theist to offer a rational defense for God's existence, yet fail to give a compelling theodicy. Indeed, this is a key distinction to bear in mind. To solve the logical problem of evil, we employ a *defense*; to address the evidential problem of evil, specifying God's rationale for permitting evil, we employ a *theodicy*. Kelly James Clark asserts that showing formal "compossibility" between key divine attributes and evil is a much more modest project than a sufficient defense,¹ pointing out that non-theists at times equivocate on defense and theodicy. In other words, one might demonstrate the philosophical compatibility of evil and the God of love, while not giving a satisfying answer as to why the Judeo-Christian God, as classically understood, would permit evil. While tracing the metaphysical particulars of the logical problem certainly has merit, the present study's primary interest lies in the evidential form of the problem of paleonatural evil.

**Natural Evil Attributed to Satan and/or to Fallen Angels**

In historical Christendom a recurring theodical response to natural evil has been to lay the blame for the perversions of the natural realm to the account of non-human beings: either God,²

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Satan, or his cohorts, fallen angels.\textsuperscript{3} Variations abound, but typically this scenario projects a Satanic fall which precedes all or most of the events in the Mosaic account of origins.\textsuperscript{2} Thus, any distasteful dysteleological entities suggested by the fossil record can be situated in a deep time, pre-Adamic context, and blamed on the misuse of freedom by angelic beings "who were appointed as nature's guardians but who have become enemies of nature's God."\textsuperscript{3}

\begin{itemize}
\item[\textsuperscript{1}] See O. Everling, \textit{Die paulinische Angelologie u. Dämonologie} (Göttingen: Vandenhoek und Ruprecht, 1888); and Norman Powell Williams, \textit{The Idea of the Fall and Original Sin} (London: Longmans, 1927), 159-162. Williams refers to the apostle Paul as "the prince and master of all Christian Fall-speculators" (ibid., 519). For criticism of Williams and others of similar persuasion, see Hick, 281-289.
\item[\textsuperscript{2}] Cf. Milton, \textit{Paradise Lost}; Johann von Goethe, \textit{Faust}; and George Byron, \textit{Cain}. The suggestion that paleonatural evil stems from demonic forces has engendered various responses. On one side of the spectrum are found responses like that of John Hick, who sees invoking fallen angels to account for nature's dysteleologies as attractive speculation and a "desperate expedient" (369). This denying of angels follows from Hick's interpretation of Gen 1-3 as myth; and thus that there was no literal Eden, Adam and Eve, or a literal Fall. Joseph Pohle thinks attributing pre-Adamic catastrophe to fallen angels verges on superstition. Joseph Pohle, \textit{God: The Author of Nature and the Supernatural} (St. Louis: Herder Book Company, 1942), 209. As such, this may only add to the problem "by invoking the more obscure to shed light on the obscure" (Meynell, 80).
\item[\textsuperscript{3}] Hick, 368. This option is popular with fundamentalists who advocate a "gap theory," with some reference Bibles, such as Scofield and Dake, promoting this view. Some in the early nineteenth century, following Thomas Chalmers, contend that between Gen 1:1 and 1:2, lies a former creation which was destroyed by "Lucifer's flood." From 1:2 onward we have a literal re-creation that can be taken literally. This theory was crafted in large part because the biblical Flood allegedly could not account for the new
\end{itemize}
Some natural evils, according to Christian revelation, can be attributed to God Himself. Even a cursory reading of Scripture, according to Weber, "will show that its pages are replete with accounts of divine punishment exacted on people and nations which were frequently distributed in the form of natural evil."¹ Weber's point is important for developing a context-sensitive theodicy, and protecting against "the exegetical imprudence of suggesting that all natural evil is possibly due to the malevolent activity of diabolical spirits."²

However, the natural evils which allegedly predate the arrival of humanity are the principle focus of this dissertation. Thus, malevolent activity by so-called evil spirits, in whatever amount and by whatever time frame,³ must receive due process in evangelical circles, unincumbered by naturalistic presuppositions. Bruno Webb contends that the Church has always entertained such an origin for natural evil as a live option. He writes:

So the fallen angels which have power over the universe and of this planet in particular, being motivated by any intense angelic hatred of God and of all creatures,

uniformitarian view of slow sedimentary deposition over aeons, and the entombing of countless remains of bygone creatures which supposedly increase in biological complexity up the geologic column. But it seems ironic, if not contrived, to invoke one catastrophic global flood to deny another. A recent defense of this theory can be found in Arthur Custance, Without Form and Void (Brookville, Canada: Privately published, 1970). For a spirited critique of this position, see Weston Fields, Unformed and Unfilled (Nutley, NJ: Presbyterian and Reformed Publishing, 1976).


²Weber, 30.

³From one perspective, demonic forces could have been wreaking havoc on the natural order for deep time prior to mankind's arrival; from another perspective such cosmic malevolence could be placed after the creation of Eden, or perhaps entirely post-lapsarian.
have acted upon the forces of matter, actuating them in false proportions so far as lay in their power, and this from the very outset of evolution, thus producing a deep-set disorder in the very heart of the universe which manifests itself to-day in the various physical evils which we find in nature, and among them the violence, the savagery and the suffering of animal life. This does not mean that, for instance, an earthquake or a thunderstorm is due directly to satanic action. It is due to purely natural causes, but these causes are what they now are owing to the deep-set disorder in the heart of nature resulting from this action of fallen spirits, most subtly mingled with the action of good spirits, throughout the long ages of the world's formation—"an enemy came and sowed tares also amid the wheat." . . . The animal world is heavily armed with weapons of slaughter which have anticipated those of man's invention. It is a reign of violence and savagery which is an enigma to many who forget the fall of the angels is a tremendous reality, but which is well understood if it be the reflection in the material and sentient sphere of that spirit savagery and violence of apostate angels who have set themselves in a state of intense hatred against God and all that He has created, and who, being unable to hurt God Himself, seek to satisfy their hatred of Him by marring the beauty of His creation to the utmost of their power.

The Three Most Prominent Theodicies

The brief analysis above will be best complemented by a succinct historical study below. Having discussed basic issues of theodicy, the present section focuses on the three most prominent schools of theodical thought which have received play into the late twentieth century. This groundwork will be followed by an overview of natural evil in particular, which sets the necessary and preparatory cognitive boundaries for a close study of paleonatural evil later in this dissertation.

The two most prominent theodicies discernable from patristic sources, are the Irenaean and Augustinian theodicies. In contemporary parlance, these options are known respectively as the "soul-making" and "free-will" defenses. A third option, process

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1Bruno Webb, Why Does God Permit Evil? (New York: P.J. Kennedy & Sons, 1941), 49-50; cf. 42. Plantinga approvingly quotes this passage, writing: "I have nothing better to offer, and this certainly doesn't seem at all incredible" (Alvin Plantinga to author, May 2, 1996).
theodicy, largely a post-Darwinian construct, has gained such wide currency in twentieth-century Christian circles that it merits brief analysis. All three of these theodical options carry important implications regarding whether a loving God would utilize deep-time serial catastrophism, and perhaps even some type of macro-evolutionary-like design, as His proximate creative mechanisms.

The Irenaean Theodicy

Though the early Church Bishop, Irenaeus (130-202 AD), never constructs a formal theodicy, philosopher of religion, John Hick, claims to have found in Irenaeus some "important constructive suggestions" which provide a "framework of thought within which a theodicy [becomes] possible." For Hick, the real value of the Irenaean framework is that it "does not depend upon the idea of the fall, and . . . is consonant with modern knowledge concerning the

1This view is variously called process theology or philosophy, and god finitism.


3John Hick, "An Irenaean Theodicy," in Encountering Evil: Live Options in Theodicy, ed. Stephen T. Davis (Atlanta: Knox Press, 1981), 41. Bear in mind that some hold that even the Bible does not offer a single, clear-cut, systematic solution to the problem of evil. See Whitney, What Are They Saying About God and Evil? 17. Dale Stoffer remarks, additionally, that one looks "in vain for a discussion of the problem of evil per se in the Apostolic Fathers" ("The Problem of Evil: An Historical Theological Approach," Ashland Theological Journal 24 [1992]: 55). A patristic accounting for "natural evil is even more limited, since their emphasis was primarily on those forms of evil for which humanity is responsible" (ibid., 61). This lacuna may be partially explained in that the early Church tends to conscript its theodicy mostly in reaction to heresies (Marcionism and Gnosticism). If so, then all theodieies are piecemeal and informal, requiring subsequent theodicians to discern "important constructive suggestions" from relevant patristic sources.

4Hick, "An Irenaean Theodicy," 41
origins of the human race." This is a fundamental point of contrast between the theodical uses of Irenaeus and Augustine, for the efficacy of the Augustinian theodicy hinges upon a literal Fall. The desire of modern proponents of the Irenaean theodicy to awaken the Church from its Augustinian slumbers is based, at least in part, on the assurance that geology has proven that death long antecedes man, our planet has never experienced a golden age, and therefore the "ancient myth of the fall of man" needs to be dispensed. John Hick defends this perspective.

We know today that the conditions that were to cause human disease and mortality... were already part of the natural order prior to the emergence of man, and prior therefore to any first human sin, as were also the conditions causing such further 'evils' as earthquake, storm, flood, drought, and pests.

The "constructive suggestions" of Irenaeus conducive to a theodical framework lay virtually dormant until the nineteenth century, when they are resurrected under the aegis of Friedrich Schleiermacher's work. In the twentieth century the Irenaean theodicy is to be popularized almost singlehandedly by Hick.

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1Ibid.


3Ibid., 285. Hick refers condescendingly to the Augustinian theodicy as "the mythically based 'solution'" (ibid.).


5Hick's apologetic for the Irenaean tradition is so thorough that some scholars merely refer to it as "Hick's Irenaean theodicy." See Douglas Geivett, *Evil and the Evidence for God: The Challenge of John Hick's Theodicy* (Philadelphia: Temple University Press, 1993), 29-44; and Whitney, *Annotated Bibliography*, 155. Just as Darwin recontoured all subsequent biological discussion, likewise Hick's work is seminal to any current dialogue on theodicy. Whitney states that "It is an understatement of significant proportions to note that references to Hick's writings virtually permeate the literature on theodicy during the past two decades [the 1970s and 80s]," and he lists 45 critical discussions of Hick's work (ibid., 167-180). With virtually no exception, since
Hick's understanding of Irenaeus's theodicy is that it contends that man was originally immature. It is granted that even though God had the power to make man perfect at the beginning of creation, He chose not to do so. Being only recently created, man could not possibly have received perfection, or even if he had received it, he could not have contained it; or if he could contain it, he could have not have retained it. In addition, the Creator's main purpose in creation is to bring us to moral and spiritual maturity. Irenaeus suggests that if one were to inquire why man was not created perfect from the beginning, we should respond that,

\textit{inasmuch as God is indeed always the same and unbegotten as respects Himself, all things are possible to Him. But created things must be inferior to Him who created them, from the very fact of their later origin; for it was not possible for things recently created to have been uncreated. But inasmuch as they are not uncreated, for this very reason do they come short of the perfect. Because, as these things are of later date, so are they infantile; so are they unaccustomed to, and unexercised in, perfect discipline. For as it certainly is in the power of a mother to give strong food to her infant [but she does not do so], as the child is not yet able to receive more substantial nourishment; so also it was possible for God Himself to have made man perfect from the first, but man could not receive this [perfection], being as yet an infant.}

Thus, perfection or maturity is achieved not fiat, but by process, whereby we gradually develop the attributes which God wishes us to have. Even though created in the \textit{imago Dei}, Adam still lacked something. Thus, a catalyst is needed for us on the road to maturity, the appearance of Hick's \textit{Evil and the God of Love}, recent discussions on theodicy take the Hickean-Irenaean theodicy as their point of departure. See also Hick, "An Irenaean Theodicy," 39-52.

\begin{itemize}
\item \textbf{1}Hick, \textit{Evil and the God of Love}, 218.
\item \textbf{3}Ibid.
\item \textbf{4}Ibid.
\end{itemize}
making the Fall narrative, and traditional understanding of that account, merely an idyllic interpretation of the immature Adam. The world, to quote Hick citing Keats, is merely "a vale of soul-making." Evil and suffering are not punitive, on this view, but are God-given aids to maturity. Thus, the Fall and any resultant evils are themselves absolute necessities.

Thus, human freedom is necessary to reach this maturity. But while suffering is the price tag that accompanies the human condition, and may contribute toward an explanation of Auschwitz, what does such a theodicy have to say regarding natural evil, particularly that which long antecedes the arrival of man? Looking at the Cretaceous-Tertiary boundary and its mass graveyards, it is natural to ask in what way would dinosaur extinction, 65 million years prior to human souls, contribute to soul-making? How are we to reconcile inscrutable, gratuitous, deep-time sub-rational suffering within the vale of soul-making? An Irenaean response for a Pompeii eruption, the Black Plague, and Lisbon earthquake is comparatively more plausible than questions of exactly how species extinction, rattlesnake-bitten gophers, ichneumonidae, and bilharzia are also necessary for mankind’s maturing into the fullness of the imago dei?

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2 Hereafter cited as the K-T boundary, and to be expounded further in chapter 3.

3 As will be seen in the next chapter, Darwin expressed dismay over these wasps.

*Tenderhearted theologues will find it difficult to cull soul-making purposes from the Adelie penguin, which disgorges itself in order to consume more fish; the Great Horned owl, truly deserving of the term "over-kill," for this owl will decapitate more than a dozen terns for every one it consumes; sheep in the Shetlands and Rhum deer bite the heads, wings and legs off live seabird chicks; the Chacma baboon, which joyfully denudes a pigeon of its feathers before pulling off its legs and decapitating it; the New Zealand kea, known for tearing back a sheep's flesh to get at its kidney fat, then leaving the sheep to die in misery; or the *Bufolucilla silvarum* flies, which lay*
A recurring challenge to the Irenaean approach still remains: "Why did God not make man fully mature?"1 Were there no other less evil, painful, or wasteful ways that He could have employed to achieve the same results? The amount of pain necessary to teach maturity seems so disproportionate, if not superfluous. The same question could be asked in spades regarding natural evil and sub-rational suffering, which Hick acknowledges "has constituted the most baffling aspect of the problem of evil."2 The obvious reason is that a soul-making theodicy does "not apply in the case of lower animals."3 What can a soul-making theodicy say to natural evils which predate souls by hundreds of millions of years? Why does a loving Creator, who has no limitations, permit deep-time pain and carnage in animals' lives?4

Hick sees the area of animal pain as "largely a field for speculation and theoretical

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1 Irenaeus, Against Heresies, 521.
2 Hick, Evil and the God of Love, 345.
3 Ibid.
4 Ibid., 346.
interpretation." He points out that pain in the human and sub-human worlds has survival value, and both realms learn "under the insistent tutorship of pain." Both survive, Hick continues, because of nervous systems which react to the environment, "which steers the individual away from danger by means of pain sensations." Continuing, he adds the following crucial distinction. In contrast to humans, who die through the eventual wearing out of their body, "most animals are violently killed and devoured by other species which, in the economy of nature, live by preying upon them." Such is seen by some as brutal, he affirms, only because they interpret "each creature as a self-conscious individual." But Hick claims that death is not problematic to the creature itself; they have no anticipation of death or its awesome finality. Since individual animals "are totally unaffected by the fact that after this thin thread of consciousness has snapped some other creature will devour the carcass," hence there appears to be no evil. At the bottom line, Hick merely resorts to mystery to counter human suffering.

Quite often themes such as this (i.e., no anticipation of death in the sub-human realm) are put forth in an effort to soften the mass mortality in sub-human creation. But what of pain and suffering? A plausible rationale for these will tend to increase any

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1Ibid.
2Ibid., 347.
3Ibid., 349.
4Ibid.
5Ibid.
6Ibid.
7Ibid., 369-70.
theodicy's palpability. Despite contentions that it cannot be proved demonstrably that lower species have consciousness, Hick admits that there is "sufficient evidence for the presence of some degree of consciousness, and some kind of experience of pain, at least throughout the vertebrate kingdom, to prohibit us from denying that there is any problem of animal suffering."\(^1\) Assuming evolutionary theory, he argues that man's brain and consciousness differ from animals only in degree, and thus it would be "surprising if man alone experienced pain."\(^2\) Further, the homology of sub-human sensory and nervous systems is similar enough to suggest that animals feel real pain. Merely viewing a burning animal that "struggles violently to escape from the source of heat," suggests "that it is undergoing an experience of pain analogous to our own."\(^3\)

Having introduced the basic rubrics of an Irenaean theodicy, as least as defended by Hick, we are better prepared to appreciate its main rival, the Augustinian theodicy.

The Augustinian Theodicy

The influence of the early churchman and Bishop of Hippo, Augustine (354-430), on Christianity's handling of the problem of evil has had an enduring influence. While some critics of Augustine have sidelined him as quasi-Manichaen, Neo-Platonic, too allegorical, or too eclectic, his theodicy has been prevalent enough to have received appellation as *the* Christian

\(^1\)Ibid., 346.

\(^2\)Ibid., 347.

\(^3\)Ibid.
position, or simply as the "Augustinian tradition." The problem of evil was a seminal issue throughout Augustine's Christian life, garnering treatment of some sort in all of his major works, most notably, The Problem of Free Choice.

A fundamental component of the Augustinian model is the assumption of a paradisiacal creation, which is corrupted by a volitional, sinful choice (i.e., misuse of free will) of either Satan, fallen angels, or men. Along with this utopian view of creation, it is generally assumed that there is no human death, though some contend that the door is left open for sub-optimal dysteleologies and a prelapsarian, internecine sub-rational order. Nonetheless, this theodicy holds that the fabric of the created order began to unravel with misuse of free will.

The Augustinian model posits that genuine moral agency requires free will. Adamic defection brought in malum culpae, which in turn incurred malum paenae. Hence, this position is often called the free-will defense for the problem of evil. The explanation that evil is the result of free will became an inextricable concomitant of Church dogma, at least up

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3 Evil of guilt.

4 Evil of suffering.

5 Plantinga and Austin Farrer have been prominent defenders of the free will defense.
until the nineteenth century. All theodicies which radiate from the Augustinian tradition seek
to exculpate God by locating the causal genesis of all evil in the perverted will and guilt of
rational creatures, or more specifically, moral evil is traceable back to a spatio-temporal,
Adamic Fall; and natural evil is divine retribution stemming from this Fall. This position
was virtually uncontested prior to the birth of the geo-sciences.

A cornerstone tenet in the Augustinian theodicy is that evil is defined as a
privation, and of creaturely origin. The Bishop from Hippo holds that whereas


2I.e., privatio boni. For Augustine evil is parasitical on the good, and thus he
describes evil as privatio boni (privation of good), non substantia (non-substance), and
corruptio, negatio, and non esse. He writes, "I did not know that evil has no being of its
own but is only an absence of good, so that it simply is not" (The Confessions of St. Augustine, 49). He asks: "What, after all, is anything we call evil except the privation of
the good? . . . Evil is not a substance" (Confessions and Enchiridion, trans. and ed. Albert
status, but is merely the absence of some quality or good which something could have had
or is owed to that being. Disease, for example, is deprivation of health. The missing
property, however, must be proper to some entity. Blindness, for example, is a privation
of sight. For a man to lack sight would be evil; but such would not be the case for a rock.

Modern thinkers who may be interpreted as denying evil any ontological status,
include Karl Barth, Church Dogmatics (Edinburgh: T. & T. Clark, 1936), 3:3; Nicolas
Berdyaev, The Destiny of Man (New York: Harper & Brothers, 1960); Martin Heidegger,
Existence and Being (London: Vision House, 1948); and Paul Tillich, Systematic

3Other theodical themes can be seen in Augustine, but may be regarded as "little more
than passing thoughts, and should not be made even near central to Augustine's theodicy"
(Hick, Evil and the God of Love, 95). Be that as it may, one of Augustine's sub-themes, the
"contrast theory of evil," the aesthetic approach, still remains a theodical favorite. Augustine
puts it this way: "In this universe, even what is called evil, when it is rightly ordered and kept in
its place, commend the good more eminently, since good things yield greater pleasure and
praise when compared to the bad things" (Confessions and Enchiridion, 342). Picture a
masterful tapestry which requires contrasting hues; dark threads are necessary to augment the
light ones. The 'ugly threads' (i.e., evil) were never meant to be seen in isolation. Likewise, life
is more readily appreciated when plumbed against its shadows. Our limitations prevent us from
goodness has ontological reality, evil is in fact derivative of, and parasitic on, the good, and therefore a shift away from reality. It is clear to Augustine that corruptible things are good: if they were supremely good they could not be corrupted, but also if they were not good at all they could not be corrupted: if they were supremely good they would be incorruptible, if they were in no way good there would be nothing in them that might corrupt. For corruption damages; and unless it diminished goodness, it would not damage. Thus either corruption does no damage, which is impossible or—and this is the certain proof of it—all things that are corrupted are deprived of some goodness. But if they were deprived of all goodness, they would be totally without being.

Here we detect a modification of Plotinus's teaching of evil as negation, to evil as privation; evil itself has no independent reality, but is merely missing the mark, or corruption of the good. Cook rightly surmises that, in the Augustinian system, evil is a turning away from a higher good, particularly from God. This is the classic description of sin. Sin is falling short of God's standards. It is failing to do and to be what God intended. . . . Thus . . . disease and disaster . . . are the natural consequences of the fall of man. Man falls from God's standards and so must inevitably be punished, or else the fact of God's goodness would have no relevance to God.

seeing the larger picture, and this myopia inflates evil. Here optimistic refocus is made on the goodness of the whole—sub specie aeternitatis. Whitney writes that from God's perfect perspective, "so-called evils in fact are either means to good ends or parts of a good whole" (What Are They Saying About God and Evil? 31).

1 Augustine, Enchiridion, chaps. 13 and 14.

2 Augustine, Confessions, 146.

3 Reference here is to the Neo-Platonism of this third-century Greek philosopher. Neo-Platonism developed under the influence of Aristotelian and Pythagorean philosophy and Christian mysticism, and experienced popularity up to the sixth century. Emphasis was placed on a mystical intuition of the highest One, or God, as the transcendent source of all being. Being, goodness, and truth are different facets of the same reality. See Dominic O'Meara, Neoplatonism and Christian Thought (Albany: State University of New York Press, 1982); and Norman Geisler and David Clark, Apologetics in the New Age (Grand Rapids: Baker, 1990), 75 ff.

As such, it is not surprising that Augustine "interpreted his discovery of Platonic philosophy as a providential preparation for his own reception of the Gospel." This system nurtured his *privatio boni* perspective where God is seen as the supreme being and also the supreme good. Thus, anything coming from the Creator's hand would reflect, even if darkly refracted, some glint of divine goodness. Any goodness in the created order is thus a derived goodness.

In the wake of uniformitarian and evolutionary theory, and the dismissing of any notion of a golden age, the free-will defense became obsolete to many, including John Hick, who states:

"Only a drastic compartmentalization of the mind could enable one to believe today in a literal historical fall of man from paradisal perfection taking place in the year x B.C. . . . Let us say without equivocation that the fall is a mythic conception which does not describe an actual event in man's history or prehistory. . . . Man has never lived in a pre- or un-fallen state, in however remote an epoch."

The postulates of the new geology were a major contributor toward dehistoricizing the Fall.

Having introduced the Irenaean and Augustinian theodicies, we turn to a third theodical angle: Process theodicy. Though a high premium is not placed on this approach in the early nineteenth century, it is presently gaining momentum as a framework providing answers for paleonatural evil which are not provided by the Irenaean and Augustinian models.

**Process Theodicy**

Another approach to the problem of evil comes from process thought, and can be traced back to the thought of Charles Hartshorne, who was influenced by Alfred North

1Ed Miller, *God and Reason* (New York: Macmillan, 1972), 145. It should be noted that to the degree that an Augustinian theodicy depends on a Platonic construct, it is prone to any weakness which might be inherent within that metaphysical perspective.

Whitehead. This is sometimes referred to as "finite godism," which basically holds to a limited creator.¹ Process thought arises in large measure as a response to one of the subsidiary issues investigated in the present study, viz., assessing the compatibility of a painful evolutionary history with God's goodness and power, coupled along with a disenchantment with the Augustinian and Irenaean theodicies.

In response to the horns of the theodicean dilemma, Process thinkers at the forefront of this method are recognized for their willingness to reassess, if not substantially recast, traditional understandings of God's primary attributes;² principally His omnipotence. One obvious problem that the process approach presents to the evangelical mind is whether such a finite god can engineer a final victory in the battle against evil, and in what capacity such a finite god is genuinely worthy of worship. Hartshorne bluntly claims that "no worse falsehood was ever perpetrated than the traditional concept of omnipotence. It is a piece of unconscious blasphemy, probably not distinguishable from no world at all."³ While this process theodicy may solve the problem of evil, the victory may be only pyrrhic, since the deity Evangelicalism is left

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¹For the basic theses of the theistic finitists, see E.S. Brightman, *A Philosophy of Religion* (Englewood Cliffs, NJ: Prentice-Hall, 1940), chaps. 8-10.


with seems little more potent than Plato's *demiurgos* or Paley's absentee watchmaker.

Having given a brief overview of the three primary models which dominate the theodical landscape, and the key tenets in each which have implications for the question of paleonatural evil, attention is now turned toward paleonatural evil itself.

**The Problem of Paleonatural Evil in Historical Perspective**

Generally, pre-geological traditionalists account for natural evils as a result of the Fall,¹ and hold the Genesis Flood responsible for the fossil record. While this response may not be satisfying to the non-supernaturalist, it is internally consistent with the early Protestant understanding of the curse on nature that accompanied original sin. But with the advent of new geological presuppositions, the widespread perspective regarding natural evils as being induced by the Fall gave way to interpreting these evils as allegedly long preceding the Fall. As indicated earlier, in assessing the acceptance of this new deep time frame for the genesis of natural evil, this dissertation seeks to discover to what degree early nineteenth-century accommodational theodicies comport with early Protestant views on creation, the Fall, and God's goodness. Were substantive theological

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¹While a literal Fall has been standard fare in Evangelicalism, for some this doctrine is dispensable. Cf. Hugh Montefiore, *Confirmation Notebook* (London: SPCK, 1993), 10-11. John Polkinghome has affirmed: "If I were asked what is the major Christian doctrine that I find most difficult to reconcile with scientific thought, I would answer: the Fall" (*Reason and Reality* [Philadelphia: Trinity Press International, 1991], 99).
adjustments necessary to accept non-penally generated deep-time natural evils? To the extent that paleonatural evil is real, really evil, how problematic is this for theism?

General Setting

The general consensus of recent geology is that natural history is characterized by 4.5 billion years of uniformitarian processes, though there has been a shift back toward serial catastrophism of late. Little dissent exists in the biological sciences, however, that the phanerozoic era is characterized by a deep-time developmentalism governed by natural selection. Accepting any deep-time model, however, means that man is preceded by hundreds of millions of years of earth in upheaval and "nature red in tooth and claw."

Yet prior to the contemporary geo-sciences quite a different opinion prevailed, as E.L. Mascall indicates:

It was until recent years almost universally held that all the evils, both moral and physical, which afflict this earth are in some way or another derived from the first act by which a bodily creature endowed with reason deliberately set itself against what it knew to be the will of God.¹

In other words, until relatively recently, the majority perspective in Christendom was that, prior to sin, things were perfect, but a "general retrograde tendency"² entered the world at


the Fall, which affected the whole creation. This is no surprise, since prior to the advent of higher criticism, orthodox Christians understand the Scripture in its natural sense without doubting the historicity and natural reading of Gen 1-11. In reference to the perspicuity of these chapters, Pattle Pun's affirmation captures this early Church perspective,

that the most straightforward understanding of the Genesis record, without regard to all of the hermeneutical considerations suggested by science, is that God created heaven and earth in six solar days, . . . that death and chaos entered the world after the Fall of Adam and Eve, [and] that all of the fossils were the result of the catastrophic universal deluge.\(^2\)

But if geology unfurls a paleonatural order that is "bloody and destructive long before the only available sinner--man--showed up,"\(^3\) then it may be naive "prelapsarian aggrandizement"\(^4\) to maintain a fall from an original perfection. In other words, to the degree that the new geological interpretation is correct, and the original creation is thought to be perforated with prelapsarian disease, suffering, death, extinctions, etc., then postulating a golden age borders on philosophical and theological irresponsibility.\(^5\)

Contemporary theologian, Hendrikus Berkhof, recognizes this point:

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1 Exceptions can be found, of course, but the nearly exclusive pre-geological perspective of the Church on the first chapters of Genesis is that they represent historical fact. Augustine is perhaps the most-often-quoted as one not necessarily taking the Genesis time frame literally. Though he did allow for "allegorical," "spiritual," or "figurative" interpretations which could parallel the "corporeal," "proper historical sense," he chides those who indiscriminately apply a non-literal hermeneutic to the Genesis. See Augustine, *The Literal Meaning of Genesis*, trans. and annotated by John Hammond Taylor (New York: Newman Press, 1982), 2:32-36, 323.

2 Pun, 14.

3 Capon, 20.

4 Ibid.

5 But the sword would seem to cut both ways. If a recent, cataclysmic, global flood is geologically defensible, it might be theologically imprudent for the consistent evangelical to interpret the majority of the death in the geologic strata as prelapsarian and non-penal.
We know today, especially through the fossil record that [the notion of suffering and death being the consequences of sin] is untenable, for it tells us that struggle, suffering and death and natural catastrophes were already a fact millions of years before man appeared on the scene.¹

Therefore, for Berkhof, it is untenable that the cosmos has ever been a paradise which was subsequently marred by a historical fall. Ian Barbour shares the same sentiment: "You simply can't any longer say as traditional Christians that death was God's punishment for sin. Death is a necessary aspect of an evolutionary world. . . . One Generation has to die for new generations to come into being. In a way, it is more satisfying . . . than to see it as a sort of arbitrary punishment that God imposed on our primeval paradise."²

Definition of Paleonatural Evil

In this study paleonatural evil refers to pre-Adamic pain, death, predation, mass extinctions, evolutionary cul-de-sacs, or any dysteleological entities which may have existed through deep time,³ and which seem prima facie counter-intuitive to the best-of-all-possible natural orders which a truly omnipotent and omnibenevolent Creator could be

¹Hendrikus Berkhof, *Christian Faith: An Introduction to the Study of the Faith* (Grand Rapids: Eerdmans, 1979), 169. To sense the extent to which Berkhof accommodates his view of the Fall to deep time, see ibid., 168-171; 206. He sees paleonatural evil as integral to God's creative method, evidently desiring His creation to go through a long history of struggle, pain, and death. Accepting the deep-time view of the fossil record, Berkhof is left with the following admission: "The only answer we can give is no answer: apparently it was never God's purpose to call into existence a ready-made and complete world" (ibid., 170).


³Use of the 'paleo' prefix is this study does not simply mean "old" in the popular sense, but refers to an assumed vast age of the earth (e.g., 4.5 billion years). Again, uniformitarian and evolutionary presuppositions are assumed here only as a frame of reference, bearing in mind that an complete geologic column may not actually exist, but is perhaps constructed solely on philosophical necessity and evolutionary presuppositions (i.e., the use of index fossils, etc.)—opinions which are not accepted by all geologists and paleontologists.

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fairly expected to ordain. The fact that these entities are alleged to precede humanity by
countless ages, as suggested by the conventionally accepted deep-time interpretation of
the fossiliferous portions of the geologic column, gives rise to the term paleonatural evil.

Past thinkers have labeled various alleged pre-human evils in a variety of ways. Since a
key fulcrum in this study pertains to the timing of an Edenic Fall, it is not surprising to find such
evils simply referred to as "aboriginal," "prelapsarian," "pre-fall," "antecedent apostasy," "pre-

This would be based on the propositional self-disclosure of His nature most
reasonably inferred from Scripture taken in its most natural sense. There is no record of
any Church Father, later Reformer, or traditionalist precursor, who suggests the likelihood
of wholesale pre-Adamic natural evil as based on the clearest reading of Scripture.

The issue of the first appearance of paleonatural evil in the geologic column needs
clarification. One demarcation line would be the earliest portion of the geologic in which
sentient life appears, discerned to be capable of experiencing suffering, either by predation,
disease, or catastrophic geophysical forces. Another point would be to view any creaturely
extinction evil, which would place the first appearance of paleonatural evil further back in
"deep time." Additionally, one could also go back deeper into time, by isolating prebiological
terrestrial processes, like avalanches, plate tectonics, fires, floods, earthquakes, meteor impacts,
tidal waves, tornadoes, and volcanic eruptions, or any other entity usually classed under the
heading of natural evils, as representative of paleonatural evil. But then a key question arises:
"Evil to whom?" What surprisingly few thinkers make clear is whether these are evil in
themselves, or whether they are evil only to the extent that they carry the potential (even in the
deep future) of inflicting agony on sentient creatures or the destruction of their habitats. Some
imply that nature evils might only be evil as they impact humans. See John Macquarrie,
falling from a cliff hardly seems evil, until it pierces a newborn's head. Some would wonder
why God would allow such a thing to happen, rather than questioning the disposition of a
mother who walks her baby near cliffs. James Orr addresses a similar concept: "This problem
of natural evil can hardly be said to meet us in the inorganic world at all, i.e. regarding it
merely as such. We see there what may appear to us like disharmony and disorder; convulsion,
upheaval, the letting loose of titanic force which work havoc and destruction; but except in
relation to sentient existences, we cannot properly speak of these as evil. We may wonder why
they should be, but when we see what ends are served in the economy of nature by this
apparently lawless clash and conflict of forces, we may reconcile ourselves to it as part of a
system, which, on the whole, is very good" (187).

I.e., "prior to the Fall." Infralapsarianism and supralapsarianism address
paleonatural evil from different angles. The former allows that prior to Adamic sin no
evil, suffering, or death existed, and that any disharmony was subsequent to and a
Adamic," "pre-human," or "pre-mundane fall." Such terms as lapse, Fall or pre-Adamic have been used in the past as implying original sin, a doctrine that at present is not enjoying its former security as a temporal-spatial event.

The Early Classic Protestant Understanding of the Original Created Order and the Effects of the Edenic Curse

To establish a backdrop against which to compare the early nineteenth-century traditionalist and accommodationist responses to natural evil, it is necessary to examine briefly how major figures in early Protestantism understood the historicity and consequences of the Fall, and the origin of natural evil. The following approach entails ascertaining what these representative thinkers actually believed based on the most reasonable inferences to be drawn from their writings. It is hoped that "important constructive suggestions" germane to a theodicy for paleonatural evil can be gathered from these original sources, which can serve as a plumbline against which subsequent theodicies can be compared.

consequence of original sin; the latter posits that God knew the Fall would occur and fashioned a world from the beginning which would accommodate evil, to serve as a constant lesson and reminder of our sinfulness and the need for personal deliverance. For a brief overview of differing lapsarian nomenclature, see Millard J. Erikson, Christian Theology (Grand Rapids: Baker, 1991), 826, 918.


Martin Luther (1483-1546)

The fact that Luther\(^1\) invests an entire decade on a verse-by-verse commentary of Genesis indicates something of how seriously he took the opening book of Scripture as preparatory for the understanding of the rest of Scripture. Hermeneutically, he takes the Scripture at face-value, and expresses concern over those with the propensity to allegorize.

Origen, Jerome, Augustine, and Bernard allegorize a great deal. The trouble is that since they spend too much time on allegories, they call hearts away and make them flee from the historical account and from faith, whereas allegories should be so treated and designed that faith, to which the historical accounts point in every instance, may be aroused, increased, enlightened, and strengthened. As for those who do not pay attention to the historical accounts, it is no wonder that they look for the shade of allegories as pleasant bypaths on which to ramble.\(^2\)

Luther's apologia before the Papal authorities is legend, stating that unless he could be convinced by Scripture, his conscience was bound to the Bible, which he was convinced is written in normal language which any literate person can grasp. Luther wrote that Moses calls a 'spade a spade,' i.e. he implies the terms 'day' and 'evening' without allegory, just as we customarily do. . . . We assert that Moses spoke in the literal sense, not allegorically or figuratively, i.e. that the world, with all its creatures, was created within six days, as the words read. If we do not comprehend the reason for this, let

\(^1\) As these thinkers are examined for their views on the origin of natural evil, bear Susan Schreiner's words in mind, that while the "reformers were not so preoccupied with the issues of free will, justification, and predestination that they ignored the subject of creation," there has been a lacuna of research on the issue of the Reformers and creation, while the other subjects have received exhaustive, if not redundant, analysis ("The Theater of His Glory: Nature and the Natural Order in the Thought of John Calvin" [Ph.D. dissertation, Duke University, 1983], xxiii). In lieu of such a research project, my concern for the moment is only to provide enough material from their works to substantiate the clearest contours of their view of the effects of the Fall.


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us remain pupils and leave the job of teacher to the Holy Spirit. Such a commitment to the *sensus literalis* of the text leads him to claim that "we know from Moses that the world was not in existence before 6,000 years ago." Admittedly, there is no risk with such a statement back in Luther's day, but such affirmations are important to gauge the extent of any accommodation to take place in post-Lyellian Protestant circles away from a straightforward reading of Genesis as modeled by Luther.

Luther reminds us of the conjectural nature of some of the questions raised by a reading of Genesis since Moses was "writing the history of the time before sin and the Deluge," while "we are compelled to speak of conditions as they are after sin and after the Deluge." Responding to queries about "harmful worms and vermin," Luther states that harmful creatures did not exist prior to the Fall, "but were brought into being later on out of the cursed earth as a punishment for sin, to afflict us and to compel us to call upon God." In addition, Luther posits that it would be an abomination to Adam "to kill a little

\[1\] Luther's Works, 1:3, 6.

\[2\] Ibid., 3.

\[3\] Ibid., 88. In this context Luther is amused at those who "torture themselves in amazing ways" trying to cartograph Paradise, calling such questions foolish and superfluous (ibid., 91). It is sufficient for Luther to merely conclude that Eden "is historical" (ibid., 89). The Fall, Flood (ibid., 206), and destruction of Sodom (ibid., 206) are also taken at face value, and treated as anything but superfluous due to their penal connection. Luther's insistence on the historicity of Gen 1-11 is complemented by his continual disapproval of Rabbinical interpreters, along with the allegorical hermeneutic of Origen, Jerome, and Augustine. Conversely, a literalist such as Lyra is praised as among the best interpreters because of his able refutation of rabbinical interpreters, carefully concerned with an account's historicity (ibid., 93). But even Lyra is swayed occasionally by the Fathers, and turns "away from the real meaning to silly allegories," Luther even referring to some of Lyra's commentary as "worthless explanation" (Martin Luther, *Luther's Commentary on Genesis*, trans. J. Theodore Mueller [Grand Rapids: Zondervan, 1958], 87, 93).

\[4\] Luther's Works, 1:54.
bird for food."¹ Pernicious insects sprang forth from an earth cursed because of man's sin.² Thorns and thistles, likewise, were not part of the original "uncorrupted creation,"³ and would not exist except by sin.⁴ Husbandry was to be plagued by weeds, not to mention "the almost endless troubles from the sky, the harmful animals, and similar things, all of which increase . . . sorrow and hardship."⁵ For Luther, without the Fall, "the earth would have [instead] produced all things, unsown and uncultivated";⁶ the earth "would gladly produce the best products, but is prevented by the curse";⁷ no part of the earth would be barren, but all of it would have remained "amazingly fertile and productive."⁸

Wolves, lions, and bears would not have acquired their well-known savage disposition. Absolutely nothing in the entire creation would have been either troublesome or harmful for man. For the text states plainly: "Everything that was created by God was

¹Ibid., 2:134.
²Ibid., 1:72.
³Ibid., 77, 206.
⁴Ibid., 76. Luther believes that prior to the earth being disfigured by sin, that newborn children would have been able to run immediately (ibid., 72); that there would have been no rainbows (ibid., 77); that sunlight would have been more brilliant and beautiful (ibid., 78); that the sun and moon now appear, by contrast, as if they had put on sackcloth (ibid., 90); that "the air was purer and more healthful, and the water more prolific" (ibid., 204); that "no part of the earth was barren and inferior" (ibid., 204); that there would have been no "frosts, lightning bolts, injurious dews, storms, overflowing rivers, settling of the ground, [and] earthquakes" (ibid., 206); that Adam was vegetarian (ibid., 210); and except for sin there would have been no "firings" or carnivores, "beasts would have remained obedient" (ibid., 78), and women would experience no labor pangs during birth (ibid., 202). Related to this last point, Luther held that originally Adam could order a lion according to his wish (ibid., 91).
⁵Ibid., 205.
⁶Ibid., 205-206.
⁷Ibid., 205.
⁸Ibid.
good." And yet how troublesome they are! How many great afflictions of disease affect our body! I am passing over the fleas, the flies, and the spiders. And how great the dangers are from the other fierce and poisonous animals!

Luther thinks that in his state of innocence, Adam and all creatures coexisted in perfect peace, and had he remained obedient, "there would have been no fear of the Flood and, in consequence . . . the rainbow would not have come into existence." Before "that wretched depravity which came in through sin," the world was "far different" and in an "unimpaired" state of innocence and perfection; a golden age where God desisted from His labors, and where there were "neither thorns of thistles, neither serpents nor toads; and if there were any, they were neither venomous nor vicious." Likewise, things like

1Once, feeling flies were sent by Satan to disturb his reading, Luther uttered, "Odio muscas quia sunt imagines diaboli et hæreticorum" (Martin Luther, The Table Talk of Martin Luther, trans. and ed. William Hazlitt [London: George Bell & Sons, 1890], 367).

2Ibid., 77. Note the context very carefully in this pericope. Luther is actually answering an hypothetical question related to God resting from His labors. Luther anticipates the following objection: "How can it be true that God has created nothing new, when it is certain that the rainbow, or iris, was created at the time of Noah (Gen 9:13)?" In addition to rainbows, thorns, thistles and ophidian anatomical changes (Gen 3:14, 18) are suggested as evidences of God having "worked" subsequent to the Fall, and thus opens the possibility that God has not "refrained from creating new classes" of animals after the Fall (Luther's Works, 1:77). Given this, Luther is only making the claim that God would not have worked after the sixth day "if man had maintained himself in a state of innocence. . . . But because of sin God changed many things" (ibid.). Thus, Luther is agreeing with the description of the prelapsarian tame disposition of the creatures, etc., while disagreeing that these changes violate God's rest, or that they would have happened regardless of the Fall.

3Ibid., 77. Allusion is made here to the tradition which believes that prior to the Fall there was no rain. Cf. p. 83, n. 5.

4Ibid., 78.

5Ibid., 77.
"water," fire, caterpillars, flies, fleas, and bedbugs" serve collectively as messengers which "preach to us concerning sin and God's wrath, since they did not exist before sin or at least were not harmful or troublesome."³ However, according to Luther such a golden age was not to last. Creation's purity and innocence were contingent upon the purity and innocence of Adam and Eve as the following quotation indicates:

If Adam had not eaten of the forbidden tree, he would have remained immortal. But because he sinned through disobedience, he succumbs to death like the animals which are subject to him. Originally death was not part of his nature. He dies because he provoked God's wrath. Death is, in his case, the inevitable and deserved consequence of his sin and disobedience.⁴

Thus, in this idyllic state Adam "was free from sin, death,⁵ and every curse."⁶ And just as man

¹Here Luther likely means water which produces harm; floods, drowning, and storms.
²Ibid., 208.
³Ibid., 208.
⁴Selected Psalms, in Luther's Works, ed. Jaroslav Pelikan (St. Louis: Concordia, 1956), 13:94. Regarding the point of whether man is created mortal or immortal, classic Protestantism has drawn fairly clear lines. Calvinists and Arminians are united against Pelagians and Socinians on this point. The former two groups see the Fall as initiating both physical and spiritual death; the latter two groups seeing physical death as natural. See H. Orton Wiley, Christian Theology (Kansas City, MO: Beacon Hill, 1945), 34-37; and 90-95. On the Pelagian view see Erikson, 611 f.
⁵According to Luther, while man would be free from disease and death, and would not even have wrinkles on his forehead, he would be eventually "translated from the physical life to the spiritual" (Luther's Works, 1:92). Luther concedes that animals could become feeble and die before the Fall: "Animals do not die because God is angry at them. On the contrary, for them death is, as it were, a sort of temporal casualty, ordained indeed by God but not regarded by Him as punishment. Animals die because for some other reason it seemed good to God that they should die" (ibid., 13:94).
⁶Ibid., 1:89. Luther believes that diseases such as apoplexy, leprosy, epilepsy, and other pernicious evils like "snakes in the belly," "worms in the brain" (and all the diseases listed in Pliny's Natural History), would not have existed in the first world (Luther's Works, 1:207).
was affected "on account of sin, the world, too, has begun to be different; that is, the fall of man was followed by the depravation and the curse of the creation."\(^1\) Adamic sin changed things so that the best became the worst.\(^2\) The earth feels the curse, and "it does not bring forth the good things it would have produced if man had not fallen."\(^3\) The entrance of "endless evils" all points to "the enormity of original sin."\(^4\) All "harmful plants . . . such as darnel, wild oats, weeds, nettles, thorns, thistles," as well as poisons, the injurious vermin, and whatever else there is of this kind . . . were brought in though sin."\(^5\) And thus, whenever we see thorns, thistles, and weeds, we should be reminded of sin and God's wrath. It is not only in the Church that we hear sermons on sin, writes Luther, but "almost the entire creation is full of such sermons."\(^6\) And if mountains came into being due to the Flood,\(^7\) they too are to serve as

\(^1\)Ibid., 77-78.
\(^2\)Ibid., 78
\(^3\)Ibid., 204.
\(^4\)Ibid., 71.
\(^5\)Ibid., 204.
\(^6\)Ibid., 209.

\(^7\)See Marjorie Hope Nicolson, *Mountain Gloom and Mountain Glory* (Ithaca: Cornell University Press, 1959), 100-104. George Williams joins Nicolson in believing that Luther's emphasis on the decay of nature belies a pessimistic attitude (George Williams, "Christian Attitudes Towards Nature," *CSR* 2, no. 1 [Fall 1971]: 10-13). But this conclusion fails to consider Luther's many affirmations that God's power and wisdom still shine through fallen nature. In stressing that God's goodness can still be seen through the prism of nature's scars, Luther's theodicy directly contradicts the Manichaean proclivities of some, and the overoptimism of others. Cf. Schreiner, xxvi.

Thomas Burnet's reaction to earth's erratic mountainous features approaches something of horror, believing that the world in its present state is surely not the one which left the Creator's hand. Oliver Lodge captures this angst of mountainanity for the poet. To them "mountains seem to fling themselves to the heavens in districts unpeopled and in epochs long
reminders of God's wrath. He expresses concern that even though the wrath of God is evident in the earth and in every creature, "we look at all these things with a smug and unconcerned attitude."¹

The spiraling decay among the created order,² brought on as the effects of the curse, is mirrored by an increasing moral decay, humanity being plunged into mutual slaughter,³ until finally the earth was filled with violence, unrighteousness, and oppression. Then just as more serious diseases in the body demand more powerful cures, so also other more severe or more frequent penalties had to be inflicted. Accordingly, when the entire earth had been laid waste by the Deluge, and every living thing on earth, with the exception of a few human beings, had been destroyed.⁴

Luther refers to the Flood as "the greater curse . . . which utterly ruined Paradise and the entire human race."⁵ He believes that it left no vestige of the world's previous state, all of before human consciousness awoke upon the earth." Such revelations can weigh upon their spirits "with an almost sickening pressure" (Life and Matter [New York: G.P. Putnam's Sons, 1905], 76). In a rebuke of Ruskin's "mountain gloom," Naturalist John Muir displays a differing perspective, energetically denying that nature has a dark side. To him, "Christianity and mountainanity are streams from the same fountain" (The Life and Letters of John Muir, ed. William Frederic Bade [Boston: Houghton Mifflin Company, 1924], 1:378). Milton, likewise, believes that the earth's existing ruggedness came as is from the Creator. Thus, "Adam and Eve found themselves in a world topographically much like our own" (Nicolson, 73).

¹Luther's Works, 1:208. All creation is a collective indictment on original sin; yet some interpreters are still able to maintain an "amazing insensibility" to this fact (ibid., 209). If this cavalier disregard of the effects of the curse is present in Luther's day, then a precedent has been set for all future theodical accommodations of the Bible to extrabiblical authorities.

²Luther believed the whole world degenerates and grows worse every day as a result of man's sin (Luther's Works, 1:209).

³Ibid., 208.

⁴Ibid., 206.

⁵Ibid., 90.
nature being marred by this mighty convulsion. In the following remarkable passage Luther
alludes to fossils and catastrophic geographical recontouring. He states that he does not have
the least doubt that all those wonders of nature, which are from time to time discovered,
are the effects and relics of that same awful visitation, the Deluge. In the metallic
mines which are now explored are found large logs of wood, hardened into stone; and
in masses of stone themselves are perceived various forms of fishes and other animals.
With the same confidence I also believe that the Mediterranean sea before the Deluge
was not within the land. My persuasion is that the position which it now occupies was
formed by the effects of the terrible Flood. So also the space now occupied by the Red
Sea was doubtless before a fruitful field, and most probably some portion of this very
garden [of Eden]. In like manner, those other large bays, the Gulf of Persia, the Gulf of
Arabia, etc., as they now exist, are relic effects of the Deluge.

Thus the original curse was exacerbated by the Flood, and any "good trees were all ruined
and destroyed, the sands were heaped up, and harmful herbs and animals were
increased." Luther asks the rhetorical question, "If today rivers overflow with such great
damage to men, cattle and fields what would be the result of a worldwide flood?"

In summary, Luther's theodicy stood in direct contrast to the Manichaean
proclivities of some and the hyper-optimism of others. He stressed that God's goodness

1 Martin Luther, Luther on the Creation: A Critical and Devotional Commentary
on Genesis, ed. John Nicholas Lenker and trans. Henry Cole (Minneapolis, MN:
Lutherans in All Lands, 1904), 1:164.

2 Ibid., 165. Some Natural theologians later view fossils in much the same way, as
"Reliques of the Deluge or Medals of Creation . . . serving a moral function by reminding
man of his early transgressions and punishment." See Francis Haber, The Age of the
World: Moses to Darwin (Baltimore: Johns Hopkins Press, 1959), 34.

3 Luther's Works, 1:205.

4 Ibid., 90.

5 E.g., Lutheran theologian, Flacius (1520-75). While Pelagius does not take
original sin seriously enough, Flacius takes it so seriously, to the point that he wants to
"insist as strongly as possible on the total depravity of unredeemed humanity, assert[ing]
that original sin is the substance of unredeemed humanity. This would mean that fallen
could still be divined through the prism of nature's scars. His highlighting of the doctrine of creation, and deep reflection on the awful results of the Fall and the Flood are distinct emphases still mirrored in the confessions of modern conservative Lutherans. As the point man in the Reformation, his perspective and authority regarding the early chapters of Genesis are to be reckoned with. Some may contend that Luther would have not been as dogmatic regarding the chaotic effects of the Fall on the natural order if he only had access to modern paleontological data. Such, however, amounts to mere conjecture, and does not deflect from the central premises that he did believe in a young earth, and a literal Fall and global flood, both of which wreaked progressive havoc on the natural order.

John Calvin (1509-1564)

Few theses can be stated more certainly than that John Calvin, like Luther, was a historical maximalist regarding Gen 1-11, and a recent and literal six-day creation. In addressing the error of those who maintain that the world was made in a moment, Calvin writes:

humanity is really no longer God's creation, introducing a Manichaean dualism" (George Murphy, "A Theological Argument for Evolution," JASA 38 [March 1986]: 25).

E.g., Giordano Bruno, the pantheistic mystic, who happily declares cosmic harmony. The Reformers hold to order and regularity in nature, yet while the theater of God's glory is evident (Rom 1:20), things are radically different from the prefallen order, and were it not for the moment-by-moment preserving providence of God all harmony would be obliterated.


3It is likely that Calvin has Augustine in mind here. Cf. Valentine Hepp, Calvinism and the Philosophy of Nature (Grand Rapids: Eerdmans, 1930), 203-204.
For it is too violent a cavil to contend that Moses distributes the work which God perfected at once into six days, for the mere purpose of conveying instruction. Let us rather conclude that God himself took the space of six days, for the purpose of accommodating his works to the capacity of men.\\footnote{John Calvin, \textit{Genesis} [1554], trans. and ed. John King (Edinburgh: Banner of Truth Trust, 1984), 78.}

Elsewhere, apropos to the question of the age of the earth, Calvin makes it clear that he holds to an earth history of not quite 6,000 years. The following statement indicates that he anticipates and responds to some who might suggest a type of six-revelatory day theory for Gen 1.

Therein time was first marked so that by a continuing succession of years believers might arrive at the primal source of the human race and all things. This knowledge is especially useful not only to resist the monstrous fables that formerly were in vogue in Egypt and in other regions of the earth, but also that, once the beginning of the universe is known, God's eternity may shine forth more clearly, and we may be more rapt in wonder at it. And indeed, that impious scoff ought not to move us: that it is a wonder how it did not enter God's mind sooner to found heaven and earth, but that he idly permitted an immeasurable time to pass away, since he could have made it very many millenniums earlier, albeit the duration of the world, now declining to its ultimate end, has not yet attained six thousand years.\\footnote{Calvin, \textit{Institutes of the Christian Religion}. Hereafter cited as \textit{Institutes}.}

To these same "impious scoffers" he adds the following warning:

Into such madness leap those who carp at God's idleness because he did not in accord with their judgement establish the universe innumerable ages before. . . . As if within six thousand years God has not shown evidences enough on which to exercise our minds in earnest meditation. . . . For by this circumstance [six-day creation] we are drawn away from all fictions to the one God who distributed his work into six days that we might not find it irksome to occupy our whole life in contemplating it.\\footnote{Ibid., 161.}

This literalism includes convictions that light precedes the sun of the fourth day, that Adam is literally created from dust and Eve from his rib,\\footnote{Despite the fact that this method of forming a woman seems "a great absurdity" to "profane persons," nonetheless Adam "lost . . . one of his ribs" (Calvin, \textit{Genesis}, 132-133).} that the Fall curses all creation, and the
Flood destroys all life. So thorough is this "confusion and disorder which had overspread the earth," that Calvin allows "that there was the necessity of some renovation" on God's part. Regarding natural evils, Calvin sees "all the evils of the present life, which experience proves to be innumerable," such as "inclemency of the air, frost, thunders, unseasonable rains, drought, hail, and whatever is disorderly," as resulting from the agency of human sin.

In a word, there is nothing certain, but all things are in a state of disorder. We throw heaven and earth into disorder by our sins. For if we were in right order as to our obedience to God, doubtless all the elements would be conformable to us and we should thus observe in the world, as it were, an angelic harmony.

Concerning predation, Calvin asks: "Whence comes the cruelty of brutes, which prompts the stronger to seize and rend and devour with dreadful violence the weaker animals?" He claims that if "the stain of sin had not polluted the world, no animal would have been addicted to prey on blood, but the fruits of the earth would have sufficed for all, according to the method which God had appointed." Marco Terreros has noted in this context that, for Calvin, Isaiah's eschatological descriptions of future peaceful relationships among animals and between these and humankind are nothing less than a future reflection of past world conditions before the entrance of sin. Just "as if the Prophets had said that..."  

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1He writes: "God certainly determined that he would never more destroy the world by a deluge" (ibid., 283).

2Ibid., 286.

3I.e., scorching heat.

4Ibid., 177. Calvin refers to this disorderliness as ἀταράξια (Institutes, 1:604).

5Calvin, Jeremiah, 5:25.


7Ibid., 216.
that golden age will return in which perfect happiness existed, before the fall of man and the shock and ruin of the world which followed it."1

Calvin sees the Fall implicating and subverting the whole natural order, with all diseases having human sin as their primary cause.2 The perversion of the whole order of nature by Adam's sin went "through all regions of the world," carrying "the most filthy plagues, blindness, impotence, impurity, vanity and injustice."3 Adam "consigned his race to ruin by his rebellion when he perverted the whole order of nature in heaven and on earth. . . . There is no doubt that . . . [the creatures] are bearing part of the punishment deserved by man, for whose use they were created."4 With the unleashing of this sin-induced disorder, "the earth's fertility was diminished and such things as briers, thorns and bugs came into being,"5 and animals which are originally submissive become savage and threatening, and they are "liable to vanity, not willingly, but through our fault."6 According to Calvin, they represent a corruption and a degeneration from the original creation.7 This leads to his theodical affirmation that all these

many things which are now seen in the world are rather corruptions of it than any part of its proper furniture. For ever since man declined from his high original [state], it became necessary that the world should gradually degenerate from its nature. We must

1Terreros, 71, n. 1.


3Calvin, Institutes, 1:246.

4Ibid.

5Ibid., 104.

6Ibid., 105.

7Ibid.
Williams sees this "pessimistic" position as more conducive to Paul, Chrysostom, and Luther, but not Calvin.Regarding this "tradition" which holds sin liable for the sabotage of the natural order, Williams sees the Genevan Reformer as aware of, but not defending it.

Attempting to substantiate this, Williams notes that Calvin writes: "Notwithstanding I say that it is the same earth which was created in the beginning." In response, one can agree that Calvin expresses reservation regarding commentators who extend Edenic conditions over every region of the world, and see Eden as the first-fruits of creation and a gift God delighted to give to this Adam and Eve. But this must not be done at the expense of overlooking that Calvin has some special nuance of "same" in mind, since in the very contexts of Calvin's writings from which Williams attempts to establish his point, we find Calvin affirming that if the earth had not been cursed on account of the sin of man, the whole—as it had been blessed from the beginning—would have remained the fairest scene both of fruitfulness and of delight; that it would have been, in short, not dissimilar to Paradise, when compared with that scene of deformity which we now behold.

Thus, Williams apparently misrepresents Calvin's position, for the Reformer clearly states that were it not for sin, the whole "earth," not just Eden, would have remained "not dissimilar to

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1Ibid., 104. Peter Huff sees Calvin as holding all nature, "no matter how humble or harmful, as a vehicle for the self-disclosure of its Maker" ("Calvin and the Beasts: Animals in John Calvin's Theological Discourse," JETS 42 [March 1999]: 69). Unless placed in a context, however, with the statements from Calvin above, Huff's remark can be misconstrued to affiliate Calvin with a more fideistic, panglossianism theodical tradition than warranted.


3Ibid.

4Calvin, Genesis, 114.
Paradise.” The fairest inference from Calvin here is that he leans in the traditional direction of human sin being liable for the sabotage of the natural order. The original Edenic paradise would have remained, but due to sin the natural order is now cursed, dissimilar and deformed. In the same vein, Calvin affirms, in relation to thorns and thistles, that the earth will not be the same as it was before, producing perfect fruits; for he declares that the earth would degenerate from its fertility, and bring forth briars and noxious plants. Therefore, we may know, that whatsoever unwholesome things may be produced, are not natural fruits of the earth, but are corruptions which originate from sin.1

Thus, in claiming that this is the same earth as the original, Calvin likely means: “This is still God’s creation, albeit now in a severely sin-generated condition of decay.”2 Whatever the case, it has been established that Calvin sees sin as corrupting an originally perfect creation.

John Wesley (1703-1791)

John Wesley, another biblical literalist,3 affirms that sin sabotaged the original creation. The fulcrum of his theodicy begins by taking Genesis literally, particularly the phrase “very good.” Wesley recounts God’s approbation of His works as very good, but by contrast notes, How far is this from being the present case! In what a condition is the whole lower

1Ibid., 174.

2By analogy, consider a city that is devastated by an earthquake. It is still the “same” city even though survivors could truthfully say: "Things will never be the same again."

world!—to say nothing of inanimate nature, wherein all the elements seem to be out of
course, and by turns to fight against man. Since man rebelled . . . in what a state is all
animated nature!1

Wesley holds that prior to sin there is no kind of evil,2 but all creatures are subjected "to vanity,
to sorrow, to pain of every kind, to all manner of evils,"3 at the Fall. In relation to "the present
state of things,"4 and the premise that God is merciful toward all living things, Wesley asks,

How comes it to pass, that such a complication of evils oppresses, yea, overwheels
them? How is it that misery of all kinds overspreads the face of the earth? This is a
question which has puzzled the wisest philosophers in all ages: and it cannot be answered
without having recourse to the oracles of God.5

In response to his own question, "Why is there pain in the world?" Wesley's succinct
answer is: "Because there is sin: Had there been no sin, there would have been no pain."6 He
posits that prior to the Fall the man was not liable to death or pain;7 even attributing weariness8
and wrinkles9 to human rebellion. Prior to sin, in addition, there are "no impetuous currents of
air; no tempestuous winds; no furious hail; no torrents of rain; no rolling thunders, or forky

1Wesley's Works, 6:245.

2Ibid., 243.

3Ibid.


5Ibid., 242.

6This is from his sermon entitled, "God's Approbation of His Works" (ibid., 215). By 'approbation' is meant the action of formally approving something as good or true, or expressing oneself satisfied with anything; i.e., God declaring His creation "very good."

7Ibid., 209.

8Ibid.

9Ibid., 221.
lightnings." In the botanical realm, prior to the Fall, "there were no weeds, no useless plants, none that encumbered the ground; much less were there any poisonous ones, tending to hurt any creature; but everything was salutary." Regarding lunar tides, Wesley says "it is certain she had not hurtful, no unwholesome influence on any living creature." While some "ingenious men have imagined [that stars] are ruined worlds," Wesley is certain "that they did not either produce or portend any evil." From these statements it is clear that Wesley sees the prelapsarian natural order as perfect, and the curse as having affected every corner of creation. For Wesley, the non-human realm still reflects "the gracious design of its great Creator."

Regarding animals, Wesley queries: "What was the original state of the brute creatures, when they were first created?" He labels some creatures as the "grosser element," who are "of a more stupid nature; endowed with fewer senses," some "but one degree above vegetables." In the context of mentioning whales, reptiles, and insects, Wesley affirms that "none of these then

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1Ibid., 210
2Ibid., 211.
3Ibid.
4Ibid.
5Wesley contends that "before the flood" the earth "retained much of its primeval beauty and original fruitfulness"; prior to the deluge "the globe was not rent and torn as it is now" (ibid., 6:56).
6Ibid., 211.
7"The General Deliverance," ibid., 244. The clear interpretation of this statement is that the beasts are not now as they were when they left the Creator's hand.
8Ibid., 212.
attempted to devour, or in anywise hurt, one another. All were peaceful and quiet,"² exhibiting "a kind of benevolence to each other."³ Regarding predation, Wesley sees the "very foundations" of creaturely natures to be presently "out of course; turned upside down";³ only a shadow of the original good can now "be found in any part of the brute creation." In contrast, we now find "savage fierceness" and "unrelenting cruelty . . . invariably observed in thousands of creatures";³ animals tear the flesh, suck blood, and crush bones.⁴ The post-Edenic disposition of creatures is that now the "immense majority of creatures, perhaps a million to one, can no otherwise preserve their own lives, than by destroying their fellow creatures."⁵

Almost all . . . devour one another, and every other creature which they can conquer. Indeed, such is the miserably disordered state of the world at present, that innumerable creatures can no [sic] otherwise preserve their own lives than by destroying others. But in the beginning it was not so.⁶ The paradisiacal earth afforded a sufficiency of food for all its inhabitants; so that none of them had any need or temptation to prey upon the other. The spider was then as harmless as the fly, and did not lie in wait for blood. The weakest of them crept securely . . . [without anything] to make them afraid. Meantime, the reptiles of every kind were equally harmless . . . There were no birds or beasts of prey; none that destroyed or molested another; but all the creatures breathed, in their several kinds, the benevolence of their Creator.⁸

¹Ibid.

²Ibid., 245.

³Ibid., 246.

⁴Ibid.

⁵Ibid.

⁶Ibid., 247.

⁷If things were not so in the beginning, then the simple, but profoundly definitive notion is that nature is not in its original Creator-intended condition. Wesley would agree with George Bugg, who thinks it unphilosophical for accommodationists "to reason from the operations of nature to the origin of nature" (Bugg, Scriptural Geology, 1:132).

⁸Wesley's Works, 6:212-213.
Thus we see that Wesley believes that prior to human sin there was no predation of any type, even in the animal kingdom. It is clear, then, that for Wesley a very good creation, from an all-loving God, would be free of any predation or fear, even down to the realm of insects, which would breathe in the benevolence of their Creator.” To say Wesley may have qualified such a belief if only he had access to the data of soon-coming geological studies would not only be pure conjecture, but such a suggestion would serve as a partial concession to the main thesis of this dissertation; i.e., that early nineteenth-century geological and paleontological interpretations caused some Christians to recast traditional notions of God’s goodness and the effects of the Fall on the natural order.

Even the outward appearances of many creatures, according to Wesley, are not as originally created. Creatures that initially had a “beauty which was stamped upon them when they came first out of the hands of their Creator,” now took on a horrid disposition, shocking to behold. They are “not only terrible and grisly to look upon, but deformed”¹ to a high degree. These ugly features are augmented with pain “from a thousand causes,” including innumerable diseases, the inclemency of seasons, and every form of natural evil.² According to Wesley, human sin did not just bring death into the sub-human nature order, “but all its train of preparatory evils; pain, and ten thousand sufferings,” including any “irregular passions and unlovely tempers” which perforate “this season of vanity.”³

¹Ibid., 247.
²Ibid.
³Ibid.
Though Wesley is not versed in geology, he is somewhat conversant with what he called fossils\(^1\) as evidenced in a 1780 journal entry, in which he records: 

> At the desire of some of my friends, I accompanied them to the British Museum. What an immense field is here for curiosity to range in! . . . Seven huge apartments are filled with curious books; five with manuscripts; two with fossils of all sorts, and the rest with various animals. But what account will a man give to the Judge of quick and dead for a life spent in collecting all these?\(^2\)

He places fossils on the ladder of life somewhere between dirt and plants, stating that they are part of "a golden chain . . . let down from the throne of God"; an exactly connected series of beings, from the highest to the lowest; from dead earth, through fossils, vegetables, animals, to man." This reveals his belief that they are inorganic when he writes of those, like Ray, who diligently search out and explain "the nature of stones, metals, minerals, and other fossils . . . [and that] many properties of natural bodies have been discovered; of fossils in particular."\(^3\)

Such statements reveal that, despite his fleeting knowledge of fossils, Wesley had a skewed understanding of what they actually were and thus was not too deeply moved as to what they implied. In light of his position on the origin of animal death, however, it is not unreasonable to surmise a much stronger reaction on his part had he been apprised that fossils were actually the remains of once-living things. Would he have still held to the absolute

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\(^1\)Ibid., 213. See also ibid., 13:485-86, sections 14-17.

\(^2\)Ibid., 4:194-95.

\(^3\)Ibid., 6:213. Regarding natural theology, it must be noted that Wesley adheres to traditional design arguments, freely utilizing the works of physicotheologists Ray, Derham, Niewentyt, and Mather, et al. This ultimately culminates in the publication of his, *A Survey of the Wisdom of God in the Creation: or, A Compendium of Natural Philosophy* (London: J. Fry, 1777), a work which merely abridges Bonnet's, *The Contemplation of Nature*. 

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goodness of God and a prelapsarian death-free natural order if he was confronted with the alleged paleonatural evil depicted, for example, in the Karoo formation? Wesley gives no indication that he was aware of mass fossil graveyards. At any rate it is unlikely that such would detour him from his conviction that the original created order was without any mixture of evil, based solely on the divine pronouncement of the whole system being "very good."

How does Wesley account for the vast amount of present animal suffering? His answer allots the possibility that animals may share future immortality with man. He takes the question of whether "the brute creation will always remain in this deplorable condition?"\(^1\) as a rhetorical question. His emphatic response is, "God forbid that we should affirm this; yea, or even entertain such a thought."\(^2\) Wesley believes "the whole brute creation will then [in the final consummation], undoubtedly, be restored,"\(^3\) and "delivered from the bondage of corruption."\(^4\)

\(^1\)Wesley's Works, 6:248.

\(^2\)Ibid.

\(^3\)Ibid., 249. Wesley's use of the word "restore" here implies that this coming perfection and death-free eternity is merely a return to the former, prelapsarian mode of the natural order. All horridness will be exchanged for "primeval beauty" (ibid.). Such certainly comports well with his sermon, "The New Creation," where Wesley contends that the coming "universal restoration" (ibid., 290) will be devoid of hurricanes, furious storms, terrifying meteors, and perhaps even rain" (ibid., 291). Likewise, the future state will be destitute of intense cold, extreme heat, jarring or destructive principles like earthquakes, horrid rocks, frightful precipices, wild deserts, barren sands, impassable morasses, unfruitful bogs, thorns, briars, thistles, any fetid weed or poisonous, hurtful, or unpleasant plant, no venom, no claws, no flesh-grinding teeth (ibid., 293-295). Even though Wesley in this context says this new existence "shall be a more beautiful Paradise than Adam ever saw" (ibid., 294), it comports well with his description of the pre-fallen earth, given in his sermon, "God's Approbation of His Works."

\(^4\)Ibid., 248. Peter Harrison suggests that Wesley may have initially picked up this position from his father ("Animal Souls, Metempsychosis, and Theodicy in Seventeenth-Century English Thought," 528, n. 40).
"they themselves also shall be delivered."¹ There will be no rage "found in any creature, no fierceness, no cruelty, or the thirst of blood."² The God of "tender regard for even his lowest creatures . . . will make them large amends for all they suffer."³ And as a "recompense for what they once suffered . . . they shall enjoy happiness suited to their state, without alloy, without interruption, and without end."⁴ Wesley foresees that some will raise an "objection against the justice of God" based on His allowing "numberless creatures that never had sinned to be so severely punished." Such an objection vanishes away, according to Wesley, if we consider that something better remains after death for these poor creatures," which will in eternity receive "ample amends for all their present sufferings."⁵

As if anticipating the objections of some who would use paleonatural evil against God's goodness, Wesley sees such as "cavils of minute philosophers" and "vain men"⁶ are grounded upon an entire mistake; namely, that the world is now in the same state it was at the beginning. And upon this supposition they plausibly build abundance [sic] of objections. But all these objections fall to the ground, when we observe, this supposition cannot be admitted. The world, at the beginning, was in a totally different state from that wherein we find it now. Object, therefore, whatever you please to the present state, either of the animate or inanimate creation, whether in general, or with regard to any particular instance; and the answer is ready:—These are

¹Wesley's Works, 6:248.
²Ibid., 249.
³Ibid., 250.
⁴Ibid., 249-250.
⁵Ibid., 251. For a select list of luminaries in the last three centuries who entertain the possibility that sub-rational suffering may be compensated for in the afterlife, see Robert Wennberg, 126-134; and Keith Thomas, Man and the Natural World (New York: Pantheon, 1983), 137-142. Those defending the legitimacy of the redemption of brutes highlight Rom 8:19-22, which they believe portrays all creation as awaiting redemption.
⁶Wesley's Works, 6:213.
not now as they were in the beginning.\(^1\)

As such the present is not as it was originally intended by God, which Wesley feels is sufficient to rebut those who imply they could have designed a better world than God.

According to Wesley, God made the world "unspeakably better than it is at present. He made it without any blemish, yea, without any defect. He made no corruption, no destruction, in the inanimate creation. He made no death in the animal creation; neither its harbingers,--sin and pain."\(^2\) In response to Soame Jenyns's\(^3\) claim that moral and natural evils must exist in the very nature of things, Wesley wrote that evil did not exist at all in the original nature of things, that it

\(^1\)Ibid.

\(^2\)Ibid.

\(^3\)Elsewhere, Jenyns perplexes Wesley on the issue of infallibility (Soame Jenyns, A View of the Internal Evidence of the Christian Religion, The Evangelical Family Library, vol. 14 [New York: The American Tract Society, n.d.]). According to Jenyns, the biblical authors told stories which were "accommodated to the ignorance and superstition of the times and countries in which they were written" (ibid., 214). "In the science of history, geography, astronomy, and philosophy," Jenyns continues, they "appear to have been no better instructed than others, and therefore were not less liable to be misled by the errors and prejudices of the times and countries in which they lived" (ibid., 215). See Jenyns, ibid., 47. In response to such claims, Wesley says it is not self-evident whether Jenyns is an atheist, deist, or Christian. If he is a Christian, avers Wesley, then "he betrays his own cause by averring that 'all Scripture is not given by inspiration of God; but the writers of it were sometimes left to themselves, and consequently made some mistakes'. Nay, if there be any mistakes in the Bible, there may as well be a thousand. If there be one falsehood in that book, it did not come from the God of truth" (Wesley's Works, 4:82). Wesley has a similar response to William Warburton, who claims the biblical writers make no considerable errors. Wesley responds: "Nay, will not the allowing there is any error in Scripture, shake the authority of the whole?" (ibid., 9:150).

Regarding Wesley's response to Jenyns, Kenneth Grider claims that such "is not a clear teaching of total inerrancy," since Wesley does not clearly state that he is "including unimportant matters when he claimed that there are no mistakes in the Bible" (Kenneth Grider, "Wesleyanism and the Inerrancy Issue," WJ 19 [Fall 1984]: 56). Grider's proposal is exceedingly unlikely, since the phenomena Jenyns raises ("history, geography, astronomy," etc.) are often considered to be unessential to matters of faith and practice. This illustrates that no matter how perspicacious past writers are, modern Christians often exhibit a bias toward defundamentalizing their forefathers. See Thane Hutcherson Ury, "The Search for the Historical Martin Luther: An Inquiry into the Uses and Abuses of Reformation History," paper for Modern Christian Theology, THST 626, Andrews Theological Seminary, August 1991.
is shameful to make such miserable excuses for the Creator who "needs none of us to make
apologies, either for him or for his creation."1 Such statements, while not using the word
theodicy, clearly show that Wesley felt the ready answer for pain and suffering even in the
animal realm could be found in the Garden of Eden. Prior to the misuse of human free will the
whole created order was in an entirely converse state than it is now.

In light of Wesley's clarity on the issue, it is hard to imagine that he is posthumously
solicited as a precursor of the evolutionary paradigm. But Nathan Bangs and T. Mason seem
do just that, portraying him as, "in a way," setting the stage for the future inclusion of
general evolutionary theories within the limits of orthodoxy.2 Brewster associates Wesley
with the alleged Augustinian notion that the "universe [was] created with the capacity and
impulse to evolve."3 But "Wesley is most commonly drawn into the Evolutionist camp" by

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1Wesley's Works, 6:214. Weslayan commentator, Adam Clarke, similarly thought that "before sin entered, there could be, at least, no violent deaths, if any death at all." But almost as if to anticipate the notion of "anticipative consequences," Clarke adds that the structure of animals' teeth leads us to believe that "God prepared them [animals] for that kind of aliment which they were to subsist on after the FALL [sic]" (The Holy Bible . . . A Commentary and Critical Notes [New York: G. Lane & C.B. Tippett, 1845], 37). Later he writes that the Fall ruined the whole universe, and brought in pains and miseries "never originally designed" (ibid., 54), and became the "source of natural and moral evil throughout every part of the globe" (ibid., 55). G. Rorison more than implies that positions such as Clarke's are based on a "sophistic exegesis" which is "the worst dis-service to the cause of divine truth" ("The Creative Week," in Replies to "Essays and Reviews," ed. E.M. Goulburn et al. [New York: D. Appleton, 1862], 287).


3Brewster, 88. Augustine is too often and too facilely labeled as a quasi-evolutionist. See the section above regarding the inference of Augustine which countermands any accommoda-tionist paradigm. See also Marvin Lubenow, "Augustine:
association, due to his having seen fit to translate Bonnet's Survey, which deals at length with the "ladder of life." Bangs and Mason take Wesley's inclusion of major chunks of Bonnet's work as definitive proof of his transformationist proclivities. This move dissolves once one recognizes, with Brewster, that even Bonnet was not presaging evolution or species sequencing of any kind in his Survey. Because everything is created de novo and maintains its fixity (i.e. species are separate links), it is a non sequitur to infer from Wesley's extended use of the scala natura that he accepts (or would later accept) organic evolution, or an actual interlinking "chain." Further, it will be recalled that Wesley's view of the "very good" prelapsarian milieu which originally came from the Creator's hand to be pain-free, predation-free, and death-free. How then could Wesley in any fashion be said to be a precursor to evolution, which by definition demands predation and death?

Thus, we have established the early classic Protestant understanding of the original created order and the effects of the original sin, based on the most reasonable inferences which can be drawn from their primary writings. This provides an important historical reference point against which to compare the traditionalist and accommodationist responses to natural evil in chapters 4 and 5. However, before assessing their theodicies we will be better prepared by looking at the recognition of paleonatural evil across various disciplines.

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CHAPTER III

SETTING THE IMMEDIATE STAGE FOR THE LOOMING PROBLEM OF PALEONATURAL EVIL ADDRESSED IN THE EARLY NINETEENTH CENTURY: THE RECOGNITION OF NATURAL EVIL IN PHILOSOPHY, LITERATURE, NATURAL THEOLOGY, AND SCIENCE

If I had been present at the Creation, I would have given some useful hints for the better ordering of the universe.

--Alfonso the Wise (13th century)

Bartlett's Familiar Quotations

If this is the best of possible worlds, what then of the others?

Voltaire, Candide

Introduction

Having sampled the views of Luther, Calvin, and Wesley regarding the effect of sin on the natural order we now turn to subsequent thought-shapers (some of whom died before the nineteenth century), who confronted the issue of natural evil. Along with the theodical reflections of pivotal thinkers such as Leibniz, Hume, and Paley, there are others whose views pulse through the veins of the early nineteenth-century British discussion. Though few of these craft formal defenses, the theodicizings of these subsequent thinkers nonetheless constitute the fertile historical, scientific, and philosophical soil which contributes to the early nineteenth-century British germinations on the theodical and theological implications of the perceived imperfections and natural
evils in the created order. The stances of most of these thinkers on natural evil are, at times, based on the most legitimate inferences from their statements on evil in general.

Several forerunners can be mentioned: English political philosopher, Thomas Hobbes (1588-1679); Cambridge Platonist; Ralph Cudworth (1617-1688); the father of

1Thomas Hobbes wrote of mankind being at constant odds with one another, living "in continual fear, and danger of violent death" (Leviathan [1651] [New York: Collier Books, 1968], 1030). Man's life is "solitary, poor, nasty, brutish, and short" (ibid.). Men are in "the natural condition of war"; in the constant "state and posture of gladiators" (ibid., 113, 101). Hobbes was, in the eyes of contemporary naturalist, Donald Worster, "well known, even notorious, for describing nature and the natural condition of mankind as a state of fear, conflict and violence" (Nature's Economy: A History of Ecological Ideas [Cambridge: Cambridge University Press, 1985], 45). While not singling out natural evil Hobbes is, however, well known for his description of this world of bellum omnium contra omnes: "the war of every one against every one" (103). Cf. Darwin's perception of this "dreadful but quiet war of organic beings. going on in the peaceful woods. & smiling woods," also noted by Augustin Pyramus de Candolle and Charles Lyell (Charles Darwin's Notebooks, 1836-1844: Geology, Transmutation of Species, Metaphysical Enquiries, transcribed and ed. Paul H. Barrett, Peter J. Gautrey, Sandra Herbert, David Kohn, and Sydney Smith [Ithaca: Cornell University Press, 1987], 114). Whether sub-rational creation is included in this axiom is a matter of interpretation. But novelist and satirist, Jonathan Swift (1667-1745), clearly understood Hobbes to include animals in this proposition: "Hobbes clearly proves that every creature lives in a state of war by nature" ("On Poetry: A Rhapsody" [1733], in Jonathan Swift: The Complete Poems, ed. Pat Rogers [New Haven: Yale University Press, 1983], 530, lines 335-336). Swift goes on in the immediate context to refer to a whale devouring herring, and "a fox with geese his belly crams; a wolf destroys a thousand lambs" (ibid., lines 339-342).

2The Cambridge Platonists were synthesizers who placed a high premium on subjective experience, and who had acumen in scientific and theological studies.

3In partial reaction to Hobbes, Ralph Cudworth pens The Intellectual System of the Universe, 2 vols. (London: Printed for Richard Royston, 1678; facsimile reprint, New York: Garland Publishing, 1978). See Frederick J. Powicke, The Cambridge Platonists (Cambridge: Harvard University Press, 1926), 119-126. While Cudworth does not theodize in a formal manner, according to Birch, in a secondary manner his work is "an exposé of evil in a world that was supposed to be created once and for all perfect by an all-powerful Being" (Louis Charles Birch, Nature and God [Philadelphia: Westminster Press, 1965], 22). "Everything in the garden was not rosy; it was not the best of all possible worlds. . . . Cudworth raised the issue clearly enough. But he was unable to find a way out of the dilemma . . . [since God is an] omnicompetent engineer" (ibid., 23).
modern chemistry, Robert Boyle (1627-1691);\(^1\) Cambridge botanist and father of English natural history, John Ray (1627-1705);\(^2\) natural theologian, William Derham (1657-1735);\(^3\) Archbishop William King (1650-1729);\(^4\) Joseph Butler (1692-1752);\(^5\) Parliament

\(^1\)Boyle, the greatest investigator from Galileo to Newton, sees some imperfections in nature as necessary to justify God's existence (Worster, 41).

\(^2\)Ray has been referred to as the "Aristotle of England" (Basil Willey, The Eighteenth Century Background [New York: Columbia University Press, 1940], 34). He was convinced that God conserves His works in the same state and condition in which He first made them; a position which was sure to raise collective eyebrows by future thinkers, not to mention the Platonists under the same Cambridge roof. His most famous work, The Wisdom of God Manifested in the Works of the Creation, was heavily plagiarized by William Paley and, according to Charles Raven, was the ancestor to The Origin. See John Ray, The Wisdom of God Manifested in the Works of the Creation [1691] (London: R. Harbin, 1717); and Charles Raven, John Ray: Naturalist--His Life and Works (Cambridge: Cambridge University Press, 1950), 452. Ray sees meticulous, if not omnibenevolent, providence in everything from the human eye to the tiger's camouflage. He compensated the annoyance of pernicious insects by affirming their medicinal benefit and that they were useful as agents of divine judgment, as with the plagues on Egypt. See Ray, 374-75. And while he is not oblivious to "errors and bungles" in the natural order, these dysteleologies were blamed on such ethereal notions as an organism's "vegetative soul" and "plastic nature."

\(^3\)William Derham, Physico-Theology: Or a Demonstration of the Being and Attributes of God, from His Works of Creation (London, 1713; reprint, Arno Press, 1977). Derham represents eighteenth-century teleological optimism, and feels no need to theodize for nature's alleged imperfections, believing that nature has no "rude bungling pieces;" in her we do not "espy any Defect or Fault" (ibid., 38, 82, 265). Natural theologians like Derham, Ray, and Paley appear so predisposed to see divine goodness in everything, that they do not feel obligated to account for the manifest scars etched across the entire slate of the natural order. John Dillenberger points out that in ascribing purposes to the most embarrassing aspects of the universe, "it is not surprising that this type of natural theology was unconvincing in the long run" (Science and Religious Belief: A Selection of Recent Historical Studies [London: University of London Press, 1973], 186-187).

\(^4\)King, 96-148.

\(^5\)Joseph Butler, The Analogy of Religion [1736] (New York: Wm. L. Allison, n.d.). According to Kramer, Butler faced the issue of profligacy in nature, but points "to the scriptural revelation that immortality is impossible on this earth" (35). Kramer declares that theodicy is hardly touched by any of the apologetic writers following Butler (ibid., 189-190). Regarding waste, Butler wrote: the numerous seeds of vegetables and bodies of animals, which are adapted and put in the way, to improve to such a point or state of natural maturity and perfection, we do not see perhaps that one in a million actually does. . . . And I cannot forbear adding . . . that the appearance of such an
member, Soame Jenyns (1704-1787);¹ Swedish naturalist, Carl Linnaeus, (1707-1778);²
Lutheran divine and advocate of Linnaean thought, John Bruckner (1726-1804);³ and
William Smellie (1740-1795).⁴ However, while these thinkers made helpful theodical
amazing waste in nature, with respect to those seeds and bodies, by foreign causes, is to
us as unaccountable, as, what is much more terrible, the present and future ruin of so
many moral agents by themselves, that is, by vice" (286). Like Paley’s writings, Butler’s
Analogy was required reading at Tennyson’s Cambridge. See Eleanor Mattes, In

¹Jenyns is firmly ensconced in chain-of-being thinking. Soame Jenyns, "On the
Chain of Universal Being," in Disquisitions on Several Subjects (London: J. Dodsley,
Hanford, 1802), 8:23-61.

²Linnaeus aspires to give order to the natural realm, as Newton had to the heavens
(John C. Greene, The Death of Adam: Evolution and Its Impact on Western Thought
[Ames, IA: Iowa State University Press, 1959], 131). According to Greene, it was said
in the eighteenth century that "God created; Linnaeus arranged" (ibid.). And arrange he
did; single-handedly classifying about 18,000 species (Stephen F. Mason, A History of the
Linnaeus attempts to account for the specter of animals "not only gorging on the most
beautiful flowers, but also mercilessly tearing each other to pieces"; our world appears to
him to be "a war of all against all" (quoted without reference in Worster, 46).

³John Bruckner muses on nature’s devastating economy of carnage in A Philosophical

⁴William Smellie refers to the natural order as a "general system of carnage
established by Nature" (The Philosophy of Natural History [Philadelphia: Robert Campbell,
1791], 345). In looking at the animated order, "the mind is struck, and even confounded with
the general scene of havoc and devastation which is perpetually, and every where, presented
to our view" (ibid., 336). Though Nature’s economy depends "more or less upon the death
and destruction of others," Smellie attempts to point out some advantages of "this apparently
cruel institution of Nature" (ibid., 336-337). He starts his theodicy by referring to this
institution as one of "seeming cruelty and injustice" (ibid., 337). This assertion that nature
only appears to be cruel, and animals only appear to suffer is to continue to gain wide
acceptance. Smellie offsets the hostilities of rapacious animals by asserting that "man is the
most universal destroyer"; his rapacity having "hardly any limitation" (ibid.). Man "devours
every species," and exercises a "tyrannical dominion over almost the whole brute creation"
(ibid., 337-338). "Every inhabitant of the waters depends for its existence upon rapine and
destruction," says Smellie, and the "life of every fish, for the smallest to the greatest, is one

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contributions, two additional figures led the way with more substantial theodicizing.

**Two Representative Examples of the Incipient Recognition of Paleonatural Evil in Pre-Darwinian Philosophers**

Gottfried Leibniz (1646-1716)

Pre-enlightenment Christians were under a self-imposed theological mandate to assume that God would create the best world possible. Today, theodicists credit Gottfried Leibniz as most prominently employing "best of all possible worlds" nomenclature. The "best of all possible worlds theodicy" for natural evil would become characteristic of mid-eighteenth-century optimism. Since God would will the very best of all possible scenarios, Leibniz proposed in his *Theodicy* that ours is *ipso facto* "the best of all possible worlds"; it would be impossible for an infinitely good and wise God to have continued scene of hostility, violence, and evasion" (ibid., 343). Smellie anticipates the following questions, "Why has Nature established a system so cruel? Why did she render it necessary that one animal could not live without the destruction of another?" His answer? Simply that "no answer can be either given or expected. No being, except the Supreme, can unfold this mystery" (ibid., 351).

Special Creationists adopt the main premise of the Leibnizian model that God did in fact create the best of all possible worlds. They define what is "best," however, very differently from Leibnizians. For them the Fall radically altered this perfection, and the natural order reflects the horrendous result of sin, by taking a drastic turn toward the worse. Cf. *The Revised and Expanded Answers Book*, ed. Don Batten (Green Forest, AR: Master Books, 2000), which states that, "the present 'reign of tooth and claw,' of violent death, cruelty and bloodshed, had no place in the world before Adam sinned" (ibid., 110).

See Leibniz, *Theodicy*, par. 52 and 226f. For a critique of "the best of all possible worlds" thesis, see Joumet, who holds that God could have made a better world (ibid., 109f, and 113 f.).

actualized another world. This position, referred to as the so-called optimistic thesis, is epitomized by Pope's well-known lines:

All nature is but art unknown to thee;  
All chance, direction which thou canst not see;  
All discord, harmony not understood;  
All partial evil, universal good;  
And spite of pride, in erring reason's spite,  
One truth is clear, whatever is, is right.2

In accepting these famous lines of Pope, one is locked into accepting whatever one finds in nature as good. If the Creator is all-knowing and all-good, then He surveys all possible contingents and creates the best. If wholesale and gratuitous suffering are part and parcel of His originally intended natural order, then those of the optimistic school have to say such is good. Critics of this position might ask: "Is there any level of apparently evil things which would cause the optimist to reconsider his position?" or, "Would it not be fair to expect that a very good creation from an omnibenevolent Being would not have so many entities which appear so bad?"

The central question which the optimists avoid pertains to why evil is necessary in the best of all possible worlds. A Leibnizian angle is the ad maiorem gloriam Dei3


3"To the greater glory of God."
response, where God is pictured as using sin and related evils as catalysts to augment divine grace and glory. In other words, we have a version of Paul’s statement regarding sinning so that grace may abound; God's omnibenevolence could not be fully appreciated had it not been in response to sin.1

Leibniz, typical of other optimistic theorists, is nebulous regarding whether this "fallen" world is the best of all possible worlds, and thus "does not attempt to demonstrate from the appearances of nature that this is indeed the best possible world."2 In fact, given his starting presuppositions, it is hard to avoid the conclusion that our present finite world of imperfections and sufferings is logically required, since this is the world God chose to actualize. Even though things seem bad, in the big picture any other world would have been worse; i.e. would have had more evil. Though ours is not the worst of all possible worlds, critics of this Leibnizian theodicy feel an all-loving God could, would, or should have created a world with fewer dysteleological conundrums.3

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1This has led to the "O felix culpa" ("O happy fault/guilt!") approach to evil, where believers rejoice over the Fall, without which Calvary's love would never have been experienced. The phrase has Roman liturgical origins in the Exultet, the paschal hymn of Holy Saturday. See the references to Reformation-era usages of "fortunate fault" in Arnold Williams, 114, n. 4.

2Hick, Evil and the God of Love, 165.

3Voltaire picks this theme up in his satirical novel, Candide [1759], trans. and ed. Peter Gay (New York: St. Martin's Press, 1963). According to David Williams, "In Candide Voltaire aimed to seize Optimism by the throat" (Voltaire: Candide [London: Grant & Cutler, 1997], 12). The book's main character, Dr. Pangloss, is portrayed as experiencing a cascade of one unbelievable evil after another, all the while repeating the Leibnizian mantra: "This is the best of all possible worlds." The bad things that happen to the other characters in the book are disposed of in similar fashion, claiming that some good will come of the evils. Thus, the use of the term "panglossian" has arisen to describe any similar indefatigable optimism no matter what amount of evil exists (ibid., 14).
David Hume (1711-1776)

The worldview of Scottish philosopher David Hume is undergirded by natural law. Thus, any notion of a miracle-working God is vigorously jettisoned. His *Dialogues Concerning Natural Religion*¹ is thought by some to be "a devastating repudiation of the argument for God from design in nature."² But Wallace Matson believes Hume’s intent to be slightly more modest:

Hume set out in his Dialogues not to demolish ‘religion’ altogether, but to accomplish a definite and limited talk: to show that the inference from the alleged design in nature to an infinitely wise, powerful, and good Author of nature is invalid. . . . Hume can be credited with what is rare in philosophy: a definitive refutation.³

According to Demea, a key figure in Hume’s *Dialogues*, the whole earth, “is polluted. A perpetual war is kindled amongst all living creatures. Necessity, hunger, want stimulate the strong and courageous: Fear, anxiety, terror, agitate the weak and infirm.”⁴ Philo adds that nature offers "curious artifices" calculated,

> to embitter the life of every living being. The stronger prey upon the weaker, and keep them in perpetual terror and anxiety. The weaker too, in their turn, often prey upon the stronger, and vex and molest them without relaxation. Consider

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¹Hume, *Dialogues Concerning Natural Religion*, hereafter cited as *Dialogues*. Parts X and XI are most poignant to the theodicy issue. See also his *A Treatise of Human Nature*, ed. L. A. Selby-Bigge (Oxford: Oxford University Press 1958), bk. 3.

²Birch, 24. It is now known that in 1839 Darwin read Hume’s *Dialogues* and the *Natural History of Religion*. Hume’s metaphysics, buttressed by sympathetic readings of Malthus and Comte, was to have a critical influence on the young Darwin.


⁴*Dialogues*, 194.
that innumerable race of insects, which either are bred on the body of each animal, or flying about infix their stings in him. These insects have others still less than themselves, which torment them. And thus on each hand, before and behind, above and below, every animal is surrounded with enemies, which incessantly seek his misery and destruction.¹

Demea contributes a "pathetic enumeration" of "external insults"; a "frightful catalogue of woes" lifted directly from John Milton.

Dameoniac phrenzy, moping melancholy, And moon-struck madness, pining atrophy, Marasmus and wide-wasting pestilence, Dire was the tossing, deep the groans; Despair Tended the sick, busiest from couch to couch; And over them triumphant Death his dart Shook, but delay'd to strike, though oft invok'd With vows, as their chief good and final hope.²

In light of these types of evils, Philo asks how one can "assert the moral attributes of the Deity, his justice, benevolence, mercy, and rectitude, to be of the same nature with these human virtues in human creature?"³ Why the glaring incongruity between God's benevolence and mercy and the benevolence and mercy of men? Philo asserts that some "mystics" respond to "racking pains" by resorting to God's divine "attributes, infinitely perfect but incomprehensible."⁴ Another character, Demea, refers to "the "mazes and

¹Ibid., 194-195.

²Ibid., 195-196. Hume possibly was using an inferior edition of Milton, since minor omissions, spelling, and punctuational discrepancies exist. See John Milton, 249. This "monstrous crew" of evils, according to Milton, was brought on by the "inabstinence of Eve" (ibid., 248).

³Dialogues, 198. Cleanthes contends later, "we must for ever find it impossible to reconcile any mixture of evil in the universe with infinite attributes" (ibid., 203).

⁴Ibid., 199.
intricacies of [God's] providence," and that the present evil phenomena will be rectified "in some future period of existence." Nonetheless, as Philo asserts, such evil is not "what we expect from infinite power, infinite wisdom, and infinite goodness." If there is such a God, "Why is there any misery at all in the world?"

Two of the most telling and underappreciated statements in this dialogue are Philo's following claims. First, he believes it is not sufficient for theodicists to establish "mere possible compatibility" between a good God and misery. Second, theodicists must prove God's infinite power and goodness "from the present mixed and confused phenomena, and from these alone."

By way of analogy, Hume invites us to imagine a house which was not "agreeable." The whole economy of the structure included "noise, confusion, fatigue, darkness, and the extremes of heat and cold." According to Hume, upon finding such "inconveniences and deformities" one should immediately "condemn the architect." A

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1Ibid. Later, Philo maintains that while there may be "good reasons" why God allows bad things, they are unknown to us. Further, "the mere supposition, that such reasons exist, may be sufficient to save the conclusion concerning divine attributes, yet surely it can never be sufficient to establish that conclusion" (ibid., 207).

2Ibid., 201.

3Ibid. Hume's reference here is to human misery, but there seems to be no reason why such cannot also be extrapolated to accommodate the problem of sub-human suffering.

4Ibid.

5Ibid., 204.

6Ibid., 205. A traditionalist response to the assumption that the house has always been this way is that the house has not always had these "deformities," but they are either later additions or the result of not properly maintaining the house; if one could inspect the
question then arises: "Is the world considered in general, and as it appears to us in this life, different from what a man or such a limited being would, beforehand, expect from a very powerful, wise, and benevolent Deity?"\(^1\)

Regarding animal pain as natural evil, Hume asserts that it seems "plainly possible to carry on the business of life without any pain. Why then is any animal ever rendered susceptible of such a sensation?"\(^2\) According to Hume, since the Author of nature has inexhaustible power, there seems no reason to have exercised a "strict frugality\(^3\) in his dealings with his creatures." In this context, Hume refers to each creature as having limited endowments; i.e., ones strictly required for survival. Like a gazelle's speed pitted against the lion's power, whatever anatomical advantage a creature may possess, is proportionally abated in others. But these attributes are bestowed with such a rigid economy, "that any considerable diminution must entirely destroy the creature."\(^4\) Hume infers that God should have indulged his creatures with more endowments "to secure the happiness and welfare of the creature, in the most unfortunate concurrence of circumstances."\(^5\) Why, if the creator is good, do we find instead that every course of life is "so surrounded with precipices, that the least departure from the true path, by mistake

\(^{1}\)Ibid.

\(^{2}\)Ibid., 206.

\(^{3}\)I.e., careful or sparing in use; economical.

\(^{4}\)Ibid., 207.

\(^{5}\)Ibid., 208.
or necessity, must involve us in misery and ruin?" According to Hume, there is no humanly satisfactory reason for God to maintain this rigid frugality. It would be far better for God to have "his power extremely limited, to have created fewer animals, and to have endowed these with more faculties for their happiness and preservation."2

After this frugality argument, Hume moves to arguments from excess and profligacy. He refers to the "inaccurate workmanship of all the springs and principles of the great machine of nature," from which arises the misery. "It must be acknowledged," he adds, "that there are few parts of the universe, which seem not to serve some purpose, and whose removal would not produce a visible defect and disorder in the whole."3 Thus, winds assist in sailing, but also turn into deadly hurricanes; and sun and rain both nourish and destroy crops. Philo claims that there is nothing so advantageous in the universe, but what frequently becomes pernicious, by its excess or defect, nor has nature guarded, with the requisite accuracy, against all disorder or confusion. The irregularity is never, perhaps, so great as to destroy any species; but is often sufficient to involve the individuals in ruin and misery.4

The universe, in Philo's mind, is "an immense profusion of beings . . . [of] prodigious variety and fecundity." A closer inspection reveals how hostile and destructive [they are] to each other! . . . How contemptible or odious to the spectator! The whole presents nothing but the idea of a blind nature, impregnated by a great vivifying principle, and pouring forth from her lap.

1Ibid.
2Ibid.
3Ibid., 209.
A seminal Humean contention, then, is that the Creator generated by the argument to design for a mechanical universe will itself be mechanistic. Thus, as with deism, the best theodicy can only argue for a mechanic, and certainly not the God of Christianity and His attributes as traditionally understood. The type of god implied by the data of natural history, therefore, does not invoke grateful awe because the only options available for embrace are Deism or Malthism. Neither of these reflect "the God of Christianity"; the first providing a god unconcerned with evil, and the second, offering a god who is the originator of it. So while Humean-like thinkers may not make God obsolete, what they actually do, if they are correct, is to unveil a god quite out of harmony with traditional theological categories.

Two Representative Examples of the Recognition of Natural Evil and Paleonatural Evil from Literature

In our contemporary context it is judicious to heed the reminder that "we can best understand the poetry of an earlier time by immersing ourselves in its contemporary culture. . . . But the reverse is also true. . . . We can best understand the thought--even scientific thought--of another age by reading the poet who thoroughly knew and felt and expressed it." The cosmic angst, say of a Tennyson, adds "an emotional dimension

1Ibid., 211.

2A response to Hume can be found in the William Paley.

which for twentieth-century readers is indispensable to a full understanding." Poets have long reflected on the cosmic dread which accompanies the hostile nature order of our planet. We find this early on in the Epicurean poet, Lucretius (99-55 BC), in his classic, De Natura Rerum, and then much later in the metaphysical poet, John Donne (1572-1631), Dean of St. Paul's Cathedral. Because of the Fall, Donne believes all creation

1Ibid. "And if it is true that the poetry of a given time may take its unique intellectual stance, and some part of its emotional impetus, from revolutionary scientific discovery, it is equally true that the great scientific revolutions of earlier periods are never fully comprehensible to us in the absence of their contemporary poets" (ibid., 38).

2Lucretius, On the Nature of Things, trans. Charles E. Bennett (New York: Walter J. Black, 1946). Lucretius is still required reading in many liberal arts courses. Of the present faults which beset our natural world, he writes: "From heaven's own workings would I dare affirm / And prove with many an argument besides-- / That in no wise the nature of the world / Was made for us by will divine; for oh / How great the faults wherewith it is beset" (ibid., 240). In this same context he winces that half of nature is seized by beast-haunted woods, cliffs, marshy wastes, and two-thirds by intolerable heat. After a "ceaseless fall of frost" whatever tillable ground nature leaves, she chokes by her own exuberance. Were it not for our groan and sweat against earth's "stubborn soil" and brambles would prevent the "goodly fruits" from rising. Even if the farmer wins this battle, he still has to contend with parching sun, destroying rains, and furious winds with their wintry breath. He goes on to ask other theodical questions like: Why does nature grow fearsome tribes of savage beasts to wreak havoc on mankind on land and sea? and, Why do the seasons bring distempers with them. He writes of a "void" made in Nature; "all of her bonds cracked." Even his grave which contains man's bones will erode away "atom and void, atom and void, into the unseen for ever" (quoted in C.F.G. Masterman, Tennyson as a Religious Teacher [London: Methuen, 1910], 104). In a dramatic monologue of Lucretius, Tennyson paraphrases him thus: "I saw the flaring atom-streams / And torrents of her myriad universe, / Ruining along the illimitable inane, / Fly on to clash together again, and make / Another and another frame of things, / For ever." It is the contention of Stevenson that pre-Lyellian generations would have regarded the De Rerum Natura as a fantastic nightmare (Stevenson, 77).

3This label, intended by Samuel Johnson to be derogatory, denotes that Donne displayed a "boastful exhibition of wit and learning in fanciful 'conceits' and extravagant metaphors" (ODCC [London: Oxford University Press, 1958], s.v. "metaphysical poets."

4Donne writes of the "disfigurements of this present world" in his Anatomy: "Are these but warts, and pock-holes in the face / Of th' earth? Thinke so; but yet confesse, in this / The worlds proportion disfigured is." John Donne, The Anatomy of the World [1633], in The Complete English Poems of John Donne, ed. C.A. Patrides (London: Dent,
now has a poysonomic tinture,"¹ "Tis all in pieces, all coherence gone,"² this world is a lame cripple,³ and "rotten at the hart,"⁴ "beauty decayd,"⁵ and is now an ugly monster.⁶ In contrast to such pervasive decay in nature, "only our love hath no decay."⁷

John Milton (1608-1674)

If Donne is right, and all coherence is gone, John Milton assumes the mantel with slightly more optimism, which is indicated by his stated purpose for Paradise Lost: to "justifie the wayes of God to men."⁸ His approach was clearly reflective of Augustinian categories in that he holds to an original perfect creation which was lost through the agency of sin.

¹Ibid., line 180.
²Ibid., 335, line 213.
³Ibid., line 238.
⁴Ibid., line 242.
⁵Ibid., line 249.
⁶Ibid., line 327.
Of man's first disobedience, and the fruit
Of that forbidden tree, whose mortal taste
Brought death into the world, and all our wo [sic] . . .

John Hick sees such a theodicy as merely on a continuum, including St. Paul and Augustine, which has overinterpreted the early pages of Genesis, forsaking the primitive simplicity of the Adamic Mythic. Adam and Eve are not set in a paradisal state, according to Hick, but merely in an earthly garden. In short, aside from Milton's artistic flare, he took the Mosaic account of the Fall literally, even to the point that all natural evil is the result of sin, meaning that the Miltonian theodicy allows that the Fall perhaps resulted in climatological changes and carnivory.

Alfred Lord Tennyson (1809-1892)

Few thinkers embody the zeitgeist bracketed by Paley and Darwin, than Tennyson. The death of his closest friend, Arthur Hallam, piqued an existential urgency in young Tennyson, giving him pause to probe theodical issues. One result was his hugely successful,

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1Milton, bk. I, lines 1-3, p. 16.

2Paul has incumbered the Adamic myth with his theology, and thus we must, according to Hick, "detach this myth from its customary framework of Pauline theology" (Hick, Evil and the God of Love, 209).

3Ibid.

4Ibid.

5Milton, bk 10, 651 f.

In Memoriam, perhaps the most popular English theodicy of the mid-nineteenth century. An intellectual feast for the Victorian mind, this work contains one of the most quoted lines of any work from that era, "Nature, red in tooth and claw," which became a poignant catch phrase to describe natural history's rapacity and apparent wantonness. The poem's content verifies that notions of geological deep time, mass extinctions, natural selection, and proto-evolutionary scenarios are "in the air" long before The Origin.

1Lovejoy, The Great Chain of Being, 219.

2Alfred Lord Tennyson, "In Memoriam," stanza 56, line 15, in The Poems of Tennyson, 3 vols., ed. Christopher Ricks (Berkeley: University of California Press, 1987), 2:373. All extracts below from Tennyson's poetry are taken from Ricks.

3In Memoriam unfolded over two decades, completed about 10 years before The Origin, with some reason to believe that the "tooth and claw" clause may have been written still a decade earlier. Eleanor Bustin Mattes believes that stanza 56 was penned in 1837 (121). On the origin of this phrase, see Robert Greenberg, "A Possible Source of Tennyson's Tooth and Claw," Modern Language Notes 71 (1956): 491-492; and Harry Rudman, "Keats and Tennyson on Nature Red in Tooth and Claw," Notes and Queries 199 (1954): 293-294.

4Geological influences in the poem are seen in the prologue, xxxiv, xxxv, xxxvi, xxxix, xlivi, lv, liv, lxix, lxv, cxv, cxii, cxiii, cxxvii, cxxvii, cxxxi, and epilogue. James Knowles chanced upon the geological stanzas, and "was so impressed and riveted by them,--for I was a student of geology at the time,--that I could not put the book down until I had read it all through and from end to end. I was caught up and enthralled by its spirit, and my eyes seemed suddenly opened on a whole new world. It made an epoch in my life and an ineffaceable impression" (quoted in Hallam Tennyson, Tennyson and His Friends [London: Macmillan and Co., 1911], 245).

5For example, Hegel reflects such progression in history in his "Philosophy of the Spirit," and Herbert Spencer's "Synthetic Philosophy" is predicated upon an "evolutionary" paradigm.


Though Tennyson comes to terms with the new geology and its gloomier implications, and seems to hold to successively higher separate creations, the frequent practice of glossing...


3Tennyson asks Edward Moxon to secure a copy of *Vestiges* on his behalf, asserting that it "seems to contain many speculations with which I have been familiar for years, and on which I have written more than one poem" (Hallam Tennyson, *Alfred Lord Tennyson: A Memoir by His Son* [New York: Macmillan, 1897], 222-23). Tennyson was so excited at the appearance of *Vestiges* that he was allegedly trembling (Paul Turner, *Tennyson* [London: Routledge & Kegan Paul, 1976], 124). Killham believes a review in *The Examiner* (Nov. 9, 1944) may have been more influential on Tennyson than the book itself (253).
In 1833 Tennyson follows an awe-inspiring cross-disciplinary study plan, including German, Greek, Italian, history, chemistry, botany, electricity, animal physiology, mechanics, and theology. This justifies Rupke's description of him as "the poetical exponent of the English school of geology," and Huxley's remark that "Tennyson was the first poet since Lucretius who understood the drift of science."

Having read the Bridgewater Treatises, Tennyson tries to maintain their optimistic reassurances of benevolence, despite the "dread factor" implied by deep time. But geology paints only half of the bleak picture, and Tennyson's Cambridge tutor, William Whewell, provides the other half. Potter suggests that Tennyson draws his initial sips of geology and

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1He had also read Hugh Miller's The Old Red Sandstone. See Hallam Tennyson, Alfred Lord Tennyson: A Memoir by His Son (New York: Macmillan, 1897), 1:26.

2Hallam Tennyson, A Memoir, 1:124. Note that geology is not on a high academic priority at this point, though it was to later become his favorite scientific discipline, culminating in numerous fossil-hunts with his friends. In Tennyson's other works, like Audley Court (1838); The Epic (1842); The Princess (1847); Edwin Morris (1851); Maud (1855); and Guess Well (1876), he makes frequent use of fossil and geological nomenclature and innuendos.

3Rupke, 225.


5See chapter 5.

6Appleman, "The Dread Factor," 35 and passim.

7See Susan Gliserman, "Early Victorian Science Writers and Tennyson's "In Memoriam": A Study in Cultural Exchange," Victorian Studies, part I (March 1975), 282, n. 4. The very prominent geologist, Adam Sedgwick, was also Professor of Geology at Trinity College, Cambridge, concurrent with Tennyson's 1828-1831 residence there.

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astronomy from Whewell,⁸ and both share a kindred spirit regarding the dreaded postulates of geology and astronomy.² Assuming his familiarity with Whewell's following statement, Tennyson may have felt the geology-generated dread writ large across the universe. Whewell writes that occasionally we are in the habit of contrasting the transient destiny of man with the permanence of the forests, the mountains, the ocean,—with the unwearied circuit of the sun. But this contrast is a delusion of our own imagination: the difference is after all but one of degree. . . . it now appears that the courses of the heavens themselves are not exempt from the universal law of decay; that not only the rocks and the mountains, but the sun and the moon have the sentence "to end" stamped upon their foreheads. They enjoy no privilege beyond man except a longer respite. The ephemeron perishes in an hour; man endures for his three score years and ten; an empire, a nation, numbers its centuries . . . ; the continents and islands which its dominion includes, have perhaps their date, as those which preceded them . . . and the very revolutions of the sky by which centuries are numbered will at last languish and stand still.³

¹Potter, "324.

²Like the other Bridgewater authors, Whewell has the task, according to Appleman, of demonstrating "that what seemed so appalling in the physical universe was, on the contrary, an integral part of some beneficent and grand design" (Appleman, "34). This shows a clear line of demarcation between the Bridgewater and Lyellian approaches. While the Bridgewater authors see signs in the world of God's caring for man, according to Gliserman, "Lyell's world is other-centered, hostile and aggressive in itself, its stability upset by volcanoes, earthquakes, and the depredations of water on land . . . a landscape full of antagonisms" (299, 303).

³William Whewell, Astronomy and General Physics Considered with Reference to Natural Theology [1833], 5th ed. (London: William Pickering, 1836), 202-203. Whewell's belief that our universe has experienced episodic paroxysms, and is one of "perpetual change, perpetual progression, increases and diminution"; the whole system tending toward "derangement" (ibid., 203), is reiterated in Tennyson's view that our earth is prey to "cyclic storms" (In Memoriam, cxviii, 11). Lucretius expresses similar sentiment: "Globes from the atoms falling slow or swift / I see the suns, I see the systems lift / Their forms; and even the systems and the suns / Shall go back slowly to the eternal drift" (quoted in Woolsey Teller, The Atheism of Astronomy [New York: The Truth Seeker Company, 1938], title page). Woolsey closes with these morbid words: "Across the sky is written in blazing stars: waste, extravagance, futility" (ibid., 121). It merits asking, "How can Whewell and Teller be looking at the same universe, agree on its perpetual derangement, and yet one sees evidence of a loving God while the other finds nothing good at all?" Gliserman contends that Whewell's strategy involves exposing the reader to such ubiquitous decay, thinking that one's negative emotional pole will make a return to God stronger (293). Whewell also attempts "to get his audience to
Having painted such cosmic dread, Whewell relays that foci constraints of his work do not permit time to "dwell on the moral and religious reflexions suggested by this train of thought."¹ Such a cosmic dread, and the implications of deep time and all its auxiliaries,² led Tennyson to see such disciplines as astronomy and geology as "terrible Muses."³

According to Mattes, Lyell tries "to conceal the disturbing religious implications of his theories,"⁴ and, surprised or not, "found that most churchmen were willing to accept almost any description of the manner of God's activity in the universe, so long as the fact of such divine activity was affirmed."⁵ Tennyson faces head-on an enigma avoided by some

invest emotionally in his own solution of a father-god, personal and caring, ordering and controlling" (ibid.). One wonders how Whewell might respond to Tennyson's statement to Queen Victoria: "You cannot love a Father who strangle[s] you" (Dear and Honoured Lady: The Correspondence Between Queen Victoria and Alfred Tennyson, ed. Hope Dyson and Charles Tennyson [Rutherford, NJ: Fairleigh Dickinson University Press, 1971], 79).

¹Whewell, 203.

²Deep time, in the Lyellian sense, is not just the passage of time, but is more accurately described by Gliserman as "destructive time" (Gliserman, part II, 445). Tennyson's description of time as "a maniac scattering dust," resonates with this perspective of deep-time destruction.


⁴Mattes, 56.

⁵Ibid., 56-57. Accordingly, Lyell cloaks and minimizes the revolutionary nature of his theory as disclosed in this confidential statement where he bluntly admits his strategy: "If you don't triumph over them, but compliment the liberality and candour of the present age, the bishop and enlightened saints will join us in despising both the ancient and modern physico-theologians... I give you my word that full half of my
natural theologians who seem too eager to adjust their theology to accommodate geological theory. He senses the shocking implications for classical spiritual values once the dark side of the new geological interpretation is grasped. From Tennyson’s words such theodical entities as deep-time suffering, death, and profligacy do not merely require a minor fine-tuning of the panglossian optimism of Paley and Butler, but demand a thorough and sober theological reassessment as the stanzas below indicate.

Tennyson broaches the question of divine purposiveness in these famous lines:

Are God and Nature then at strife,
That Nature lends such evil dreams?
So careful of the type she seems,
So careless of the single life.

Here Tennyson is one of the first to talk of biological types going extinct. Such species extinction (along with issues like the so-called demise of the fixity of species) tends toward eclipsing past notions of a caring Creator. Tennyson’s inquiry as to divine concern over the individual type is quite evidently rhetorical.

'So careful of the type?' but no.
From scarped cliff and quarried stone

history and comments was cut out, and even many facts; because . . . I . . . felt that it was anticipating twenty or thirty years of the march of honest feeling to declare it undisguisedly” (Letter to George Scrope, June 14, 1830, in Katherine Lyell, ed., The Life, Letters and Journals of Sir Charles Lyell [London: John Murray, 1881], 1:270-271).

1Mattes, 57.

2F.E.L. Priestley notes that Tennyson constantly uses the word ‘seems,’ and that scholars to the present have failed to account for the force of this word (F.E.L. Priestley, Language and Structure in Tennyson’s Poetry [London: Andre Deutsch, 1973], 173).

3Alfred Lord Tennyson, "In Memoriam," stanza 55, lines 5-8 (Ricks, 2:371).
She cries, 'A thousand types are gone:\(^4\)
I care for nothing, all shall go.\(^2\)

The above quote is a very significant perception by Tennyson. He seems to wonder how one gleans goodness from the carnage and capriciousness suggested by the new geology, where deep-time creation is neither complete nor perfect, and is far from indicating omnibenevolence as classically understood. Do not the "everlasting hills" seem more a handful of rubble shifting indifferently, even malevolently, toward man? In analyzing "In Memoriam," and the impact of geology on the Victorian mind, Michael Banner suggests that geology did not oust

religious values, rather that facts revealed about the earth's history threw into doubt traditional religious claims. As in the case of the problem of evil, the religious believer does not think of loss of faith as a change of attitude, but instead experiences the hardness and immediacy of a direct factual challenge.\(^3\)

\(^1\)Paleontologist David Raup mirrors this Tennysonian figure, estimating that only one in a thousand creatures avoids extinction, which he calls "a truly lousy survival record: 99.9% failure" (3-4)! Cf. Lewontin, 213; and Rick Gore, "Extinctions," National Geographic 175 (June 1989): 669. When considering such staggering profligacy, however, bear in mind that often evolutionists base extinction rates on evolutionary presuppositions, thus potentially over-inflating the amount of extinction. The extinction rate of holobaramins (i.e., an entire set of common descendants; a group containing all and only organisms related by common descent) would seem of greater interest. If the number of holobaramins, living and extinct, is in the few tens of thousands rather than millions, the moral repugnance inherent in the extinction issue might be somewhat abated. For an example of an evolutionist with very different numerics than that of Raup, see William H. Matthews III, Fossils (New York: Barnes and Noble, 1982), 8. Yet some theists accept the upper horizon without hesitancy. B.P. Sutherland, for example, notes that "even after the thousand have been sacrificed for the sake of the one, that one is ineffective, incomplete, and fails to reach its true end" (14). Coming from a theist, this outlook is all the more bleak on the Creator's goodness.

\(^2\)Alfred Lord Tennyson, "In Memoriam," stanza 56 (Ricks, 2:372).

Elsewhere Tennyson writes that nature is "as if some lesser god had made the world, But had not force to shape it as he would."¹ This "lesser god" is not the God of traditionalism but is more in line with the semi-potent god of Process theology. Even though much of nature conforms to traditional angles of omnibenevolence when seen through a Paleyan prism, just as much evidence can point away from such goodness when seen from another angle.

Maintaining belief in traditionalism’s good God is more difficult when contemplating natural history’s unrelenting deep-time winnowing; individual and specie, red in tooth and claw, with ravine, shrieking against the divinely ordained chain of hecatombs. The red canon of imperfections entombed in the iron hills groans against any Deus Paleyensis. Such stupendous sub-rational suffering and death, culminating in extinction, according to Tennyson, hardly seem worthy of a good and just God.

Who loved, who suffered countless ills,  
Who battled for the True, the Just,  
Be blown about the desert dust,  
Or sealed within the iron hills?²

Compare this to Lyell’s affirmation that "none of the works of the mortal being can be eternal. . . . [They must] eventually perish, for every year some portion of the earth’s crust is shattered by earthquakes or melted by volcanic fire, or ground by dust by the moving waters on the surface."³ Tennyson knows that "Lyell’s theory of natural laws operating ruthlessly

²Alfred Lord Tennyson, "In Memoriam," stanza 56, lines 17-20 (Ricks, 2:373).  
³Lyell, Principles, 2:271.
throughout the earth's history is incompatible with belief that God is love and love is the law of creation." It can further be suggested that a horrible mockery and self-delusion permeates the entire structure of Western civilization, in which men build churches to worship a God of love whom nature disproves, and fight for supposedly eternal values like truth and justice, which die with the species that cherishes them.

Regarding the related topic of profligacy, in "The Passing of Arthur," Tennyson writes that the "lavish profusion of the natural world appalls" him; in "Vastness," he writes of "a million millions of suns;" and in "In Memoriam" he finds that of a myriad of seeds, Nature "often brings but one to bear." In light of geology's harsh implications any tissue of surety in the God of the sparrow seems doomed, and amid the looming disquietudes of nature's brutish forces and multiple extinctions, life and death seem emasculated of any providential meaning. At best one is left with the hollow refrain:

O life as futile, then, as frail!

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1Mattes, 60.

2Ibid.

3Masterman writes that "the discovery of the vastness of material things is a discovery which has been producing a vague disquietude in the minds of men for the last three centuries" (9). The brushes of Copernicus, Galileo, Lyell, Darwin, et al., progressively painted humanity as but a transitory "speck of animated dust"; merely "a parasite of one of the meanest of the planets" (ibid., 13). Geology discloses to us "a world stretching backward through immense periods of time before the first appearance of men, people by a thousand types that had for ever passed away" (ibid., 16). This "horror of vastness" stems initially from "the dark unfathomable abysses of Time and Space" (ibid., 20). Such horror is echoed in Tennyson's lines: "The steps of Time--the shocks of Chance, The blows of Death?" ("In Memoriam," 95).

4Alfred Lord Tennyson, "In Memoriam," stanza 55, line 12 (Ricks, 2:372). There is little doubt that Tennyson is making an explicit reference to Joseph Butler's Analogy here, which it will be recalled was required reading at Cambridge (Mattes, 47, n. 13).
O for thy voice to soothe and bless!
What hope of answer, or redress?
Behind the veil, behind the veil.¹

Is this the extent of Tennyson’s theodicy? Can he offer nothing better than that the final answer lays "Behind the veil."² According to Mattes, Tennyson "had to rationalize as best as he could."³ The poet’s rationalization about his place amidst the cruelties and redness of the external world, and the finality of death, seems to lead him down a Schleiermacherian path, where the most he can do is to look within for final answers.

Two Representative Examples of the Recognition of Natural Evil and Paleonatural Evil from Natural Theology and Science

William Paley (1743-1805)

Anglican priest William Paley crafted an early nineteenth-century classic, entitled Natural Theology,⁴ of which Darwin was a diligent student,⁵ practically knowing the work by

¹Alfred Lord Tennyson, "In Memoriam," stanza 56, lines 25-28 (Ricks, 2:374).

²In a private letter to Emily Sellwood, Oct. 24, 1839, he shows a leaning in this direction: "So mayst thou and I and all of us ascend stepwise to Perfection . . . the hope that conquers all things . . . But there is no answer to the question except in a great hope of universal good. And even then one might ask why God has made one to suffer more than another, why is it not meted equally to all. Let us be silent for we know nothing of these things and we trust there is one who knows all. . . . Who knows whether revelation be not itself a veil to hide the glory of that love which we could not look upon without marring our own sight" (Tennyson, The Letters of Alfred Lord Tennyson, ed. Cecil Y. Lang and Edgar F. Shannon, Jr. (Cambridge: Harvard University Press, 1981), 1:174-75).

³Mattes, 60.

heart. Even though Paley initially gave young Darwin "much delight," the mature Darwin writes: "The old argument of design in nature, as given by Paley, which formerly seemed to me so conclusive, fails, now that the law of natural selection has been discovered."

Hume, as shown above, contends that general revelation shows a different god than the one inferred from special revelation. At the very least it is invalid to infer an infinitely wise, powerful, and good God from the alleged design in nature. Though *Natural Theology* is a frontal assault on Hume, Paley states that the mere existence of God is his main inquiry.

> When we are inquiring simply after the existence of an intelligent Creator, imperfection, inaccuracy, liability to disorder, occasional irregularities, may subsist in a considerable degree, without inducing any doubt into the question. . . . But . . . these are different questions from the question of [God's] existence.

But Paley wishes to establish more than God's mere existence. He also desires to defend divine goodness, and rest part of his case on the evidence in nature, particularly from

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5Eiseley, *Darwin's Century*, 178. Recall that students pursuing a Cambridge B.A., as Darwin, are required to read Paley.


2Ibid.

3Ibid., 87.

4While Paley only briefly notes Hume (512), there are some indications, according to John Baldwin, that "jointly suggest that Paley is intentionally and energetically responding specifically to Hume" (John T. Baldwin, "The Argument to Design in British Religious Thought: An Investigation of the Status and Cogency of Post-Humean Forms of Teleological Argumentation with Principle Reference to Hume and Paley" [Ph.D. dissertation, University of Chicago Divinity School, 1990], 206).

5Paley, 56-57.
"the parts and faculties . . . and limbs and senses of animals." He believes we can consider divine benevolence only "in relation to sensitive being." Animal limbs and senses, as "instruments of perception," can be "estimated with a view to the disposition of its author. Consequently, it is in these that we are to seek his character. It is by these that we are to prove, that the world was made with a benevolent design."2

Earlier in his work, Paley anticipates objections to nature's apparent dysteleological entities, and refers to nature's "apparent blemishes" which are of weight "when the argument respects [God's] attributes."3 Here Paley uses "apparent blemishes" because he, like other natural theologians, affirms that God specifically designed every single feature and function of every organism.

Paley does distinguish between moral and natural evils,4 but contributes to a blurring of these categories in committing the pathetic fallacy.5 For example, he believes that ours "is a happy world after all. The air, the earth, the water, teem with delighted existence."6 Shrimp and flies experience happiness. Despite Paley's emphasis on sub-

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1Ibid., 455.

2Ibid., 456.

3Ibid., 57.

4Ibid. He uses the description "external evils" for natural evils. Elsewhere Paley makes reference to the doctrine of imperfections or the "evils of imperfection," and factors the scala natura into his theodicy (ibid., 494).

5I.e., the imputing of human feelings to nature. Cf. C.S. Lewis, 133; and H.H. Farmer, Toward Belief in God (New York: Macmillan, 1943), 237.

6Paley, 456.
rational happiness as a rule, he does admit that there are exceptions of misery, but the preponderance of the former should outweigh the latter. According to Paley, if ever "we cannot resolve all appearances into benevolence of design, we make the few [i.e., appearances of evil] give way to the many." Even though evil exists, it never seems to be "the object of contrivance." As an example, Paley cites teeth, which are contrived to eat, not to ache. It is of no little interest here that Paley does not see that teeth are also the cause of much misery in other creatures. In his mind, "pain and misery are the very objects of contrivance" for man-made instruments of torture and execution, but,

nothing of this sort is to be found in the works of nature. We never discover a train of contrivance to bring about an evil purpose. No anatomist ever discovered a system of organization calculated to produce pain and disease . . . [or] to incommode, to annoy, or to torment.

Paley was aware of questions regarding venomous and predatory creatures, for he concedes that the notion of "animals devouring one another, forms the chief, if not the only instance in the works of the Deity, of an œconomy, stamped by marks of design, in which the character of utility can be called in question." In his mind, however, venomousness is "of much inferior consequence" in comparison with predation.

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1Ibid., 463.
2Ibid., 465.
3Ibid.
4Ibid., 467-468.
5Ibid., 481.
6Ibid.
Weapons of offense such as fangs, tusks, talons, claws, and stingers raise difficulties which cannot be quelled by saying that "the effect was unintended."\(^1\) Paley affirms that the main question is only whether such contrivances are "ultimately evil."\(^2\) Here he begins by employing a strategy of appeal to the unknown.

From the confessed and felt imperfection of our knowledge, we ought to presume, that there may be consequences of this economy which are hidden from us; from the benevolence which pervades the general designs of nature, we ought also to presume, that these consequences, if they could enter into our calculation, would turn the balance on the favourable side.\(^3\)

Thus any "appearance of failure in some of the details of Nature's works" is illusory; "Her species never fail."\(^4\) Such seems to be indistinguishable from a claim that, "No matter how bad things look, if we see the whole picture, or see from God's perspective, all things would on balance be very good." While conceding that divine perspectives of goodness might differ from our perspectives, Humean thinkers could justifiably inquire why these perspectives of goodness seem to be so radically divergent. Theodical appeals to mystery or hidden knowledge are not likely to persuade disciples of either Epicurus or Hume.\(^5\)

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1Ibid., 469. Regarding predation, poisonous bites and stings, Paley contends that these are good for the animals in question for reasons of defense and the subduing and killing of prey. Further, snake venom is merciful, for without it rodents would be swallowed alive.

2Ibid. Paley approaches chance in the same way, when he writes that "the appearance of chance will always bear a proportion to the ignorance of the observer" (ibid., 514).

3Ibid.

4Ibid., 480.

5Later Paley avers that our understanding is only partial (ibid., 473). But the critic could contend that this sword cuts both ways; i.e., that if all the facts could be known, things might actually be worse than the dysteleologist thinks.
Why should they be expected to accept a notion of divine goodness which would require a significant recontouring of what goodness means? Since the whole earth appears "cursed and polluted," and nature seems to ubiquitously perform those things for "which men are hanged or imprisoned for doing," how is the goodness of the Creator to be commended to the skeptic in a non-question begging manner?

For Paley, pain has a pragmatic function, teaches vigilance and caution, and "is seldom both violent and long-continued." Regarding "thinnings" and predation, Paley posits that our understanding is only partial, but then proceeds to claim that "immortality upon this earth is out of the question. Without death there could be . . . no animal happiness." This "system of animal destruction" should be balanced against the "countervailing quality" of superfecundity. Once done, then "what we term destruction, becomes almost instantly the parent of life."

Further, superfecundity presupposes "destruction, or must destroy itself," since any species

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1Hume, Dialogues, 194.
3Paley, 496-497.
4Ibid., 496.
5Ibid., 497.
6Ibid., 479-480.
7Ibid., 472. Cf. 469.
8Ibid., 473.
9Ibid., 475.
10Ibid., 477.
would "overrun the earth, if it were permitted to multiply in perfect safety." This predation-fecundity dialectic also has a "compensatory" element, for Paley, in that the longevity, size, and defense level of animals are inversely proportional to the same qualities in their enemies: e.g., birds of prey lay few eggs, while sparrows may sit upon a dozen; minnows and pike are a thousand-to-one; herring and shark are a million-to-one. The whole predation paradigm, further, is merciful in that a suffering creature is not left to perish in lingering decay, or experience "the protracted wretchedness of a life slowly wasted by the scarcity of food."

Regarding proposed solutions to the origin of evil Paley affirms that "no universal solution has been discovered . . . which reaches to all cases of complaint." He believes that omnibenevolence could be defended on two fronts, each of which can be drawn from natural theology. First, in the vast plurality of instances in which contrivance is perceived, the design of such is beneficial." And second, God "has superadded pleasure to animal sensations beyond what was necessary for any other purpose, or when the purpose, so far as it was

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1Ibid., 479.
2Ibid., 481.
3Ibid., 474.
4Ibid.
5Ibid., 492. A contemporary of Paley, H.S. Boyd, ventures to claim that "suffering of every kind is the effect of sin," and but for sin there would have been no "carnivorous animals . . . before the creation of man," nor would the brute creation "have been in a state of pain and suffering before Adam fell" (Boyd, 377). To such thinking Paley asks: "Is it to see the world filled with drooping, superannuated, half-starved, helpless, and unhelped animals, that you would alter the present system of, of pursuit and prey?" (474). He contends that in our present system death is necessary as a "mode of removal . . . , that almost every thing in that world must be changed, to be able to do without it" (ibid., 501).
necessary, might have been effected by the operation of pain." But here, Paley's theodicy take a radically divergent trajectory, for Paley admits that those capacities of pain and pleasure, which are necessary for animal survival, could have "proceeded from a benevolent or a malevolent being." Thus, while these animal properties "do not strictly prove the goodness of God, they may prove the existence of the Deity." While perhaps proving omnipotence and intelligent design, such does not prove omnibenevolence, thus leaving open the door to suppose that such properties "might have been produced by a being whose views rested upon misery."

Thus, when looking only at nature, Paley admits that it is justifiable to conclude that such is not the product of a benevolent being. At best Paley can only establish an intelligent designer, but at the expense of a personal and caring Creator. To assume omnibenevolence is not to prove it. All post-Paley deistic theodicies, as well as those of contemporary intelligent design apologists, will be similarly hampered. If one's theodical grist is pulled only from the present state of nature, without reference to the third chapter of Genesis, then the most one can produce is an aloof creator who is indistinguishable from Aristotle's god.

While Paley makes a compelling argument for a Designer, one is left to wonder how valuable this is if the being discovered is no more appealing than a Thomistic prime mover or absentee

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1Ibid., 454–455.
2Ibid., 482.
3Ibid.
4Ibid.

5Paley's argument for design has recently received an updating by Michael Behe, Darwin's Black Box (New York: Free Press, 1996).
landlord. Intelligent design is purchased at the price of a caring designer.

Charles Darwin (1809-1882)

Even though Charles Darwin writes in the mid-nineteenth century, he captures the theodical spirit so powerfully that brief mention of his thought on paleonatural evil is deemed relevant to this dissertation. Authorities on Darwin recognize that his life was permeated with theodical cogitations. But even earlier than Charles, his grandfather, Erasmus Darwin (1731-1802), poignantly thought on the problem of evil. According to Hooykaas, Erasmus faced the difficult task of accounting for the happiness of the organic kingdom as a whole, the first law of which . . . might be expressed in the words "Eat or be eaten!", and which would seem to be one great slaughterhouse, one universal scene of rapacity and injustice. He acquitted himself with ability and agility from this heavy task and concluded that even the calcareous mountains (being remains of living creatures) are 'monuments of the past felicity of organized nature!--and consequently of the benevolence of the Deity!' Erasmus deals with the topic of evil in his *The Temple of Nature*. Though considered by some to be mediocre poetry, this work paints such an sanguinary picture of nature that one wonders to what degree young Charles's early cognitive development


2Since Erasmus died seven years prior to the birth of Charles, the latter never met his grandfather, and would have been influenced primarily by his grandfather's writings.


might have been affected by reading his grandfather’s description of the organic kingdom as "one great Slaughter-house."\(^1\)

There is no conjecture, however, that Darwin was urged by his father to pursue medical school, but his heart was never in it. Perhaps his witnessing an unanesthetized and excruciating amputation of a young man’s leg prompted him to hear a calling elsewhere, and seeing "two very bad operations" haunted him for many years afterward.\(^2\)

This squeamishness was conjoined with a compassionate spirit. According to David Herbert, suffering’s reality

was impressed upon [Darwin’s] mind as a student at Cambridge. Like many of his fellow classmates, hunting was considered to be a favourite pastime. Once while hunting, this aspiring cleric came upon a bird that had been shot a day or so before. The sight of this deliberate inhumaneness caused Darwin to hang up his rifle for the rest of his life.\(^3\)

In addition, when fishing, he could not hook live worms without first having euthanized them in a salt solution.\(^4\) At one point he decided "that it was not right to kill insects for the sake of making a collection."\(^5\) He later wrote: "It is difficult to believe in the

\(^1\)Ibid., line 66. According to Nora Barlow, Samuel Coleridge was nauseated by reading Erasmus, and likened his verse to "the mists that occasionally arise at the foot of Parnassus" (in Darwin, The Autobiography of Charles Darwin, 150-151).


\(^3\)Herbert, Charles Darwin’s Religious Views, 79.

\(^4\)Barlow, in Darwin, Autobiography, 27.

\(^5\)Ibid., 45.
dreadful but quiet war of organic beings, going [on] in peaceful woods, & smiling fields."6

Such pointers to Darwin’s tender spirit supply the fuller context of his continued contemplation of whether God would author nature’s supposed cruelties and wastes.2

Doubts induced by apparent maltheisms found ample time for reflective gestation on the

1Darwin, Transmutation Notebook E, in Charles Darwin’s notebooks, 114. Cf. Charles Darwin, The Expression of the Emotions in Man and Animals [1872] (London: John Murray, 1873). Several other factors bear mentioning. Although he saw vivisection as necessary for medical research, it still made him “sick with horror,” and he spoke harshly regarding those who were practicing it out of a “mere damnable and detestable curiosity” (Life and Letters of Darwin, 200). Frank Burch Brown notes that Darwin’s hypersensitivity to creaturely suffering kept him in a muddle of “agnostic theism” (38). It has even been suggested that such was very likely a contributing factor to his 40-year bout with headaches, nausea, dizziness, and vomiting (ibid., 37). According to Lynn Barber, while Darwin was writing The Origin, he was never free from pain for more than twenty minutes at a time (Lynn Barber, The Heyday of Natural History: 1820-1870 [Garden City, NY: Doubleday, 1980], 134). As a young man, he was also “encouraged by his father’s example to hate the sight of blood and the practice of bleeding” (Donald Fleming, “Charles Darwin, the Anaesthetic Man,” VS 4 [1961]: 227). With the deaths of his father in 1848, and three years later his 10-year-old daughter, it is not hard to imagine that this pre-disturbed soul might find it harder to reconcile a loving God with suffering and death.

2Darwin is vexed by many contrivances in nature, including elements like peculiarities of biogeography, superfecundity, pollen and egg waste, the profligacy of incipient beings, seemingly inefficient contrivances for ensuring genetic health in plants, the cuckoo’s instinct to oust foster siblings, the bee’s sting causing its own death, profligate drone production for a single act followed quickly by the slaughter of their sterile sisters, the instinctive hatred of the queen bee for her own fertile daughters, the slave-making instinct of certain ants, numberless creeping parasites (e.g., spehegide), worms, the tucutuco (an underground mole-like rodent, usually blind), animals misled by false instincts or which possess organs constantly prone to injury or which delight in inflicting cruelty, and rudimentary organs like bastard wings, male nipples, and fetal baleen whale teeth. For Darwin, such entities, most seemingly benign, are not becoming of a benevolent Creator, and thus patently counter to the theses of natural theology, leading Darwin to state: “I am in a thick mud yet I cannot keep out of the question.” See Moore, The Post-Darwinian Controversies, 318; Darwin, The Origin, 243; 428-434; idem, The Foundations of the Origin of Species, ed. Francis Darwin (Cambridge: Cambridge University Press, 1901), 254; idem, The Effects of Cross and Self Fertilisation in the Vegetable Kingdom (New York: D. Appleton, 1895); idem, Life and Letters of Darwin, 2:382; and Neal Gillespie, Charles Darwin and the Problem of Creation (Chicago: University of Chicago Press, 1979), 172, n. 33, 177, n. 6. In response to the claim that rudimentary organs speak infallibly (ibid., 457), see Jerry Bergman and George Howe, “Vestigial Organs” Are Fully Functional (Kansas City, MO: Creation Research Society Books, 1990).
Beagle, where Darwin finds "it increasingly difficult to attribute everything he observed to a superintending Providence."¹ Though Paleyans claim reassuringly that benevolence is the irrevocable mainstay of the Creator's character, Darwin seems to be asking in what way dysteleologies could be called beneficent arrangements.² Suffering was to become an "insuperable problem for belief to Darwin," and especially bewildering was the question of "whether a beneficent God could have designed the world with so much animal pain."³ In light of natural evil, can Paley's "smiling face of nature" and "happy world" still be entertained? Finding this very hard, Darwin's tender spirit eventually confesses, in a now-famous line: "What a book a Devil's chaplain might write on the clumsy, wasteful, blundering low & horribly cruel works of nature!"⁴ In a letter to good friend, Asa Gray, Darwin asked: "How can a loving God allow suffering?"⁵ The bottom line here is that the perennial theme of the traditionalists, that "God not only had to be an intelligent Designer,

¹Moore, The Post-Darwinian Controversies, 318.
²See Gillespie, Charles Darwin and the Problem of Creation, 126.
⁵Charles Darwin to Asa Gray, May 22, 1860.
He also had to be a Loving Designer, "I was shared by Darwin.

In considering Darwin and theodicy, the locus classicus, in which he expressed dismay over nature's cruelty, is found in a letter to Asa Gray, where Darwin laments that

I own that I cannot see as plainly as others do, and as I should wish to do, evidence of design and beneficence on all sides of us. There seems to me too much misery in the world. I cannot persuade myself that a beneficent and omnipotent God would have designedly created the Ichneumonidae with the express intention of their feeding within the living bodies of Caterpillars or that a cat would play with mice. ²

When observing predator-prey scenarios, Darwin found the means of propagation in a certain wasp to be distasteful. ³ According to Michael Corey, the female ichneumon lays her eggs in the body of a living caterpillar. Later, the newly hatched larvae feed

on the still-pulsating tissue of the caterpillar's body. Since a dead caterpillar isn't nearly as nutritious as a living one, the larvae have the good sense to eat only the inessential parts of the caterpillar first, leaving the crucial organs for last. This preserves the life—and hence the nutritiousness—of the caterpillar until the last possible moment. ⁴

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¹Roberts, "Darwin's Doubts About Design," 122. Roberts makes the point that, in the throes of Darwin's loss of a young daughter, and Thomas Huxley's loss of a young son, a mere "Intelligent Designer or a Cosmic Fine Tuner" offers cold comfort.


³These wasps receive attention as far back as Pliny, Natural History, trans. H. Rackham (London: William Heinemann, 1940), 3:423. They are later considered by Smellie, Erasmus Darwin, and Kirby, et al. Lyell is aware of them, but according to Gillespie, initially "showed no moral concern that nature should employ such a gruesome device. Indeed, his tone was one of implicit approval at this efficient means of checking the number of caterpillars" (Darwin and the Problem of Creation, 125). As a direct result of Darwin's influence, Lyell later adjusts his thinking, believing Venus flytraps, vestigial organs, monstrosities, vicious individuals, and evil insanity to engender moral ambiguity if the Creator was responsible for them (Principles of Geology, 2:133).

Darwin questioned whether such an arrangement could represent divine benevolence.\(^1\) While modern accommodationists and Process theologians contend that such grisliness is both anthropocentric and anthropomorphic,\(^2\) it seems that the Darwinian use of "such examples was to shock Paleyans out of their complacent optimism about nature." According to David Oates, this "emphasis on competition, strife, and brutality clearly did its job of bludgeoning a reluctant public into a new awareness" of nature being a jungle stalked by ruthless predators.\(^3\)

According to Gamaliel Bradford, "Darwin was perfectly aware that his theories tended to shatter the orthodox view of God."\(^4\) The "deadly, grinding, destroying implications of the struggle for existence"\(^5\) could no longer be dismissed with a wave of the fideistic hand. Darwin demonstrates his acute awareness of the key theodical

\(^1\)Richard Owen's similar crisis of faith has him adopt an "automaton theory of lower life," to save conscious polyps from the "shrinking terror" of being grazed alive by predatory fish. Richard Owen, "Hunterian Lectures on the Nervous System 1842: Lecture I, April 5, 1842," Manuscripts, Notes, and Synopses, 1842-8, British Museum (Natural History), 38.

\(^2\)Corey, *Back to Darwin.* As a process thinker and deist, Corey is compelled to write that perplexity over the ichneumon issue is "based on a value judgment that views the world in terms of a potential hedonistic paradise," where things falling short of this ideal cannot possibly be God's handiwork. He sees the anthropomorphization of the lower forms of creation as an approach "almost certain to be mistaken" (ibid.), and he personally opts for a more Irenaeian approach, where human development is the chief aim in creation. As such, whatever plays an important part in facilitating this development is desirable, "even if it happens to appear undesirable when viewed in terms of itself." The physical world, from this perspective, "has been patterned after the necessary nature of the human developmental process. To the extent that this assumption turns out to be true, we immediately have in our possession a potential justification for any type of natural evil" (ibid., 376).

\(^3\)Oates, 443.


\(^5\)Ibid., 214.
elements of divine omnipotence and divine benevolence, and their incongruency with sub-rational suffering. He notes:

That there is much suffering in the world, no one disputes. Some have attempted to explain this in reference to man by imagining that it serves for his moral improvement. But the number of men in the world is as nothing compared with that of all other sentient beings, and these often suffer greatly without any moral improvement. A being so powerful, and so full of knowledge as God who could create the universe, is to our fine minds omnipotent and omniscient, and it revolts our understanding to suppose that his benevolence is not unbounded, for what advantage can there be in the suffering of millions of the lower animals throughout almost endless time. This very old argument from the existence of suffering against the existence of an intelligent first cause seems to me a strong one.¹

He expresses the sentiment that one's notion of God would be demeaned if He had separately created parasites, feeling it derogatory if

the Creator of countless Universes should have made by individual acts of His will the myriads of creeping parasites and worms, which since the earliest dawn of life have swarmed over the land and in the depths of the ocean. We cease to be astonished that a group of animals should have been formed to lay their eggs in the bowels and flesh of other sensitive beings; that some animals should live by and even delight in cruelty; that animals should be led away by false instincts; that annually there should be an incalculable waste of the pollen, eggs and immature beings.²

However, on natural selection, Darwin states that "we may console ourselves with the full belief, that the war of nature is not incessant, that no fear is felt, that death is generally prompt, and that the vigorous, the healthy, and the happy survive and multiply."³

Surely a good and loving God, Darwin holds, would create a more harmonious

¹Darwin, Autobiography, 90.

²Darwin, The Foundations of the Origin of Species, 254. Darwin's point in this context is that if such pain and profligacy were due to primary causality, theists have a problem. But the universal chomp would be somewhat attenuated if the "dreary view of the Divine economy" (Millhauser, Just Before Darwin, 113) were seen to be the mere by-product of secondary causes.

³Darwin, The Origin, 129.
biosphere, rather than the law of the jungle we observe. But there were acquaintances who "kept telling him that to conjoin belief in God with belief in natural selection merely went to deepen their faith and enlarge the consolations of religion."¹ For Darwin, a God "that dwelt in natural selection would be the worst of all possible Gods. For the proprietor of the universe to have to seek for a mere preponderance of good over evil in the world that he made, which was the best that could be said for any progress attained by natural selection, was monstrous."² Darwin could not fathom a Creator who operated by a "Benthamite calculus and either did not know how or did not care enough to decree uncontaminated good. In a sense, he belonged, with the Mills, to a class of God-deniers who were yearning after a better God than God."³ Apropos to any clumsy, wasteful, blundering, and cruel entities in nature, for Darwin it was simply a non-answer to hear from some accommodationists that the Creator has purposes to which we are not privy.⁴

¹Fleming, "Charles Darwin, the Anaesthetic Man," 231.
²Ibid.
³Ibid.
⁴Cf. Neal Gillespie, 126. St. George Mivart, Baden Powell, and Adam Sedgwick are a few who take theological refuge in the mysteries of God. Considering the subjects of animal suffering and the existence of evil, Mivart writes that our limitations, purposes, and motives are not applicable to God. In addition, to place "non-moral beings in the same scale with moral agents" is "utterly unendurable" (St. George Mivart, On The Genesis of Species [New York: D. Appleton, 1871], 276, 277). Powell asks: "How can we undertake to affirm, amid all the possibilities of things of which we confessedly know so little, that a thousand ends and purposes may not be answered, because we can trace none, or even imagine none, which seem to our short-sighted faculties to be answered in these particular arrangements?" (Baden Powell, quoted in Mivart, 276). Such "redress in reserve," and deference to the great progress of the whole, is also Chambers' position. Until the present and subsidiary contingencies are "lost in the great system . . . let us wait" with patience and good cheer; the redress is in the balance (Millhauser, Just Before Darwin, 114, 157). Cf. Chambers, Vestiges, 362-378.
Thus far in this chapter, we have seen the responses of representative thinkers to natural evil. Varying degrees of recognition and response to the problem are found in philosophy, natural theology, science, and literature. Leibniz, Hume, Milton, Tennyson, Paley, and Darwin all see the issue.

Yet they cannot be expected to fathom the pending amplification of the problem with a more deeply temporalized geologic column, and the record within of stupendous amounts of death and extinction, and its ever-present attendants, pain and suffering. It is requisite at this juncture to look at this mass record of death, beginning with a description of the geological column and then a brief look at some prominent Lagerstätten.

**Shapers of the Early Nineteenth-Century Geological Recognition of the Problem of Paleonatural Evil**

**The Column and Its Contents**

Before moving on to Cuvier and Buckland, a brief description of the geologic column is necessary. The column basically refers to the sedimentary fossil-bearing rock formations which make up part of Earth’s outer crust. At least three dominant themes can be discerned from assessing the column. First, the column’s stratigraphic order, as reconstructed by conventional uniformitarian philosophy, displays a deep-time chronological sequence; the deepest layers being older; the upper strata being more recent.

Aside from mere deep time, second, evolutionism claims that the fossil record in the geological column displays a sequence of increasingly biological complexity, from the

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1See Appendix II for a chart of the geologic column as conventionally reconstructed.
lowest layers to the top. Care must be taken to discern whether the developmental paradigm is reconstructed to accord with conventional evolutionary taxonomy, or whether a less conventional interpretive grid might be plausible.

Last, and by whatever grid, the column shows a stupendous amount of death. As a matter of fact, a key criterion for demarcating geologic periods is death itself, with five major "die-offs"\(^1\) separating phanerzoic history.

The fossil record in the geologic column and a discussion of its significance are fundamental to the framework of this dissertation in at least five ways. First, as it has been increasingly amplified from Lyell till now, the record tenders a massive amount of deep-time mortality. Second, early nineteenth-century geological theory elicited a conceptual shift in the thinking of some Christians from catastrophism toward uniformitarianism. This led to both a demise of any "golden age," and an accommodationistic tendency to recalibrate natural evils as deep-time phenomena, rather than results of the curse. Third, such shifts were also accompanied by a retreat from taking Gen 1-11 at face value; particularly affected are the length and recency of the creative week, the physical nature of Adamic death, and the extent of the Flood. Fourth, in allowing the geologic record to dissolve any penal nexus between Adamic sin and subrational death and suffering, indicating that both are prelapsarian and divinely ordered, a reassessment of classic exegesis on such key passages as Gen 1:31 and Rom 8:19-23 is mandated. And fifth, taking all these points into account, the Church of necessity enters into a new era of theodical reformulation. The theological stakes could not be higher.

\(^1\)See Appendix II.
Sin, death, the curse, the character, love, and power of the Creator, and the "goodness" of creation require retrial, if not recasting, before the bar of geology.

The Significance of Georges Cuvier

No single study can do justice to the dramatis personæ in the history of geological studies, but it would be remiss not to make passing mention of Georges Cuvier (1769-1832). A man of genius, he "perfected the technique of comparative anatomy,"¹ and his biological system eclipsed that of Lamarck. Regarding the geosciences, Cuvier's thought and work earned him the title of father of paleontology, and all subsequent thinkers hammered out their geological models in response to his theory.² So significant is Cuvier's position in the history of science, that he has been acclaimed as the Aristotle of the nineteenth century.³

Prior to Cuvier, fossils were interpreted generally to be the result of the Genesis Flood. Therefore, it is nothing short of iconoclastic when he suggests that the earth has experienced numerous deep-time, localized catastrophes.⁴ As Cuvier has been interpreted, these catastrophes cause mass-species extinction, and each geophysical paroxysm is followed by re-creations. There are allegedly no genealogical connections between any two of these recreations, though the door is left open for surmising that

¹Bowler, Evolution: The History of an Idea, 112.


³Greene, 169.

⁴Bowler, 117.
surviving plants and animals (which may have migrated) could replenish the earth in time. But Erik Nordenskiöld, in disagreement, states that the conjecture that Cuvier believed in re-creation "anew after each catastrophe is utterly incorrect."¹ There is no disagreement, however, that Cuvier proposed as many as forty to fifty of these "catastrophe-replenishment" cycles; what I will call deep-time serial catastrophism.

Cuvier's model was well received by accommodationists and other divines desiring an entrée into geological circles, because it allows one to accommodate a Mosaic chronology to whatever deep time frame geologists require. Additionally, it maintains the biblical Flood as the last of these violent upheavals, and also preserves the doctrine of the fixity of species.

But what would accommodationists do with that portion of the Cuvierian proposal which meant that earth's past is heavily punctuated with cyclic and cataclysmic death?² On one of his excursions Cuvier exclaimed, "I at length found myself as if placed in a charnel-house, surrounded by mutilated fragments of many hundred of skeletons . . . piled confusedly around me."³ Renowned Oxford geologist, William Buckland, to whom we now briefly turn, is one accommodationist who also picks up on such charnel knowledge, recognizing that in adopting Cuvierianism, one ipso facto concedes the episodic

¹Erik Nordenskiöld, The History of Biology: A Survey (New York: Tudor Publishing, 1928), 339. But the surmisal that each cycle ushers in creatures more complex than the previous one cannot be credited to Cuvier, since he staunchly rejects transmutation.

²Derek Ager's metaphor of geological history captures this tumult—like "the life of a soldier, [it] consists of long periods of boredom and short bursts of terror" (Derek V. Ager, The Nature of the Stratigraphical Record [New York: John Wiley & Sons, 1973], 100).

destruction of numberless sentient beings throughout the inconceivably remote past.

William Buckland: "Treading on Charnel-houses"¹

William Buckland expresses amazement that "mankind should have gone on for so many centuries in ignorance of the fact, which is now so fully demonstrated, that no small part of the present surface of the earth is derived from the remains of animals, that constituted the population of ancient seas."² The very walls of our homes are often "composed of little else than comminuted shells,"³ the remains of deep-time animals. Buckland quotes Cuvier who was struck by the magnitude of sub-rational death over immeasurable deep time: "At the sight of a spectacle . . . so imposing, so terrible as that of the wreck of animal life, forming almost the entire soil on which we tread . . ."⁴ Buckland describes our extensive plains and mountains as "the great charnel-houses of preceding generations, in which the petrified exuviae of extinct races of animals and vegetables are piled into stupendous monuments of the operations of life and death, during almost immeasurable periods of past time."⁵ Raven writes that the entire Victorian age saw the

¹Buckland, Geology and Mineralogy, 1:112.

²Ibid.

³Ibid.

⁴Ibid., 113.

⁵Georges Cuvier, Rapport Historique sur le Progrès des Sciences Naturelles, 179, quoted in ibid., 113. Fellow accommodationist, John Pye Smith, parallels Buckland on these points. Smith sees the "unfathomable antiquity" which geology unfolds, we find "the larger part of those formations is filled with such [animal] remains, constituting in some cases nearly the entire substance of rocks which are hundreds and thousands of feet in thickness and many miles in extent" (On the Relation Between the Holy Scriptures and Some Parts of Geological Science, 67). Cf. ibid., 110.
world of nature as "a charnel-house and its presiding goddess 'red in tooth and claw with ravine.'"¹ Earth's strata are "loaded with the exuviae of innumerable generations of organic beings, [which] afford strong proof of the lapse of long periods of time, wherein the animals from which they have been derived lived and multiplied and died."²

Bearing in mind Buckland's view of charnel nature, mention can be made here of the plethora of discoveries that still lay ahead in the next 150 years will only widen the incipient rift between the traditionalists and the accommodationists. Concepts such as suffering, death, mass death assemblages, and mass extinctions receive amplification from Buckland to the present, and the uncovering of numerous, additional mass-fossil graveyards would only enhance the ateleological showcase against a good Creator. We turn now to a consideration of these graveyards.

**Notable Fossil-Lagerstätten: The Problem of Paleonatural Evil Compounded in the Wake of Post-Lyellian Paleontological and Geological Discoveries**

Colossal conglomerations of fossil remains arrest the attention of any observer. Observing firsthand some fossil beds in Patagonia, Darwin naturally wondered what could have "exterminated so many species and whole genera."³ He felt that "certainly, no fact in the long history of the world is so startling as the wide and repeated exterminations of its inhabitants."⁴ When such fossil remains are so numerous or densely oriented, the least


²Ibid., 116.


⁴Ibid., 150.

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biased response to such mortality is "Catastrophe!"¹ Such graveyards are more conducive
to a catastrophist model than uniformitarianism. But how these remains arrived at their
stratigraphic orientation is another question. Of more immediate import are the
foreboding facts of unfathomable deep-time mortality and suffering. It is to some of the
more staggering Lagerstätten that we now turn.

The term Lagerstätten literally means "lode places," but Carlton Brett suggests a
freer translation of "mother lodes."² By this, he implies a mother lode of fossil remains.
The word Lagerstätten (singular Lagerstätte) has its origins in German mining tradition, a
Lagerstätte being "any rock or sedimentary body containing constituents of economic
interest."³ The Lagerstätte has also been defined as a rock body "unusually rich in
Palaeontological information, either in a quantitative or qualitative sense."⁴ Accordingly,

¹The Greek word literally means "a thorough turning around."

²Carlton Brett, "Comparative Taphonomy and Ecology of Fossil Mother Lodes,"
Paleobiology 14 (Spring 1988): 214. Alternative referents used in the literature to refer to sites
of paleo-mass mortality are: fossil motherlodes; fossil cemeteries or graveyards; and death
assemblages (thanacoenosis). Other sites of death assemblages, such as "bone breccias" and
"bone beds," will be referred to below, but strictly speaking, these are not deep-time boneyards.

³Thus, it is not mere symbol when Peter Ward refers to The Karoo Formation as
"holding treasures more precious than all the gold and diamonds still to be found in Africa"
(Peter Ward, The End of Evolution: On Mass Extinctions and Preservation of Biodiversity
harvest . . . rich in dinosaur skeletons . . . a veritable mine . . . [of] paleontological treasures"
(Men and Dinosaurs [New York: E.P. Dutton, 1968], 149, 151). Colbert and Osborn liken
fossil hunting to prospecting (ibid., 175, 193; Henry Fairfield Osbom, "Dinosaurs of the Bone-
Cabin Quarry," in Dinosaurs: With Special Reference to the American Museum Collections, ed.

⁴Adolph Seilacher, W.-E. Reif, and F. Westphal, "Sedimentological, Ecological
and Temporal Patterns of Fossil Lagerstätten," Philosophical Transactions of the Royal
a "Fossil-Lagerstätte is any rock containing fossils which are sufficiently well preserved and/or abundant to warrant exploitation."¹ German paleontologist Adolph Seilacher allows such "exploitation" to apply for scientific purposes,² but there is no reason that the term cannot be exploited for philosophical and theological purposes as well. According to Seilacher, Reif, and Westphal,

the term [Lagerstätten] embraces not only strata with an unusual preservation, but also less spectacular deposits such as shell beds, bone beds and crinoidal limestones. The concept also implies that there is no sharp boundary with 'normal' fossiliferous rocks. Rather, the preservation of any fossil is to be considered as an unusual accident that deserves attention and questioning.³

Lagerstätten, therefore, seems to allow for some latitude, despite its common use to designate paleontological concentrations which have preserved exquisite anatomical details, especially of soft parts. Huge numbers and/or dense concentrations are not necessary criteria, but these are what typically come to mind when thinking of the world's more spectacular Lagerstätten. The definition of Seilacher, Reif, and Westphal, above, seems to make clear that no absolute demarcation line exists regarding either concentration density, stratigraphical orientation, or fauna type, which would delimit the reference as a Lagerstätte. Given this acknowledgement of the subjective element here, possible disagreement can be anticipated below, regarding either the inclusion or exclusion of some formations as Lagerstätten. The variant uses of the term above inform the use of Lagerstätten in this study as highly concentrated mass-mortality


²Ibid.

³Seilacher, Reif, and Westphal, 5.
assemblages in the geologic column, even including "less spectacular deposits such as shell beds, [and] bone beds."¹

Conventional geological interpretation tells us that paleobiological history is shadowed by numerous "die-offs," having been likened by Derek Ager to the life of a soldier-long periods of boredom punctuated by short bursts of terror.² Deep-time 'terror' of this type, chiefly characterized by episodic mass-kills, serves as a menacing window into Earth's sepulchral past. These eradictions are estimated to have occurred about every 26 million years.³ The demarcation lines of the fossil-based chronology of today's geological column usually indicate a massive loss of life and species extinction.⁴ This is highly significant for this dissertation, and any discussion on paleo-natural evil. Here the radical divergence of thought between the traditionalists and accommodationists is highly pronounced. Traditionalists see the majority of the column as the aftereffects of a global flood, and consider this "die-off" to be God's judgment on sin. But accommodationists accept the

¹Ibid.

²Ager, The Nature of the Stratigraphical Record, 100.

³Raup, 65. But, according to William Gallagher, this "cyclical extinction hypothesis relies heavily on statistical manipulation of large data sets derived from taxa-counting exercises . . . [and are] fraught with potential statistical error" (William Gallagher, "The Cretaceous/Tertiary Mass Extinction Event in the Northern Atlantic Coastal Plain," The Mosasaur 5 [1993]: 75-154).

⁴While a distinction should be made between mass mortality and mass extinction, i.e., the loss of individuals vs. the loss of species, for the purpose of this paper both will be subsumed under a single heading. See Raup, 13-14. Those holding to a deep-time geologic column, may also hold to what Raup call low-level, or "background," extinctions; those extinctions taking place during "normal" times, and not due to some cataclysm (ibid., 66). If true, this means that death and extinction have been going on "around the geological clock." The fossil record, then, reads like an obituary, to which eventually the name of every species will be added (cf. Tennyson's line, "I care for nothing, all shall go," my emphasis).
conventional deep-time scale. This fundamentally means they are calibrating their whole understanding of prelapsarian earth history against a deep-time calendar of death.

The top five mass extinctions are found in, and in fact marked by, the Ordovician, Devonian, Permian, Triassic, and Cretaceous periods. Paleontologist Peter Ward likens the heavily fossiliferous K/T horizon to "a scar, recording the passage of the knife blade that cut off the long history of dinosaurs." The demarcating scars separating the Permian-Triassic (P/T) and Cretaceous-Tertiary (K/T) periods are said to be the most severe.

Foci constraints prevent a detailed discussion of proposed causes for these mass extinctions, but they range from volcanism (which destroys most vegetation), climate fluctuation, meteor impact, changes in sea level, disease, global cooling, and destruction/loss of habitat. One such speculation is that constipation did in the dinosaur. Gordon Rattray Taylor writes that "speculation runs riot," but that there can be little disagreement that "some great natural disaster must have occurred" (Gordon Rattray Taylor, The Great Evolution Mystery [New York: Harper & Row, 1983], 89). Raup points out that some hold to quieter extinction scenarios, like a birthrate not keeping up with a death rate; or a "marked drop in the origin of new species." The main appeal here is aesthetic, because "nobody is actually hurt." Raup lays bare the driving motivation for such theories as "a wish to avoid all the killing" (Raup, 74-75).

The nomenclature of the geologic time-scale is used for the sake of uniformity when referencing mass die-offs, and is the standard in mainline geology and paleontology. There remains, of course, healthy disagreement on how much passage of time is represented in the column. But in the words of Leonard Brand, "Whether we prefer catastrophic geology or conventional geology, the geological column is still a valid description of nature's history book" (Faith, Reason, and Earth History [Berrien Springs, MI: Andrews University Press, 1997], 240). In the present study specificity regarding exact dates between boundaries is not mandatory, since our main thrust requires only that we highlight those mass-kilings which are proposed to have preceded the advent of mankind (and thus sin), and to assess the theological and theodical ripples of such an allowance.

Ward, The End of Evolution, 128.

The abbreviation K/T indicates the contact point between the Cretaceous and Tertiary periods; the "K" being used to distinguish this age from the Carboniferous and Cambrian epochs.

Note that a comprehensive list of period mass extinctions is not given here, as geologists also claim that lesser extinction horizons are discernable at the close of the...
exhibiting enormous fossil graveyards.¹ The P/T boundary, according to modern
convention, was the more devastating of the two, with upwards to 96 percent of all the
world's species being extinguished.² The K/T is most notable for the eradication of
dinosaurs and large marine reptiles,³ preceding mankind by at least 65 million years.⁴
What follows are five brief samples of some of the most acclaimed fossil Lagerstätten,
beginning in North America, then moving on to Canada, Europe, India, and Africa.⁵

North American Sample: The Wyoming Fossil Graveyards

If ever a region was deserving of the label "fossil mother-lode," Wyoming would

Cambrian, Pliocene, and Pleistocene periods. At the Cambrian, for example, we lose ½'s
of all trilobite families.

¹John Phillips (1800-1874) was the first to propose the supreme divisions of the
geologic column (Figures and Descriptions of the Palaeozoic Fossils of Cornwall, Devon
and West Somerset: Observed in the Course of the Ordnance Geological Survey of That
District [London, 1841], 155-182). Phillips subdivided the phanerozoic era into the three
main erathem of Paleozoic, Mesozoic, and Cenozoic (the contact points later to be known
as the P/T and K/T boundaries), with his chief criterion being the punctuated faunal
discontinuities in the strata.

²For a detailed breakdown of the percentages of individual biota extinctions, see
Jennifer K. Schubert and David J. Bottjer, "Aftermath of the Permian-Triassic Mass
Extinction Events: Paleocology of Lower Triassic Carbonates in the Western USA,"

³"Marine animals suffered the total extinction of 38 percent of their genera; among
land animals, the hit was slightly higher. These are big numbers when one considers that in
order for a genus to die out, all individuals in all its species must go" (Raup, 68).

⁴At the K/T we have the loss of 25% of known families; sixteen orders or super
families perished (Taylor, 89).

⁵These are intended only to give a flavor of examples of mass death, allegedly
through deep time. References to many other Lagerstätten can be found in Appendix III.
make any short list. The acclaimed Morrison Formation, at Como Bluffs, Wyoming, has been described by Colbert as "a veritable mine of dinosaur bones" which yields "a rich harvest." In 1898 the famous Bone-Cabin Quarry was located just north of Como Bluff. The cabin was so named because a Mexican sheepherder had made the foundation of his cabin solely out of dinosaur bones! On one expedition Henry Fairfield Osborn described the Quarry as a "vast graveyard," and "a veritable Noah's-ark deposit, a perfect museum of all the animals of the period." On an approach to the hillock, Osborn saw what at first glance appeared to be

numbers of dark-brown boulders. [But on] closer examination, it proved that there [was] really not a single rock, hardly even a pebble, on this hillock; all these apparent boulders are ponderous fossils which have slowly accumulated or washed out on the surface from a great dinosaur bed beneath.

After six years Osborn's team had uncovered 7,250 square feet with "not one of the twelve-foot squares into which the quarry was plotted lack[ing] its covering in bones, and in some

1In August 1996, the author partook in a six-day fossil dig in Roxson, Wyoming. Our team was taken on day 1 to the most "congested" areas of the 8,000-acre Hanson Ranch. Both sides of the trail were blanketed by thousands of bones and bone fragments, many embedded in the hillside, with an astonishing number merely strewn out in the open; fossilized dinosaur bones literally laying out everywhere.

2Colbert, *Men and Dinosaurs*, 151.

3Ibid., 149.

4Osborn, "Dinosaurs of the Bone-Cabin Quarry," 132. Colbert implies that bones were used in the actual structure itself, and not just as a structural footing (*Men and Dinosaurs*, 151).


6Ibid.
case the bones were two or three deep,"7 tendering nearly 50 tons\(^8\) of Lagerstätten gold.

At the foot of the Bighorn Mountains, in 1934, acclaimed fossil digger Barnum Brown discovered a massive amount of dinosaur bones, "one of the most concentrated deposits of dinosaur bones ever found."\(^3\) The owner of the ranch site was one Barker Howe, and thus this graveyard is referred to as Howe Quarry. Here Brown found "the concentration of the fossils was remarkable; they were piled in like logs in a jam,"\(^4\) with Brown alone tediously excavating enough bones to fill a large railway boxcar to the brim.\(^5\)

Canadian Sample: The Alberta Graveyards

Alberta, Canada, houses some of the world's most bounteous bonebeds.\(^6\) In a 15-mile swath of river east of Steveville, Alberta, "is a veritable dinosaurian graveyard."\(^7\) The

\(^1\)Ibid., 149.

\(^2\)Ibid. An account is given by Colbert of a single excursion which retrieved "sixty thousand pound of bones that filled two special freight cars" (Men and Dinosaurs, 151).

\(^3\)Colbert, Men and Dinosaurs, 173. See Roland T. Bird's sketch (p. 172 and Plate 60) for an idea of how densely congested the site was with dinosaur remains. In this same area, in Alberta's Drumheller fossil beds, there are millions of fossil clams packed together, with shells closed (clams normally open at death). Similar formations can be found in Glen Rose, Texas, with a three-foot layer of pelecypods all having their valves closed; and in a New York bed of brachiopods all with valves closed.

\(^4\)Colbert, Men and Dinosaurs, 173.

\(^5\)Ibid. This quarry has the most concentrated cluster of Sauropod dinosaur bones ever discovered; one spot furnishing 4,000 bones. The dense conglomeration of fossils justifies its description as "one of the most concentrated deposits of dinosaur bones ever found" (ibid.).


\(^7\)Edwin Colbert, The Age of Reptiles (New York: W.W. Norton, 1965), 169. Colbert is universally acclaimed as the dean of paleontology in the last generation.
fossiliferous badlands of southern Alberta, in the area which comprises the Belly River beds, are so fossil-rich that famed bone-hunter Ed Colbert says there are "innumerable bones." J.A. Allan, University of Alberta professor of geology, states that reptile "fossil remains are found in such great abundance along the Red Deer," and they "seem to have been driven together by a common danger and to have perished in the same great catastrophe."  

European Samples: The Old Red Sandstone and Monte Bolca  

The geological formation in northern Scotland, known as the Old Red Sandstone, covers 10,000 square miles, and in places is 1½ miles thick. In one area spanning 100 miles there are estimated to be billions of fossil fish. This fish Lagerstätte, notable for

1Ibid.
2J.A. Allan, quoted in Alfred Rehwinkle, The Flood in the Light of the Bible, Geology, and Archaeology (St. Louis, MO: Concordia Publishing House, 1951), 234. The Royal Tyrrell Museum's website has a photo of this extraordinary Centrosaurus bone-bed assemblage, though it captures only a fraction of the 3,000 square meters of "Quarry 143." "Centrosaurus Bone Bed"; available from http://tyrrellmuseum.com/tour/bonebed.html; Internet. This picture of a jumbled accumulation of Centrosaurus bones covers only an area of eight square meters, representing "less than one half of one percent of the total area of the bone bed, which in turn is only one of may such bone beds in Dinosaur Provincial Park" (ibid.). The Tyrrell staff have documented ninety such bonebeds, with an average of twenty bones per meter being uncovered; sometimes exceeding sixty (Currie and Dodson, 61, 63). Common explanations for such assemblages include flash flooding, or herds drowning while crossing rivers.
3Now known as the Devonian. A closely corresponding formation can be found in the Catskill Mountain formations.
4Fish remains are so abundant in some places (e.g., Pennsylvania, New York, Kentucky, Tennessee, Eastern Canada, W. Russia, North Scotland) that the strata in which they are entombed will burn since they are so heavily saturated with oil. John MacFarlane believes that "practically the entire source of petroleum" comes from the "disintegrated and decomposed constituents of fishes" (Fishes, the Source of Petroleum [New York: Macmillan, 1923], 5, 384).
the contorted positioning of some of its victims, testifies to "the disturbing agencies of this time." Miller asserts that at a certain period some terrible catastrophe occurred, resulting in the abrupt destruction of the fish of an area at least a hundred miles from boundary to boundary, perhaps much more. The same platform in Orkney . . . is strewed thick with remains which exhibit unequivocally the marks of violent death. The figures are contorted, contracted, curved; the tail in many instances is bent round to the head; the spines stick out; the fins are spread to the full, as in fish that die in convulsions . . . The attitudes of all the ichthyolites on this platform are attitudes of fear, anger, and pain . . . The record is one of destruction.

The formation of fish fossil-beds of the north Italian locale of Monte Bolca in many ways mirrors Miller's description of the Old Red Sandstone. Buckland describes this formation as indicating that the fish "perished suddenly." Their skeletons, according to Buckland, "lie parallel to the laminae of the strata of the calcareous slate; they are always entire, and so closely packed on one another, that many individuals are often contained in a single block. The thousands of specimens . . . must have died suddenly on this fatal spot."

1Hugh Miller, *The Old Red Sandstone* [1841] (Edinburgh: William P. Nimmo, 1870), 237. As with most Lagerstätten, the fossil-fish here are crammed together, compressed to paper-thinness, physiological details are preserved well, and signs of predation are absent; all indicating catastrophe. This formation will be addressed further in chapter 5, below.

2Ibid., 233.

3Descriptions like "sudden" should be kept in mind for the following Lagerstätten, as such would highlight abrupt, catastrophic mortality in contrast to uniformitarian notions of attritional mortality and sedimentation.

4Ibid., 237.

5Buckland, *Geology and Mineralogy*, 1:123.

6Ibid.
Indian Sample: Siwalik Hills

The Siwalik Hills, north of Delhi, thousands of feet high and hundreds of miles long, constitute the stepping stone to the Himalayas. This Miocene to Upper Pliocene formation contains extraordinarily rich beds crammed with fossils: hundreds of feet of sediment, packed with the jumbled bones of scores of extinct species. Many of the creatures were remarkable; including a tortoise 20 feet long and a species of elephant with tusks 14 feet long and 3 feet in circumference. Other animals commonly found include pigs, rhinoceroses, apes, and oxen.¹

Immanuel Velikovsky refers to the Siwalik bone bed as so jam-packed with "animals of so many and such varied species that the animal world of today seems impoverished by comparison."² The Siwalik mass graveyard is also notable for evidencing heavy denudation³


²Velikovsky, *Earth in Upheaval*, (Garden City, NY: Doubleday, 1955), 79. Use of Velikovsky's numbers in this study does not imply endorsement of his auxiliary theories, but a word of clarification is in order. Velikovsky has been a target of derision by the uniformitarian establishment for the last half century, reacting to his theses in *Worlds in Collision* (New York: The MacMillan Company, 1950). Gould, not surprisingly, accuses Velikovsky of being a "heretic" whose chief faults are "carelessness, inaccuracy, and sleight of hand" (*Ever Since Darwin* [New York: W.W. Norton, 1977],15, 157). He disputes Velikovsky's catastrophist interpretation of the bone beds, which Gould says is based on a rather bad reading of the geologic literature. But Gould's argument against Velikovsky may itself exhibit "sleight of hand," in that he begs the question by dismissing Velikovsky's catastrophist description of the Old Red Sandstone, with the mere assertion that this cannot be the case, since those fish are distributed through hundreds of feet of sediments which record deep time (ibid., 155-56). While Velikovsky's name still carries a pejorative taint, isolated focus on his bone-bed statistics (in *Earth in Upheaval*) is appropriate. No one has disputed the numbers in his book, which he spent five years compiling. Even Gould agrees with Velikovsky's numbers, but simply denies his global catastrophism, preferring a more localized catastrophism (ibid.).

and its lack of marine remains. Most of the victims are terrestrial creatures, including
hippopotamus, pig, rhinoceros, elephant, apes, and oxen, which fill the interior hills "almost to
bursting."² In central Burma, 13,000 miles further east, a sister deposit estimated at 10,000 feet
thick, is packed with an amazing profusion of hundreds of thousands of fossilized trees,
mixed with innumerable mastodon, hippopotami, and oxen remains.³

The Karoo Formation

If paleontology were a religion, the Karoo Formation⁴ in South Africa would be a
sacred site. The Lagerstätten of the Karoo provides us with some of the more powerful
vignettes of mass mortality that the fossil record has to offer, and may be "the best place on
earth to conduct such research."⁵ The formation covers about two-thirds of South Africa, and
falls between the Permian and Jurassic Periods. Peter Ward describes this area as "holding
treasures more precious than all the gold and diamonds still to be found in Africa."⁶ These
treasures, however, were bought at a price, for the Karoo is also a "mausoleum of
protomammals,"⁷ and "a vale of tears, a graveyard filled with the victims of one of the

¹Nearly 30 species of elephant have been found at this site, only one of which
remains. Velikovsky, Earth in Upheaval, 79.

²Ibid.

³Ibid. See also Wadia on the Siwalik.

⁴Older publications have the alternate spelling 'Karroo,' but according to the South
African Committee for Stratigraphy (1980; 536), the original and proper spelling is
Karoo. The name "Karoo " literally means "land of thirst."

⁵Ward, The End of Evolution, 69.

⁶Ibid., 31.

⁷Ibid., 33.
Uniformitarianists take this *Lagerstätte* as synchronous with the mass universal species loss which demarcates the Permo-Triassic (P/T) boundary.

It has been estimated that The Karoo contains about 1 percent of the vertebrate fossils on earth, perhaps amassing the remains of as many as 800,000,000,000 dead creatures. The validity of this figure has been challenged by some, citing the implausibility that that population density, plus who knows how many other trillions,

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1Ibid., 31-33.

2This staggering figure is attributed to an estimation by maverick Scotch paleontologist Robert Broom, found, but not referenced, in Norman Newell, "Adequacy of the Fossil Record," *Journal of Paleontology* 33 (May 1959), 492. However, as a high profile member of the staff at Columbia University and the American Museum of Natural History, it is unlikely that Newell would have been misinformed or felt the need to exaggerate, though he does admit that such numbers "are not highly accurate" (ibid.). Cf. John Woodmorappe, "The Antediluvian Biosphere and Its Capability of Supplying the Entire Fossil Record," in *Proceedings of the First International Conference on Creationism; Vol. 2, Technical Symposium Sessions*, ed. Robert Walsh et al. (Pittsburgh: Creation Science Fellowship, 1986), 209. Woodmorappe's main thrust is to respond to those who contend that the Genesis chronology is several orders of magnitude too truncated to account for present coal and oil deposits, crinoidal limestone, Meso-Cenozoic chalks, the Karoo *Lagerstätte*, antediluvian accumulation of biogenic material, and mass-marine fossil beds. See also his "The Karoo Vertebrate Non-problem: 800 Billion Fossils or Not," *CENTJ* 14 (2000): 47-49.

3Robert Schadewald, "Six Flood Arguments Creationists Can't Answer," in *Evolution versus Creationism: The Public Education Controversy*, ed. J. Peter Zetterberg (Phoenix: Oryx Press, 1983), 448-453. Gordon Davison says such a number cannot be substantiated, and offers a calculation that downplays Broom's estimate ("Are There 800 Billion Vertebrate Fossils Buried in the Karoo?" *CRSQ* 32 [March 1996]: 201). The intrepid James Kitching, the Karoo's most prolific fossil collector, writes that, in 1932, Robert Broom "gave some astronomical figure for the number of fossil vertebrates that might be preserved in the whole of the Beaufort series" (Kitching, "The Distribution of the Karoo Vertebrate Fauna," in *Memoir No. 1* [Johannesburg: African Committee for Stratigraphy, 1977], 6). Kitching's father, a road-gang foreman, used to collect fossils for Broom. South African geologist Michael Johnson deflates the large estimate simply because "personal experience" has shown that fossils are quite hard to find (Genesis, *Geology and Catastrophism* [Exeter, Devon, UK: Paternoster Press, 1988], 59). But clearly something is amiss, since University of Washington paleontologist Peter Ward, reflecting on his own "personal" dig, finds the Karoo "packed with spectacular fossils . . . enough to collect for many millions of years" (*The End of Evolution*, 65).
could have subsisted given the resource and space scarcity of the antediluvial world. But others have defended the figure's legitimacy, lending credence to the large estimate.

James Kitching, the renowned fossil hunter known as "Mr. Karoo," in a recent interview accented some of his hundreds of fossil finds. According to Kitching, there is such a mother lode of fossils in this area that locals "prop up [their] garden tables" with the abundant monstrous skulls and limb bones. Some fossils are so common he does not bother to collect them anymore. Though these are from the sites we know about, it remains mere extrapolation to predict accurately the totality of which actually lies beneath. Nonetheless, it is safe to assume that what has been found so far is merely the tip of the proverbial iceberg. Even Davison admits that many sites are ignored because

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1Such arguments can be discerned as early as François Xavier Burtin, 1784. See Schadewald, 450. Possible rebuttals to Schadewald's thesis might be that his calculations are off and that the antediluvian landmass may have been greater. See Weber, 343-345. Hayward's commitment to progressive creationism results in treating Schadewald with kid gloves, without so much as challenging a single premise of his (Creation and Evolution: The Facts and Fallacies, 125-126).

2Woodmorappe, "The Antediluvian Biosphere," 209. Geologist Andrew Snelling, for example, extrapolates that if in one block of one degree latitude by one degree longitude there are 75 known fossil vertebrate sites, then what can we say of the rest of the Karoo which covers a sizeable area of South Africa and which is fairly thick? Letter to author, November 29, 1996.

3This is reminiscent of several other accounts regarding the overabundance of fossils. Henry Alleyne Nicholson relays that whale vertebrae were so abundant in Alabama that they were used to make walls, or merely incinerated in the fields (The Ancient Life-History of the Earth: a Comprehensive Outline of the Principles and Leading Facts of Palaeontological Science [New York: D. Appleton & Co., 1898]), 300; fossil remains of the Chukotski Peninsula (Siberia) were used by the natives for fuel (Rehwinkle, 245); and Sicilian hippopotamus bone beds supplied 20 tons of commercial charcoal for the manufacture of lamp-black in sugar refineries (W.B. Wright, The Quaternary Ice Age [London: Macmillan, 1937], 262).

they contain further specimens of common fossils. So Broom's estimate may be closer to the truth, particularly as we now have even more evidence of there being countless fossils scattered over hundreds of thousands of square miles.

Ward reflects on the Karoo as a "vale of tears," one which begins and ends in pain. To spread this mass mortality over 10 million years seems less frightening, but some "paleontologists are perplexed by the savage intensity" of the kill-event. Others, like Ward, note that the rocks do not show anything like a "long, peaceful death [i.e., extinction]," but rather bespeak "a quick, savage murder." If non-theists express anxiety over "the seeming rapidity of the event that struck down the protomammals in the long-ago Karroo and the implications this holds for our world," how much more so should theists? Is there a potentially deafening irony here if, while some non-theists deplore the grim message and tremendous weight of the Karoo, theists who landscape the same vale of tears praise God for His infinite goodness? For die-hard uniformitarians who claim that these extinctions took place over long periods of time, and downplay any catastrophist angle, Ward suggests that

1 Davison, 201, n. 2.

2 The Karoo records a story of an empire "that painfully rose out of the swamps" (Ward, The End of Evolution, 5). Later, according to Ward, small reptiles, "armed with sharp teeth . . . began to make meals" of protomammals (ibid., 6). Latter species scream against "suffering so cruelly in the current extinction (ibid.)"; i.e., "Nature, with ravine, shrieking against such creeds."

3 Ibid., 65.

4 Ibid., 66.

5 Ibid.

6 Ibid., 65. Ward calls this wonderful and troubling (ibid., 64); wonderful because of the weather and readily accessible fossils; troubling because of "the seeming rapidity of the event that struck down the protomammals . . . and the implications this holds for our world" (ibid.).
they "would do well to study the past."¹ Indeed, after surveying the Karoo, Ward wonders which rocks his predecessors could have been looking at.²

Those who reject the 800,000,000,000 figure should merely be asked what is their estimate. The number would still have to be enormous.³ In this regard, disputing over specific numbers can be a red herring, for no one who knows the evidence denies the existence of mass-fossil graveyards or the fact that the fossil record universal entombs trillions of dead things in water-laid rock strata. Either way, theistic catastrophists are likely to take the Karoo and all other death-congested Lagerstätten in a way different from accommodationists, interpreting most of these graveyards as badlands, literally, as spectacular reminders of the devastation caused by a single, cataclysmic and global flood. They will contend that the sepulchral rocks cry out a "grim message,"⁴ one proclaiming that there is a God who decisively judges sin. But in accepting these crimson, deep-time Lagerstätten as a necessary concomitant in the best of all possible creations, by an all-powerful, all-loving God, then contemporary evangelical accommodationists, in the words of David Griffin, "have a lot of explaining to do."⁵

What significance does the Karoo and the other death-laden Lagerstätten have for

¹Ibid., 280.
²Ibid., 66.
³At minimum, their figure would have to be "untold Millions of skeletons" (ibid., 45).
⁴Ibid., 65. Later, Ward spells out that this fear relates to our world, and "that an increased rate of extinction can eventually reach some threshold point, triggering a cascade of mass extinction, a free-fall of death" (ibid., 88).
this dissertation? Regardless of ideology, these bone beds are testimonies to a cataclysmic loss of life. The theodical challenge, to put it lightly, is whether this death is by divine design for deep time, or intrusive on a death-free "very good" creation? This is the poignancy of the Karoo, which ably serves as a graphic icon of paleonatural evil.

**Summary**

At the beginning of this study relevant philosophical and historical background information was provided, clarifying key elements in Western thought on theodicy, and proposed origins and definitions of natural evil. This was followed by synopses of the views of several luminaries on the problem of natural evil, which served as a backdrop to evaluate how three classic Reformers understand God's benevolence as revealed in nature, and what they see to be the cause of natural evil. This investigation then turned to the grim specter of the Lagerstätten, with countless species and individuals being called upon to write their names in the register of extinction.¹ Uniformitarianists understand these Lagerstätten to mostly depict slow and episodic extinctions, which are the necessary by-products of evolutionary process. But catastrophists (and neo-catastrophists) will disagree, citing that too many of these Lagerstätten are characterized by the abrupt and violent death of countless creatures, both individuals and entire species. Another highly anomalous fact for the uniformitarianistic model is that all too often these beings come from radically diverse habitats and ecological niches.² Nonetheless, with interpretive schemes aside, uniformitarians

¹Velikovsky, *Earth in Upheaval*, 69.

²One common characteristic of many Lagerstätte is that they contain seemingly any combination of boreal, tropical, aquatic, plains, and forest-dwelling creatures. Uniformitarians, who attempt to decatastrophize Lagerstätte like the Old Red Sandstone, Siwalik, Karoo, or Agate Springs, offer "just-so" counter-examples of allegedly comparable
and catastrophists agree that the geologic column lithologically freeze-frames a stupendous amount of death and carnage, if not natural evil.

With these foundational rubrics in place, the next step of this dissertation will be to investigate early nineteenth-century Anglo theistic scholarship with respect to the problem of paleonatural evil. If there are responses to paleonatural evil, are they able to be codified and critically assessed for internal consistency with the benevolence of God as revealed by His method of creation as understood by early classic Protestantism? How were natural history's escalating categories of pain, suffering, death, and extinction dealt with? Were these part of God's original plan; the best of all possible blueprints? Or are they intrusive to His original "very good" creation? Did new interpretations of the fossil record catalyze a shift away from the traditional understanding of God's omnibenevolence? As the young science of geology widened the sepulcher of the deep-time mass-mortality of the fossil record in the geologic column, did any, along with Ruskin, hear the "dreadful hammers,"¹ recognize the "dread postulates,"² or lament over the "terrible Muse"³ of geology? To these questions, early nineteenth-century British religious and geological thought offered a variety of responses, to which we now attend.

forces which can account for the gradual accumulation of vast quantities of bone. Cf. Gould, *Ever Since Darwin*, 156-57. But such examples are often not true parallels, but are "order[s] of magnitude smaller in depth, and lateral extent," and do not contain comparable remains of poly-habitational fauna (Richard Milton, 94). Moreover, mass-ossiferous breccias are notorious for their lack of signs of predation (i.e., teeth-marks), and obrution (rapid burial).

¹John Ruskin, May 24, 1851.

²William Gillespie, xvi.

CHAPTER IV

THREE EARLY NINETEENTH-CENTURY REPRESENTATIVE BRITISH TRADITIONALIST RESPONSES TO THE PALEONATURAL EVIL SUGGESTED BY A DEEP-TIME INTERPRETATION OF THE FOSSILIFEROUS GEOLOGIC COLUMN

In order to rightly understand the voice of God in nature, we ought to enter her temple with the Bible in our hand.

--Heinrich Moritz Gaede

Can the rocks play a double role? Can they act a Dr. Jekyll and Mr. Hyde? Is the varied testimony of the rocks the fault of the rocks or the fault of those who interpret their language?

--Frank E. Allen, *Evolution in the Balances*

Introduction

This chapter seeks to discover, codify, and assess the theodical formulae arising in three representative early nineteenth-century Scriptural geologists as a direct result of new geological theory. While bereft of the fuller picture of mass mortality, as just laid out, enough data had accumulated by the nineteenth century to significantly impact the course of theodical discussion among the Scriptural geologists.

In early nineteenth-century Anglo-Christendom, two schools of thought address, in varying degrees, issues germane to paleonatural evil. Maintaining an awareness of the danger
of "facile labeling," this study refers to these parties as traditionalists and accommodationists. Because the concept of deep time has already been injected into the early nineteenth-century discussion on earth history, theodicies for natural evil *ipso facto* had to become theodicies for paleonatural evil. As will be shown, traditionalists and accommodationists claim goodness and power as indispensable divine attributes. Thus, if the theodicies of these groups differ, the question arises of which theodical formation is more consistent with both Scripture and early Protestant understandings of God's beneficence as understood by His method of creation.

**Clarification of Group Nomenclature**

Interpretations of the geologic record in the early nineteenth century are diverse. This disparity is reflected in the labels given by subsequent scholars attempting to distinguish and codify those engaged in this particular dialectic of ideas. Interestingly, as seen with the following ten contemporary scholars (see table 1), there is a tendency toward three divisions.

1John Woodbridge believes that attempts to ascertain the "historic position of the Church" run the risk of facile labeling. Such labels can "have all the trappings of false concreteness," in that individuals from the past can be grouped "together without sufficient regard for the different cultural contexts" in which they lived. The danger of facile labeling is that one might miss "the richness of an individual's theology, its evolution or devolution in time, or its meaning when placed against the social, intellectual, and cultural tapestry of a particular age" (25).

2Though coined in the twentieth century, these labels in a general sense are fairly descriptive of divergent perspectives within Christendom since the early nineteenth century.

3Frederick Gregory places those whom he calls "reconcilers" into three varying levels of accommodationism: (1) Those who know that evolution cannot be grafted into theology without altering the latter (e.g., James McCosh, A.H. Strong, and B.B. Warfield); (2) Those more concerned about reformulating doctrine to comport with modernism, than with conserving traditionalism (e.g., Frederick Temple); and (3) Those who make evolution the fulcrum of their theology (e.g., the authors of *Lux Mundi* (*The Impact of Darwinian Evolution on Protestant Theology,* in *God and Nature,* ed. Lindberg and Numbers, 379).
### TABLE 1

TRIPARTITE CLASSIFICATION BY TEN CONTEMPORARY SCHOLARS

<table>
<thead>
<tr>
<th>Scholar</th>
<th>First Division</th>
<th>Second Division</th>
<th>Third Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noel Weeks</td>
<td>Strict literalists</td>
<td>Day-agers</td>
<td>Non-literalists'</td>
</tr>
<tr>
<td>Richard Bube</td>
<td>Completely literal</td>
<td>Essentially literal</td>
<td>Essentially non-literal</td>
</tr>
<tr>
<td>Lloyd Bailey</td>
<td>Creationist; staunch literalist; young earth</td>
<td>Theistic anti-evolutionist; old earth; day-agers</td>
<td>Theistic evolutionist</td>
</tr>
<tr>
<td>Clark Pinnock</td>
<td>Narrow-concordists</td>
<td>Broad-concordists</td>
<td>Evangelical non-concordists</td>
</tr>
<tr>
<td>Pattle P.T. Pun</td>
<td>Fiat creationists</td>
<td>Progressive creationists</td>
<td>Theistic evolutionists</td>
</tr>
<tr>
<td>Richard Overman</td>
<td>Rational supernatural orthodoxy</td>
<td>Romantic liberalism</td>
<td>Scientific modernism</td>
</tr>
<tr>
<td>Alister McGrath</td>
<td>Literal approach</td>
<td>Allegorical approach</td>
<td>Accommodation approach</td>
</tr>
<tr>
<td>James Moore</td>
<td>Christian Anti-Darwinism</td>
<td>Christian Darwinisticism</td>
<td>Christian Darwinism</td>
</tr>
<tr>
<td>Michael Johnson</td>
<td>Literalist</td>
<td>Concordist</td>
<td>Functionalist</td>
</tr>
<tr>
<td>Milton Milhauser</td>
<td>Scriptural geology</td>
<td>Party of reconciliation</td>
<td>Higher criticism</td>
</tr>
</tbody>
</table>

Despite such diverse labeling as above, and occasional misclassification, labels can serve some useful purpose if used responsibly. Classifying the key players in the present study under the labels 'traditionalist' and 'accommodationist' is believed to be appropriate. In general terms, both groups claim to hold to the divine inspiration and Mosaic authorship of Gen 1-11. But despite this common starting ground, vast incongruities exist between these thinkers, as will be seen below. Numerous reasons for this disparity could be listed, but two issues are at the root of the controversy. The first issue concerns whether science and/or nature are co-equal authorities with Scripture. The second concern is a hermeneutical one; specifically, what is the proper method for interpreting the creation and Flood accounts of Genesis? Must these accounts be taken as the author intended, or is it legitimate to engage in category translation based on some external authority?

The Significance of the Scriptural Geologists

No group in the early nineteenth century more clearly deserves the appellations

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1For example, Pinnock incorrectly lists Norman Geisler as a narrow concordist, despite Geisler’s adherence to both deep time and a geologically insignificant (i.e., tranquil) Flood (“Climbing Out of a Swamp,” 145, n. 8).

2In other words, where conflict arises, does Scripture or nature have final veto power? If they are not co-equal or symbiotic, are these subservient to a third standard, such as tradition?

3The key question, then as now, is how much exegetical latitude can be allowed under the umbrella of authentic Evangelicalism while still remaining true to Reformation orthodoxy.

4In this and the next two chapters, frequent reference will be made to the hermeneutical principle called "category translation." This refers to the practice of shifting from univocal to equivocal readings of Scripture. While the terminology differs, it seems that, in principle, much of the hermeneutical discordance between early nineteenth-century traditionalists and accommodationists foreshadows the hermeneutical nuances which continue to divide conservative and liberal thinkers in the twenty-first century. See Langdon Gilkey, "Cosmology, Ontology, and the Travail of Biblical Language," The Journal of Religion 41 (July 1961): 194-205; and idem, Religion and the Scientific Future, 3-34.
describing the traditionalists above than the so-called Scriptural geologists. In fact, it can be fairly surmised that the majority of the debate within the Church over the last two centuries regarding the compatibility between science and theology stems from the adjectival half of this idiom. These men are called Scriptural geologists for numerous reasons, but perhaps the dominant one is that they intransigently refuse to engage in hermeneutical category translation, as will be indicated. While a spirit of accommodationism had been brewing for more than half a century, they knew that traditional Christianity would not survive a shift from univocal to equivocal exegesis. The accommodationists, under the persuasion of the allegedly assured results of geological facts, are open to surrender the historicity of some potions of Gen 1-11, contented themselves that the text prefigures folklore and symbolism.2

Leading Scriptural geologists3 include Samuel Best (1802-1873)4 George Bugg (1769-)

1The best short treatment of the Scriptural geologists is found in Millhauser, "The Scriptural Geologists." Cf. also J.M.I. Klaver, Geology and Religious Sentiment; Moore, "Geologists and Interpreters of Genesis in the Nineteenth Century," 322-50; Rupke, 42-50; and Young, The Biblical Flood; 124-136. The most exhaustive, scholarly treatment, to date, is Mortenson, "British Scriptural Geologists in the First Half of the Nineteenth Century."

2Clark Pinnock makes a similar point regarding Langdon Gilkey: "Science has compelled him as a liberal theologian to surrender all claims to factuality in Christian theology and to content himself with myths and symbols" ("Langdon Gilkey: A Guide to His Theology," TSF Research [1977], 2).

3Not all scholars agree on who is a traditionalist or an accommodationist. For example, Gillispie surprisingly aligns John Pye Smith with George Fairholme and Andrew Ure (Gillispie, Genesis and Geology, 163). But in stark ideological opposition to both Fairholme and Ure, Smith is firmly committed to deep time and a local flood. In this same vein, up until the 1820s prominent scientists like André Deluc, Richard Kirwan, James Parkinson and Joseph Townsend defend a global Flood, and thus are classed by some as Scriptural geologists. But Deluc, Parkinson, and Townsend later go the deep-time route, while Kirwan remained steadfastly ambiguous as to where he stood geochronologically. A more recent example of blurring the lexical boundaries comes from Michael Shortland, who describes deep-time geologist Hugh Miller as "a passionate defender of Biblical geology" (Hugh Miller and the Controversies of Victorian Science, ed. Michael Shorthand [Oxford: Clarendon Press, 1996], 1). Ironically, Shortland himself says that "calling Miller a 'creationist' is likely to put a fullstop to all sensible
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discussion of him” (ibid., 5). But when disambiguated, the label Scriptural geologist[s] best refers to those early nineteenth-century thinkers who rejected all deep-time concordisms, and accepted a recent, six-day creation and a catastrophic, global Flood.

4See Samuel Best, After Thoughts on Reading Dr. Buckland’s Bridgewater Treatise (London: J. Hatchard and Son, 1837); and idem, Sermons on the Beginning of All Things as Revealed to Us in the Word of God (London: Simpkin, Marshall and Co., 1871).

1On George Bugg, Andrew Ure, and George Young, see pertinent sections below.


3See Cole, Popular Geology Subversive of Divine Revelation.


5See George Fairholme, General View of the Geology of Scripture . . . (London: J. Ridgeway, 1833); idem, New and Conclusive Physical Demonstrations both of the Fact and Period of the Mosaic Deluge, and of its having been the only Event of the Kind that has ever Occurred upon the Earth (London: James Ridgeway & Sons, 1837).


7See Brown, Reflections on Geology.


9See Granville Penn, A Christian’s Survey of all the Primary Events and Periods of the World; from the Commencement of History to the Conclusion of Prophecy (London: John Murray, 1811); idem, A Comparative Estimate of the Mineral and Mosaic Geologies (London: Ogle, Duncan and Co., 1822); idem, Supplement to the Comparative Estimate (London: Ogle, Duncan and Co., 1823).
(1797-1874),¹ Joseph Sutcliffe,² Sharon Turner (1768-1847),³ Andrew Ure (1778-1857), George Young (1777-1848), and others.⁴ Though these men have differing degrees of geological competence,⁵ they are all Mosaic literalists who defend the Genesis account of earth history as literal, over against a deep-time serial catastrophism or Lyellian uniformitarianism. However, one minor figure helped to orient Scriptural geology in the early nineteenth century.

A Proto-Scriptural Geologist Helps to Set a Particular Tone at the Beginning of the Nineteenth Century

By 1817 a little-known Scriptural geologist, H.S. Boyd, tests the new geological theories for compatibility with Scripture.⁶ Setting pace for the Scriptural geologists to follow, Boyd weighs in the balance the latest view of earth history, assessing its concord with Genesis, 


²See Joseph Sutcliffe, A Short Introduction to the Study of Geology; Comprising a New Theory of the Elevation of the Mountains, and the Stratification of the Earth: in which the Mosaic Account of the Creation and the Deluge is Vindicated (London, 1817).


⁴Mortenson has sleuthed out lesser luminaries like William Brande, Charles Burton, George Croly, William Cuninghame, William Eastmead, Robert Fitzroy, Walter Forman, Leveson Vernon Harcourt, Robert MacBrair, William Martin, David Morison, Thomas Rodd, and the anonymous "Biblicus Delvinus" (Mortenson, 12-13). In the literature of the time David and Eleazar Lord, Peter Macfarlane and Moses Stewart are others referred to as "Mosaic" or "anti-geologists" (cf. Hugh Miller, The Testimony of the Rocks [1860], 342-344).

⁵For example Fairholme, Murray, Rhind, and Young were quite accomplished in geological studies. See Mortenson, 3, n. 14, 223-253, 275-351, 366-390.

⁶Boyd, 375-8.
and finds it wanting due to numerous discrepancies. His chief reference is to a preface to a recent translation of Cuvier's *Essay on the Theory of the Earth*, by Robert Jameson.\(^1\) Boyd sees "the French philosopher" and Jameson as conflicting with "the Jewish historian," Moses.\(^2\) Jameson leans toward a creation "period of some thousand years," and believes "that fishes were formed long before land animals, and land animals long before man."\(^3\) Boyd notes that Jameson "endeavours to reconcile these apparent discrepancies" with methods similar to that of Bishop Samuel Horsley,\(^4\) contending that "when our globe was originally formed it may have revolved on its axis much slower than it does now; and consequently that each day of the creation may have been a period of a thousand years, or even a longer term." Boyd believes Jameson is only touching upon a surface issue, with far greater difficulties "at which Jameson has not even glanced."\(^5\) These difficulties are as follows.

First, Boyd states that according to Cuvierianism, "fishes without number perished before the sixth day commenced, and beasts innumerable perished before the sixth day was closed." In contrast, "it is most evident, from the account of Moses, that all the animals which were created on the fifth and sixth day were alive on the seventh and at a subsequent period."\(^6\)

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\(^1\) Jameson, Professor of Natural History at Edinburgh University, is a faithful disciple of A.G. Werner, the founder of Neptunist geology.

\(^2\) Boyd, 375-376.

\(^3\) Ibid., 376.

\(^4\) Bishop, mathematician, physicist, and astronomer, Samuel Horsley (1733-1806), F.R.S., 1767, felt "every clergyman had an obligation to possess a knowledge of science and to encourage its development in the universities" (Gillispie, *Genesis and Geology*, 32).

\(^5\) Boyd, 376.

\(^6\) Ibid.
Second, Boyd understands Cuvier to be claiming that "a multitude of fishes, and most probably of beasts, also perished before the formation of man." In contrast, according to Boyd, the Scripture is clear "that all things were made for the use of man."  

Third, Cuvier believes "whole genera of fishes became extinct, and that new ones succeeded them before the formation of land-quadrupeds, and that whole genera of land quadrupeds became extinct and were succeeded by others . . . [and thus] were created without any reference to man." In contrast, according to the traditionalists, "if only some individuals of a species had perished, or even if some species of a genus had become extinct, it might have been said that, as the genus was preserved, the purpose of the Creator was accomplished."  

Fourth, Cuvier and Jameson are adamant that "fishes and crocodiles, and serpents, lived and died long before the earth was fitted for the support of land animals." In contrast, "Moses teaches us, that the earth was adorned with its beauteous garniture of trees and plants on the third day, but that no living thing knew the luxury of existence until the fifth."  

The following point is perhaps Boyd's most powerful. According to Cuvier, "while the face of the earth was covered with successive races of land animals, the human race may have been existing in some narrow region of the globe." In contrast, Boyd suggests that without sin, there would have been no suffering; that suffering of every kind is the effect of sin; that Adam was constituted the head and representative of the whole creation; and

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1Ibid.

2Ibid.

3Ibid.

4Ibid., 377. The pressure is not lessened, says Boyd, since Jameson and Cuvier "assure us that the sea was peopled with fishes before the dry land was capable of being inhabited" (ibid.).
consequently that all the animals participated in the consequences of his disobedience. But in this respect the Christian doctrine is overturned, and, I may say, annihilated, by the system of geologists. According to them, whole races of carnivorous animals inhabited both the sea and the dry land before the creation of man; consequently the brute creation must have been in a state of pain and suffering before Adam fell.¹

These points will be vigorously contested by accommodationists, but here Boyd highlights key issues raised by later Scriptural geologists. Perhaps most prominent among these ideas, as seen in this affirmations above from Boyd, is the causal relation between human sin and animal suffering.

Boyd is an important prelude to the Scriptural geologists. If lesser players such as this are raising theodical cautions over the new geology, it would be expected that the more geologically adroit thinkers would echo similar theodical circumspection when assessing the compatibility of the new geology with Reformed thought concerning the Creator's goodness, and the importance of a thinker's view on geologic time, a literal Edenic curse, and a catastrophic global Flood as pertaining specifically to a theodicy. Moreover, since the term "paleonatural evil" is not found in their works, the stance of a traditionalist (or an accommodationist) on such concepts must be based on the fairest inferences from related statements in their own writings, to which we now turn.

In contrast to supernumeraries as Boyd, the men to which we now turn are higher profile, and their views on paleonatural evil can be safely assumed to represent classic Scriptural geology.² The order of assessment is mainly chronological, using the publication

¹Ibid.

²The volume of a writer's output is not the criterion for inclusion here, but rather these men's reputation as Scriptural geologists, and whether they recognize and substantially address paleonatural evil, and its impact on God's character. The exclusion of other important figures is not to slight their value or equal passion, but only an effort to avoid being excessively redundant. References to secondary lights and their theodicizings are found in the footnotes.
dates of works which address deep-time serial catastrophism and the origins of natural evil.

**George Bugg (1769-1851)**

**Biography and Publications**

One of the more substantial replies to the theses of men such as Cuvier and Buckland comes from a "prolific pamphleteer and sought after preacher" named George Bugg.¹ Though biographical data on his life are sparse, his writings clearly indicate that he was a traditionalist, as will be shown shortly. After graduating from St. John's College (Cambridge) in 1795, Bugg served pastorates at York, Dewsbury near Leeds, Welby with Stoke in Leicestershire, Kettering in Northamptonshire, Lutterworth in Leicestershire, and Desborough near Kettering. Bugg served this latter curacy for 14 years, but we find no extant biographical materials detailing where he was or what he did for the 12 years preceding this position.² Bugg ended his career as rector of Wilsford, Lincolnshire. In addition to doctrinal skirmishes, Bugg encounters many difficulties in his life, including numerous bouts with illness, dismissals from three parishes,³ and having to raise four young daughters alone after his wife's death in 1815. Through all this, however, he was able to publish several works. These

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²Dunhill, 46. It is not unreasonable to presume that Bugg likely spent a large share of this time tilling the soil for his upcoming 720-page work on Scriptural geology.

works include a work relating to baptismal regeneration, a compendia of sermons, some works related to his dismissals from three parishes, and a tract on The Book of Common Prayer. Works most relevant to this dissertation include Bugg's two-volume Scriptural Geology and several letters to the editor of the Christian Observer.

Bugg's most celebrated work, Scriptural Geology, initially published anonymously, is the source from which the idiom 'Scriptural geologists' is derived. Bugg says he adopted the title, "SCRIPTURAL GEOLOGY" not from the vain notion that the Bible taught us the DETAIL, but the PRINCIPLE of Geological phenomena. And I trust it is no arrogance to say . . . that the state of the strata cannot possibly be accounted for on any other principle.

Anticipating the charge that he claims Scriptures to be teaching geology, Bugg makes the following preemptive clarification. By appealing "to the Scriptures on the subject of Geology, the reader must not suppose that I consider them teaching us anything on that subject as a Science." Yet he does affirm that the Scriptures have the cognitive status to teach us what nothing else can. Bugg's close friend, the Rev. Thomas Jones, curate and later rector of

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1 Bugg, Scriptural Geology. There are five minor typographical discrepancies between the title pages of both volumes.


3 Though George Young's 1838 work is also entitled, Scriptural Geology, the phrase is attributed to Bugg for three reasons: (1) Bugg uses the phrase "Scriptural geology" before anyone else, antedating Young by 12 years; (2) his work is nearly ten times larger than that of Young; and (3) as Millhauser points out, Bugg's work has been recognized as "the classical statement" of the Scriptural geology position (Millhauser, "The Scriptural Geologists," 71).

4 Bugg, Scriptural Geology, 2:348.

5 Ibid., 1:xii.
Creaton, depicted *Scriptural Geology* as "trying to set men's brains aright, and to make the disputers of this world to be still."¹ Rupke describes Bugg's *Scriptural Geology* as "lucid and perceptive."² However, in light of contemporary geological theory, and because Bugg contends that Genesis offers the only adequate guide to truth and earth history, it is not surprising to find contemporary characterizations of Bugg as a "radical fundamentalist."³

Entering now into the heart of this investigation, beginning with Bugg, each Scriptural geologist's understanding of paleonatural evil will be adjudicated from their position on the following five themes: (1) time frame for creation; (2) recognition of the fossiliferous strata as a deep-time phenomenon as espoused by leading accommodationist geologists; (3) understanding of and discomfort with the Cuvierian/Lyellian time scale; (4) the origin of natural evil; and (5) understanding of the bearing that the paleonatural evil implied by a deep-time geological column has upon God's character.

**Time Frame for Creation**

Bugg's position on the time frame for creation is based upon his personal commitment to biblical infallibility and his reluctance to engage in category translation. Thus it is helpful to unpack briefly Bugg's conviction on this point. He frequently critiques the exegetical

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¹Rev. Thomas Jones, quoted in Dunhill, 47.

²Rupke, 45.

³Norman Cohn, *Noah's Flood: The Genesis Story in Western Thought* (New Haven: Yale University Press, 1996), 122. Cohn calls Bugg a radical fundamentalist because Genesis, for Bugg, "was a wholly adequate guide to truth" (ibid.).
method of men such as Faber, Buckland, and Sumner,\(^4\) who he sees as "so bewitched by this new [deep-time] Geology as to... explain away the plain meaning of the Scriptures."\(^2\)

Bugg’s allegiance to infallibility and a literal hermeneutic impregnates every page of Scriptural Geology. He refers to Scripture’s "plain declarations";\(^3\) the "Mosaic narrative" as "a plain HISTORY OF THE CREATION" and "the literal and only certain construction of language";\(^4\) "all the Scripture, except such as are manifestly figurative, should be literally understood, and as such, interpreted."\(^5\) Bugg asks "what can ADD to the AUTHORITY of that which is infallibly true?"\(^6\) This claim helps to suggest that Bugg regards the Bible as infallible. In his estimation, those such as Sumner, Buckland, and Faber "all change the plain and obvious meaning of the Bible,"\(^7\) and thus exercise category translation. These "Geologists who profess CHRISTIANITY," seem to mention Scripture only to then "devise some way... of getting rid of it as soon as possible."\(^8\) They look at Scripture and "excuse

\(^{1}\)Bugg, Scriptural Geology, 1:107.
\(^{2}\)Ibid., 1:108.
\(^{3}\)Ibid., 1:73.
\(^{4}\)Ibid., 2:332. Cf. "The HISTORY of CREATION is strictly a narrative of plain fact" (ibid., 2:347). Unless otherwise noted in this chapter, all italicized and capitalized words appearing in quotes are as found in the referenced author.
\(^{6}\)Ibid., 2:272.
\(^{7}\)Ibid., 2:345.
\(^{8}\)Ibid., 2:322-323.
the want of science, the ignorance, and even the error of the Sacred penmen." In contrast, Bugg allows that the

Sacred writers may be silent about science or even ignorant of it, without impeaching their infallibility as recorders of divine revelation. But whatever they do declare, and on whatever subject . . . is certainly true. They were under divine and supernatural guidance, and therefore personal ignorance in the writer is no defect; and error is impossible. By not limiting infallibility to matters of faith and practice, but including also issues of history, geology, science, etc., Bugg espouses principles similar to modern inerrantists.

He contends frequently that the plain, obvious meaning must be sought when interpreting Scripture. Bugg is such a strong literalist that he even chides Alexander Catcott and Granville Penn for not adhering firmly enough to biblical writ. On taking the Scripture at face value, he writes that it
does not "interfere with philosophical inquiry," or repress the researches of mankind."

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Ibid., 2:352.

Ibid., 2:352-3. Bugg quotes approvingly Bishop Samuel Horsley, who writes that no inspired writer would be permitted to affirm a false proposition in any subject, or in any history to misrepresent a fact (ibid., 1:13).


Like other traditionalists, Bugg mirrors classical Reformation exegesis. J.I. Packer describes this approach: "Biblical passages must be taken to mean what their human writers were consciously expressing. This principle embodies the Renaissance insistence, out of which the Reformation sprang, that all ancient documents should be understood literally as opposed to allegorically . . . [as] units of communication. The 'literal' sense that Renaissance exegesis sought was the 'literary' sense, the sense that the writer meant his readers to catch." The Bible is inspired by a "God who speaks, in the straightforward sense of that word--that is, a God who addresses verbal messages to people, states facts, tells us things" ("How Evangelicals Read the Bible," available from http://www.episcopalian.org/tesm/missmini/packer-bib.htm; Internet; April 10, 1999).

But it does forbid us to interfere with "the literal interpretations of terms in Scripture," when such interference would change the character of the thing revealed, and fritter down the Creation of the Bible into "THAT Creation which Moses records, and of which Adam and Eve were the first inhabitants;" and so make "the Mosaic account of Creation" a mere epoch in the progress of Geology from the "primitive formations" to the present times.1

Bugg lived "nearly forty years under the full and firm belief that the Scriptures are strictly and literally true."2 So firm is this conviction that Bugg holds an all or nothing position. He states: "It is perfectly clear that the Mosaic narrative professes to be, and really is, or it is nothing, a plain HISTORY OF THE CREATION."3 His commitment to the historicity of Genesis and a literal hermeneutic4 is frequent and self-evident in his Scriptural Geology. His adherence to the doctrine of creatio ex nihilo, for example, is evident when he states that the issue of whether the earth was created out of a prior world is "perfectly decided" by the writer of Hebrews.5

Having considered Bugg's basic orientation we turn directly to his understanding of the time frame of creation. Bugg's adherence to a time frame for creation limited to a six-day creation week is clear when he writes that the work of creation for the reception of man took

1Ibid., 2:40-41.
2Ibid., 1:108; 2:351.
3Ibid., 2:332.
4Cf. Bugg's claim: "If the HISTORY of Moses be a FIGURE, what are we to say of his DOCTRINES." Ibid., 2:333. Cf. 2:347, 351. It must be pointed out that while traditionalists do take Gen 1-11 literally, in the larger sphere their theodicy is not dependent upon such a hermeneutic. Bugg does not let "the matter rest upon scriptural evidence alone," but is "assured upon the maturest reflection and the strongest philosophical evidence, that this pretended new Theory of Geology has no more claim to truth and consistency, than the absurd farrago [i.e., confused group] of systems which have preceded it" (ibid., 1:90).
5Ibid., 1:112. Here Bugg quotes Heb 11: 3.
place in "six real,"1 "natural days."2 This creation was "the immediate work of God," with no "second causes" connected with its production.3 According to Bugg, the suggestion by deep-time thinkers, that "the Mosaic creation is only made one creation amongst many,"4 surely stands out "in striking colours before the Biblical student."5 In Bugg's estimation, Moses "links together the earth and heavens, in the same period of formation."6 "No possible sophistry," Bugg says, "can exclude 'the whole material universe' from being comprised in these 'six days'. . . And no possible sophistry can elude the fact that these 'six days' are six real days."7

Remarking on the fourth commandment, Bugg notes that it "is among the most minute and specific of the whole, and the most singularly minute, particular, and exact revelation of all the will of God."8 Coupled with having been "WRITTEN WITH THE FINGER OF GOD," then,

it is impossible that God should himself have recorded with his own hand, a description of the "heaven and earth, the sea, and all that in them is" as having created them in "six days" if that record were not strictly and literally correct. Yet if Geology be true, there

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1Ibid., 1:107.

2Ibid., 1:69, 90, 104. Bugg refers to the creation days as "six natural days," or "six real days." Cf. Ibid., 1:106-107, 150.

3Ibid., 1:90.

4Ibid., 1:89-90.

5Ibid., 1:90. The singularity of creation also applies to Bugg's belief in a single violent global flood. He writes: "THE BIBLE is given to teach us that there has been one Creation, and one Deluge, attached to our globe, and no more" (ibid., 2:52. Cf. 1:160 ff.).

6Ibid., 1:103.

7Ibid., 1:107.

8Ibid., 1:104.
is no part of this correct. For "MADE" in the fourth command, is certainly analogous to and descriptive of the same "heavens and earth and sea," which in ii. Genesis, are said to be "CREATED AND MADE." But Geology says; that the "heavens, the EARTH, and the SEA" especially, were created and made, "thousands of ages" before the work of those "six days" commenced.1

This integral point by Bugg (i.e., the Genesis time frame vs. the geology time frame) indicates the importance of the contrast between two authorities: a particular biblical interpretation and secular geological theory of the nineteenth century. Thus, for Bugg, the two cannot co-exist without robbing the fourth command, and by extension all of Scripture, of any propositional foundation and coherence. In Bugg's mind, "we are bound" to take the six-day creation "literally; and that they included the whole universe."2 If one is to remain fair and hermeneutically honest, then,

it is undeniable that the six days of creation embrace the real and original creating and making of the heavens, and the earth, the sea, and all they contain. And that we know of no creation whatever besides this.—All therefore of Mr. Buckland's "hypotheses" must fall to the ground.3

Thus, regarding the literal six day creation time frame, Bugg is justifiably called the Scriptural geologist. He is fully committed to infallibility, reticent to entertain any residuum of category translation, and confident that geology does not contradict Scripture, provided that both are interpreted correctly.

Recognition of the Fossiliferous Strata as a Deep-Time Phenomenon as Espoused by Leading Accommodationist Geologists

Given Bugg's allegiance to sola scriptura and a literal exegesis, it is important to

1Ibid.
2Ibid., 1:106.
3Ibid., 1:151.
observe his understanding of geology data and his posture on geology as a source of
knowledge in order to understand his grounds for making subsequent theodical judgments.

We start by considering Bugg's evaluation of geology and then move to his concerns. He
agrees with the leading geologists of his day on at least two issues. First, he agrees that the
earth's geological structure displays God's wisdom and benevolence as having been prepared
for man. Second, Bugg generally agrees on the facts of the "fossil strata." But at the same
time he makes the following pivotal distinction:

As to the extent of geological speculations, I distinguish between geological facts and
geological speculations. Physical facts are a store-house of natural knowledge; but
speculations and theories upon those facts are very different subjects. Yet strange to tell,
and most disreputable to the philosophy which produces it, even divines and reading men
in almost every situation are found to speak of the "numerous revolutions" which have
taken place in the earth, as "facts" rather than "theories"; as "phenomena" which cannot be
contradicted, rather than speculations which have been grafted upon those phenomena.2

The above paragraph shows that Bugg makes every effort to distinguish between the actual
physical data and the mere subjective interpretation of the data, and is laying out a not-so-
latent challenge to accommodationist to do the same.3 In a letter to the editor of the Christian
Observer, Bugg points out how illegitimate it is to make "geological theories synonymous
with geological phenomena."4 He calls for a further distinction between "alleged physical

1Ibid., 1:xii. Bugg constantly refers to the "fossil strata," or the equivalent, with its
animal remains therein, thereby exhibiting a working knowledge of the philosophical construct
later to be called "the geologic column." Cf. 1:18, 23, 25, 48-49, 53-55, 59, 174 f., 183, 190 f.,

2Ibid., 1:6.

3Cf. ibid., 1:6-8.

facts," and "alleged theological inferences" drawn from these facts. The contrast is between "the actual phenomena of the physical state of the earth," and inferences potentially hostile to revelation. Bugg reflects the general tenor of the other Scriptural geologists, in declaring that he admits "the physical facts' allowed by geologists." He simply believes it unwise to entertain a geological speculation or theory "which materially affects the word of God." To do this is to "bring theoretical speculations on natural phenomena into immediate and almost direct hostility to the first principles of the oracles of God."

Bugg suggests a useful definition of accommodationistic-type thinking, as any "system which strives to evade the plain and obvious meaning of the word of the Most High." Such evasions, in his estimation, are "clogged with difficulties and absurdities, in every direction." Bugg takes Buckland, Sumner, and Faber to task for circumventing

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1Ibid., 235-238.
2Ibid., 237.
3Ibid., 238.
4Ibid., 237.
5Ibid., 238. Note Bugg's response to "W.M." regarding the issue of prelapsarian death in the sub-human realm. Ibid.
6Bugg, Scriptural Geology, 1:70.
7Bugg repeatedly refers to "accommodation," though not always with identical nuance (see ibid, 1:xii-xiv, 2, 123; but also cf. "geological accommodation," ibid., 107).
8Ibid., 1:126.
9Ibid., 1:126.
Scripture’s plain meaning. He contends that these "professed christian geologists" are bewildered by . . . fascinating speculations which are [sic] become the fashion of the present times," and they thus "try to believe two irreconcileable [sic] systems, without minutely investigating their disparities, or understanding consistently their relations." Critically assessing their writings reveals to Bugg that the accommodationists do much more than admit that the "physical" facts are true which geologists allege. They embrace the theories by which geologists account for the formation of those "physical phenomena," and from which they endeavour to prove, that numerous races of animals lived and died "on our globe during myriads of years before the formation of man." These theories are "inferences," or deductions, which geologists have drawn from their "physical facts." But these . . . are not facts. They are conclusions which geologists assert to arise out of those facts. It is a fact that the "strata" are deposited in a certain form;—it is a fact that "animal remains" are found embedded in the strata. These are the facts, and, generally speaking, we may say these facts are true.

Bugg expresses concern over the "contagious and alarming" facility of some prominent thinkers, "to relinquish the plain and literal meaning of divine truth." Notable in this regard are "the first rate divines of our Universities" and "the Church of England," who accommodate too quickly to the "specious system" of the new geology, unable to

1Ibid., 1:48.
2Ibid., 1:40-41.
3Bugg, "Mr. Bugg on Scriptural and Modern Geology," 237-238.
4Bugg, Scriptural Geology, 1:8.
5Ibid.
6Ibid., 1:12.
7Ibid., 1:13.
8Ibid., 1:8.
distinguish the interpretation of the evidence from the evidence itself. According to Bugg, divines and reading men in almost every situation, are found to speak of the "numerous revolutions" which have taken place in the earth, as "facts" rather than "theories"; as "phenomena" which cannot be contradicted, rather than speculations which have been grafted upon those phenomena. And who need be surprised at this? When he finds M. Cuvier, Mr. Buckland, &c. &c. almost every where adopting the same unfair mode of address in their writings on the subject.¹

The bottom line for Bugg, then, is that the potential incongruities between Scripture and geology are not mandated by the hard phenomena. Rather, it is the theories adopted and promoted by some geologists which occasions any conflict.² According to Bugg, accommodationists appear "bewildered by fascinating speculations," "geological conceit," and "whimsies," and attempt "to believe two irreconcilable systems, without minutely investigating their disparities, or understanding consistently their relations."³ In the interest of analyzing Bugg's familiarity with the "geologic column," let us now assess his understanding and reconstruction of the geologic time scale.

Bugg's Understanding of and Discomfort with the Cuvierian Geologic Scale

As noted earlier, in order to set the stage for Bugg's subsequent theodical assessments of the new geological theory, it is paramount to demonstrate the depth of Bugg's familiarity with the new geological paradigm which came to dominate the ideological landscape of his

¹Ibid., 1:xi. Here, Bugg refers to Moses' language being accommodated.
²Ibid., 1:6.
³Ibid., 1:7.
day. As an introduction to this section, it is helpful to note first that Bugg is rather dismayed with one aspect of Cuvier's method. For example, Bugg did certainly suppose and believe that M. Cuvier had visited almost every country on the globe;—that he had actually descended into almost all the coal pits,—had scrutinized every important mine,—and had examined nearly all the stone-quarries in Europe. And this was surely a natural and reasonable expectation. What then will be the reader's astonishment when he learns that M. Cuvier has drawn the testimonies, by which he illustrates and confirms his 'Theory of the earth,' very greatly from the quarries of Paris and its neighbourhood!1

Bugg asks his readers to "notice here that 'many' of 'the most complete and satisfactory evidences' of M. Cuvier's Theory were 'dug up' in the 'environs of Paris.'!!" It is moreover in evidence, Bugg continues, "that M. Cuvier wrote his 'Theory of the earth' not only without personal inspection, but even in almost total ignorance of most other parts of the globe."2 Bugg implies that Cuvier is not aware, or does not indicate an awareness, of what today we might term fossil-Lagerstätten in the near vicinity of France. A prominent lacuna, according to Bugg, is Cuvier's failure to mention the "fossil remains" of the Italian Apennines, which traverse almost the "entire length" of the country.3

Thus, Bugg takes Cuvier to task for basing his theory on inadequate first-hand research, an inadequate sampling, and for basing his theory on a survey of what amounts to "a

1Ibid., 1:190-191.

2Ibid., 1:191.

3Other Lagerstätten which Bugg claims Cuvier might be aware, but nonetheless ignorant, include: Jura, the Hartz, the Vosges, Black Forest,—Aix, Po, Arno, Thuringia, Oeninger, Verona, Glarus, and Aichstadt. Bugg believes these receive inadequate explanation in geology texts (ibid., 1:192).
twenty thousandth part of the surface of the earth." Bugg wants his readers to realize just how "small a portion of this superficies has ever been actually 'dug up' and examined to any depth" by Cuvier himself. He follows with these rhetorical questions:

And at the actual discovery of how many of these bones was M. Cuvier present? And how much of the strata has he actually seen turned over? Certainly almost next to nothing. It is really doubtful whether he could vouch for the contents of the strata subtended by one single acre of surface.

In sum, Bugg is stunned that one of Cuvier's stature proposes a theory devoid of "authentic information and certain knowledge, upon the most liberal allowance of more than ONE PART IN TWENTY MILLION OF THE FOSSIL STRATA ON THE SURFACE OF THE GLOBE." His surprise aside, Bugg grasps well Cuvier's views on the geological strata, to which we briefly turn.

The Idea of Revolutions

Bugg clearly describes for his reader the nature of the geological system, and its bearing upon the creation and Scripture. His motives are to "enable the reader to see the theory itself." Bugg understands Cuvierian-type thinkers to define a revolution as a catastrophic deposition of the geologic strata, which involves the mass extinction and death of species. Further, Cuvier's theory of many successive catastrophes stands in stark antithesis to Bugg's model. The traditionalist "admits of no revolutions among the secondary strata," while

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1Ibid., 1:193.
2Ibid.
3Ibid., 1:194.
5Ibid., 1:15.
Cuvier "requires ten, or perhaps twice or thrice or more probably ten times that number."

After having noted that "Buckland and other writers speak of prodigious masses of bones . . . heaped together and accumulated in an extraordinary manner," Bugg offers the following tentative proposal for how some fossil Lagerstätten may have formed:

If some of the foundations of the great deep, all of which were 'broken up' at the Deluge, remained open till the return of the diluvial waters, and admitted large portions of that retiring element, it is very possible that while numerous floating bodies of animals were spread over large tracts of land, not a few might come within the reach of the whirlpool caused by these funnel-shaped gullies. In such case, whole animals, bones, and pieces of bones might be heaped and locked together, in a way which few other known causes could produce.

Bugg notes that Buckland's theory, virtually identical to Cuvier, reduces such an agglomeration of bones to merely one of a vast series of revolutions. The last revolution on this count is Noah's Flood, which brought the earth to its present state. Each revolution is "distinguished by its appropriate and peculiar fossil remains," as Bugg indicates in the following manner.

Each revolution destroyed the animals then found upon the earth, but prepared that earth for their successors. As the creation which Moses records prepared the earth for man, the revolution which succeeded it destroyed its prior inhabitants, and made way for those races which accompanied mankind. The last revolution which changed the face of our globe was the Mosaic deluge: and the last but one, "that creation which Moses records."

To highlight further the contrasts indicated in the paragraph above, let us now look at Bugg's understanding and critique of Cuvier's view of the origin of the geologic strata.

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1 Ibid., 1:55.
2 Ibid., 2:128.
3 Ibid., 2:128.
5 Ibid., 1:60.
Bugg’s Understanding of Cuvier’s Deep-Time Scale of Geology Expressed in Chart Form

Bugg contends that in Cuvier’s theory each stratum or stage of the geologic strata is "distinguished by its peculiar and appropriate petrifactions."¹ To assist his readers, Bugg lays out the following tripartite table which indicates the major geological divisions.

I. The present species; at top [sic] of the diluvial formation.

II. The extinct species; the Elephant, Rhinoceros, Hippopotamus, Mastodon, Elk, etc.

III. The extinct genera; the Palaeotheria, in the "Paris formation," which is the next stratum immediately under the diluvial formation. This "Paris formation" is a very remarkable one, and according to this theory, is the last revolution but one. The last was our deluge. Our deluge involved the "extinct species." The previous one, the "Paris formation," imbedded the "extinct genera," which M. Cuvier calls the "Palaeotheria," or large ancient unknown animals.²

Bugg expands upon these divisions by employing Cuvier’s "scale of the Strata." Table 2 gives Bugg’s view of this schema.³ Bugg notes that 11 of these 16 strata contain fossils, and writes: "By beginning at the surface of the earth, and tracing the Strata downwards, we shall be able to come to the point at which we are now aiming. Whether we are to count the number of Revolutions by the number of the Strata, or by the number of Strata containing organic remains; we are not distinctly informed. To give, however, their system all its advantage, we will suppose for the present that the Strata containing organic remains, are to be regarded as furnishing our rule. We shall find the revolutions to be Eleven."⁴

¹Ibid., 1:25. Petrifaction refers to something changed to stone, i.e., fossils.


³"Cuvier’s scale" is referred to again on 1:53, 56, 196, and later called "Cuvier’s geological table," 54, 59.

⁴Ibid., 1:23-24. Later, Bugg notes that “Mr. Buckland unites in opinion with M. Cuvier, and considers the strata which contain fossil remains vastly too large and deep [i.e., two miles] to have been formed by the operations of the deluge” (ibid., 1:176).

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<td>Human fossil remains first appear in this formation.</td>
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<td>XV.</td>
<td>Remains of extinct species of elephant, rhinoceros, hippopotamus, taper, deer, hyæna, bear</td>
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<td>Paris formation—Remains of extinct genera, the Palæotheria, first appearance of fossil remains of birds, and mammiferous animals</td>
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<td>XII.</td>
<td>Brown coal formation</td>
</tr>
<tr>
<td>XI.</td>
<td>Fourth limestone and chalk—fossil shells, corals, lacertæ, turtles, and fishes</td>
</tr>
<tr>
<td>X.</td>
<td>Third sand-stone or green sand</td>
</tr>
<tr>
<td>IX.</td>
<td>Third limestone... &amp; lias limestone—fossil shells, corals, lacertæ, fishes, vegetables</td>
</tr>
<tr>
<td>VIII.</td>
<td>Second sand-stone or new red sand-stone—fossil shells, corals, vegetables</td>
</tr>
<tr>
<td>VII.</td>
<td>Second limestone or magnesian limestone—first appearance of fossil fishes, oviparous quadrupeds</td>
</tr>
<tr>
<td>VI.</td>
<td>New red conglomerate</td>
</tr>
<tr>
<td>V.</td>
<td>Coal formation—Impressions of plants, many with a Tropical aspect</td>
</tr>
<tr>
<td>IV.</td>
<td>First limestone or mountain limestone—fossil corals and shells</td>
</tr>
<tr>
<td>III.</td>
<td>First old red sand stone and old conglomerate—fossil wood</td>
</tr>
<tr>
<td>II.</td>
<td>Transitions rocks (nine)—first appearance of fossil shells and corals</td>
</tr>
<tr>
<td>I.</td>
<td>Primitive rocks (four in number)—no fossil remains</td>
</tr>
</tbody>
</table>

Source: George Bugg, Scriptural Geology; or, Geological Phenomena Consistent only with the Literal Interpretation of the Sacred Scriptures, upon the Subjects of the Creation and Deluge; in Answer to an "Essay on the Theory of the Earth," by M. Cuvier, Perpetual Secretary of the French Institute, &c. &c. and to Professor Buckland's Theory of the Caves, as Delineated in his 'Reliquiae Diluviane'... (London: Hatchard and Son, 1826-27), 1:22-23.
Bugg alludes to that portion of the Cuvierian paradigm which indicates that animal
"bones are so situated in the strata as to prove successive and numerous formations." He
asks the reader to engage Cuvier, whom he quotes as follows: "The most important
consideration, and that which has been the chief object of my researches, and which
constitutes their legitimate connexion with the Theory of the earth, is to ascertain the
particular strata in which each of the species was found." Bugg perhaps sees within Cuvier’s
method here what will later be known as "index fossils," which will be used to establish the
succession of organic beings in the geologic column. Bugg agrees that the particular strata in
which species are found "is indeed 'the most important consideration in the discussion'." He
particularly highlights Cuvier’s belief that "there is also a determinate order observable in the
deposition of these bones in regard to each other, which indicates a very remarkable
succession in the appearance of the different species." This highly significant statement

1Ibid., 1:230.

2Georges Cuvier, quoted in ibid.

3To Bugg, modern geology begs the question by referring to index fossils. He says:
"Geologists consider strata which are chemically different from each other to belong to the
same formation . . . only because they contain the same kind of fossil remains. This, however,
is inverting the nature of the evidence by which the Theory is professedly established. The
'Theory' declares that 'similar strata' contain 'similar fossil remains.' But when they come to
prove this by the strata, which do actually contain similar fossil remains, they find that the
strata are not at all similar, nor do they prove, but contradict the Theory. These Geologists then
desert their first principle, assume the truth of the Theory, and then prove the strata to be of the
same formation because the Theory says they should be so!—Thus, then facts are corrected by
the assumed Theory, and any thing proved we please" (ibid., 1:259; cf. 272).


5Bugg is quoting Cuvier here (ibid.).
suggests that Bugg sees the whole edifice of modern geology as resting upon the remains of extinct genera and species, and that the orientation of their remains allegedly demonstrates successive revolutions.\(^1\) Bugg quotes Cuvier in this regard:

\begin{quote}
The importance . . . of investigating the relation of extraneous fossils with the strata in which they are contained, is quite obvious. It is to them alone that we owe the commencement even of a Theory of the earth; as but for them we could never have suspected that there had existed any successive epochs in the formation of our earth, and a series of different and consecutive operations in reducing it to its present state.\(^2\)
\end{quote}

For Bugg, these extraneous fossil remains in the strata are the sole indicators of the numerous revolutions in the strata, which the modern geological Theory assumes to have taken place. And the indications, we have further seen, arise from this circumstance,—"Their species and even their genera, change with the strata."—It appears further that these genera and species begin with the most inferior race of animals, and advance by regular gradation, from shells, fishes, amphibious reptiles, birds, and so up to quadrupeds.\(^3\)

In the important quotation above, Bugg makes the critical observation that the Cuvierian paradigm, even at this pre-Darwinian stage, carries within it what we today might call incipient Darwinian-like transformationism, whereby there is an increasing biological complexity as one moves further up the geologic column. Further, the statements quoted above indicate that there are two types of succession implied in Cuvier's model: (1) the succession of geologic strata, recording the mere passage of deep time; and (2) the successive development of biological kinds, whereby each geological revolution is paralleled by increasing biological complexity. Thus, fossil remains in the respective strata are interpreted through the philosophical assumption of numerous epochs or deep-time epochs which are "demonstrated" by the fossil remains in the respective

\(^1\)Ibid., 1:276.

\(^2\)Cuvier, quoted in ibid., 1:174.

\(^3\)Ibid., 1:183.
strata. However, Bugg views the above conclusion as an exercise in circular reasoning.1

New Creations

If one adopts the Cuvierian time scale, Bugg is anxious to point out the implications this has for God's creative activity. He refers to a certain "class of writers who advocate [multiple] new creations."2 These new (or progressive)3 creationists would of logical necessity affirm that God has gone out of His usual way to produce new creations. This entails "that the Almighty has by His own hand changed the course of nature, and removed the animals previously existing in order to create new ones in their place: and that these destructions and new Creations are all a part of one and the same design."4

Bugg asks us to consider which of two options is more likely. Is God more likely to "suddenly change the course of his proceedings, as to destroy all the existing animals and create fresh ones"; or rather, "in the course of some thousand years effect variations in animal nature . . . ?" More directly, he asks, "Which is the greater deviation?" This proposition

1Ibid., 1:173-174.
2Ibid., 2:276.
3Contemporary astrophysicist, Hugh Ross, a leading spokesman for Progressive Creationism, defines this position as "the hypothesis that God increased the complexity of life on earth by successive creations of new life forms over billions of years while miraculously changing the earth to accommodate new life" (Hugh Ross, "Dinosaurs and Hominids" [Pasadena, CA: Reasons to Believe, 1990]), audio-tape. There seems to be an intentional ambiguity on Ross's part regarding what he means by "successive creations of new life forms," and this at least leaves the door open for future Progressive Creationists to gravitate towards transformationists models. Ross, however, is not ambiguous on his adoption of a deep-time view of earth history, which means that the present economy of death and suffering basically mirrors that which was prior to the Fall.
4Bugg, Scriptural Geology, 1:277.
seems "directly contrary to every thing we know of God and of his dealings."5

Bugg's Basic Discomfort with the Cuvierian New Geology

As has been indicated above, Bugg clearly grasps Cuvier's scale of geologic strata, and his views of earth history and the alleged increase in biological complexity throughout deep time. If Cuvier in fact presages Darwin's theory, then Bugg's criticism of geology goes much further than merely critiquing deep time; he is equally concerned about any incipient transformationist scenarios and the suffering and death which attend such a model. Bugg continues to sound the alarm that Cuvier's theory not only involves a deep temporalization of the history of the earth, but it is accompanied by the notion of successive generations, which means that earth's history is characterized by "death upon death."2 Such a notion of succession, in Bugg's words, is "perfect mockery as it respects science, and profane as applied to divinity."3 However, such claims mean that the onus is upon Bugg to demonstrate precisely how the character of God is profaned by the new geology. In the following two sections we will allow Bugg to harvest the theodical implications of Cuvierian deep-time geology.

The Origin of Natural Evil

Bugg describes Gen 1:31 as a "simple, majestic, and God-like narrative,"4 which conveys "a peculiar, and beautiful emphasis."5 This verse assures him that any scheme

1Ibid., 2:279
2Ibid., 1:54, 259.
3Ibid., 1:231.
4Ibid., 1:143.
5Ibid., 1:144.
"which supposes that animals have arisen by time and acquirements, from animalcules and monads [sic], to quadrupeds and men," is "erroneous in fact." Bugg claims that this verse shows that man was created de novo in the image of God, and also destroys any notion that "the human race commenced its career in a state of barbarism" and has "been gradually improving" from that time to the present. He emphasizes that portion which states, "EVERY thing that he HAD MADE" which he takes to mean that "every thing was in its perfection before him, which the Lord God had made. For Bugg, there could then have been no prior revolutions and destructions of the works of God. They were all here, and all good."

The Almighty contemplated his new creation. Infinite wisdom surveyed its parts, properties and tendencies. And infinite purity and goodness approved the whole.

Then every part of it was pleasing to God. Every part of it was what he wished it to be. Then no part of God's creation had any propensity to discontent or rebellion. Whatever was the will of the Lord, was the will of the creature. Whatever he ordered would be cheerfully [sic] performed, and whatever he granted would be gratefully received. While "all was good very good [sic]," there could be no desire for more than he gave, and no inclination to take what he withheld.--We do not touch the moral question here, we have enough without.

Thus, as clearly implied by Bugg in this decree, a construct of aboriginal serial catastrophism, like that proposed by Cuvierian-Lyellian apologists, contravenes Gen 1:31.

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1Time here can only mean deep time, since no notion of transformism had been recently hypothesized, in Bugg's day, which did not demand thousands of ages.

2Ibid., 2:315.

3Ibid., 2:315.

4Ibid., 1:143.

5A complementary notion to this point, on Bugg's part, is that "the all-wise God works no superfluous miracles" (ibid., 1:169).

6Ibid., 1:143. Bugg refers to the original creation as "beautiful" (ibid., 1:61).

7Ibid., 1:144.
If the created order was originally perfect, how does Bugg account for its present order's apparent sub-optimality? Bugg takes the issue of carnivory as an example. If animals were originally created carnivorous, this would mean that violent death would have been common in the creation from the very beginning. But the Scripture represents death as entering into the world by sin:—Had lions and tigers, &c. been as voracious from the first as they are now the earth must have been in danger of being depopulated; And Adam himself would not have been safe from destruction by voracious animals.¹

Such a picture can hardly be inferred from Scripture alone, according to Bugg, and is "the grossest insult to the wisdom and goodness of God."² Bugg believes that God originally "granted to all the animals, only vegetable food,"³ and makes the additional salient point that "if animals were created carnivorous they would instantly have fed upon their fellow creatures. Then unless many of one kind had been created at first the animals upon which the others fed would have immediately become extinct."⁴ Bugg goes further and says that since the animals were all created very good, they would not have had any "propensity to desire more";⁵ they would have wished for nothing more than an herbaceous diet.⁶ He points out that carnivorous animals in the present have been known to survive "upon vegetable food only."⁷ The post-diluvial lifting of the prohibition against eating meat⁸ indicates that such a

¹Ibid., 1:145-146.
²Ibid., 1:147.
³Ibid., 1:146 (cf. Gen 1:29-30).
⁴Ibid., 1:145.
⁵Ibid., 146.
⁶Ibid., 1:147.
radically different dietary system had previously existed. Bugg chooses to forgo any
counterpart on post-lapsarian anatomical changes in animals, knowing that one could not
"prove how far this change in the animal propensities has affected their external or internal
organization." He simply contends "that animals have degenerated from their original state
into carnivorous habits." Elaborating further he does not believe it was natural for
the earth to bear "thorns and thistles:" It was not natural to animals to eat one another.
They have both departed from their original tendencies from their connexion with the
"human race." The cause was a moral one--man departed from his allegiance to his
Maker--and from that period, the whole world degenerated."

This statement from Bugg highlights several contrasting issues between traditionalists
and accommodationists of his day. Traditionalists see thorns and thistles in one end of the
theodical spectrum, and the suffering and death inherent in carnivory on the other end. Moral
causes lie behind such natural evils, and represent a degeneration from an original perfection:
"man has degenerated and all nature with him, from their original perfection; and the
tendency of his nature is to grow worse and worse."

In stark contrast, according to Bugg, accommodationists do "not recognize moral
causes as having any concern in the physical changes of the globe," and regard the human
race as originally in a state of barbarism. Bugg believes this flatly contradicts the imago dei

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8Gen 9:3.

1Bugg, Scriptural Geology, 1:147.

2Ibid., 1:149. Cf. 1:215 f., 221-222. For a Jewish perspective of the chronology of
carnivory, with humans and animals, see L. Ginzberg, "Noah and the Flood in Jewish Legend,

3Bugg, Scriptural Geology, 1:222.

4Ibid., 1:152.

5Ibid., 2:315.
of Gen 1:27,¹ the inference being that if this verse is true, a good Creator would not be likely to create a non-barbaric humanity, only to set it into a natural order which (according to conventional geology) is characterized by nothing but barbarism and death. The idea that humanity begins in a barbarous state and has been gradually improving ever since is the first of "two errors of vast importance,"² both of which are "bad in divinity,"³ according to Bugg.

The second error pertains to natural evils stemming from non-moral causes. Recall that Bugg sees the new geology as erasing any link of "offence, with the suffering beings."⁴ Here he adds that geology "never recognises moral evil as the cause of natural catastrophes."⁵ But Bugg is convinced that "Moral causes have produced [these] changes;" "that natural evil never precedes moral evil; and that sin is the author of pain, as well as of death."⁶ Such clearly indicates Bugg's position on the origin of natural evil.

Bugg's Understanding of the Bearing That Paleonatural Evil Implied by a Deep-Time Geological Column Has upon the Character of God

Having introduced Bugg's ideas on natural evil's origin, we have the backdrop for finding his understanding of the bearing of the origin of natural evil on the character of God. The dissertation has discovered that, according to Bugg, two primary divine attributes affected by the new geology are God's wisdom and goodness.

¹Ibid.
²Ibid.
³Ibid.
⁴Ibid., 2:40.
⁵Ibid., 2:317.
⁶Ibid.
The New Geology Negatively Impacts the Wisdom of God

For Bugg, the veracity of Scripture is near the heart of the discussion about the new geology, because this impacts "the character of the Author."¹ Implications surface as Bugg chastises the likes of John Bird Sumner² for not taking "the literal interpretations of [certain] terms in Scripture."³ According to Bugg, when contrasted with the Bible, 

*modern Geological Theory* makes every thing unwise, unkind, and perhaps, unjust. It finds no original Creation:--And it cannot prove a first Creation, from "wise design." For "primitive rocks remaining thousands of years alone is unwise, because useless. And, dashing these to pieces, in order to mend them and make fresh ones, designates either a want of wisdom in the primitive "design," or a failure in the attempt, and a want of experience and power to execute a wise one. But whoever predicates either of these on the Most High, "charges God foolishly."⁴

Clearly, for Bugg, in ravaging these habitats for the mere purpose of creating fresh one, the Creator displays an apparent lack of divine wisdom. Could not an omnipotent God execute a wiser plan? Bugg observes that accommodationists believe that earth history is characterized by many "violent convulsions,"⁵ and that our present state has been arrived at via serial, deep-time "renovation and destruction,"⁶ and the wreck and ruins⁷ of a more ancient world over

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¹Ibid., 2:42.

²John Sumner was bishop of Chester when he wrote *A Treatise on the Records of the Creation, and on the Moral Attributes of the Creator*, 2 vols. (London: J. Hatchard, 1816), and later became Archbishop of Canterbury, and encouraged Buckland to pursue geological studies.


⁵Ibid., 1:72.


"thousands of ages."¹ Thus the new geology maligns the wisdom of God. Bugg clearly believes accommodationism maligns God's goodness, wisdom, and justice.² He rhetorically asks: "Where then is the philosophy, the wisdom, yea the common sense in building, destroying, and rebuilding the mansion many times over, before its Lord is made to occupy it?"³ Pressing this point home, Bugg notes that the rocks cry out of having been "violently torn up and projected into turrets and pinnacles, ongoing numerous convulsions and catastrophes, while they were alone, and before the existence of any living being."⁴ Bugg asks: "Where is the wisdom of this!!"⁵ These rocks are "'overturned in a thousand ways,' and most of the animal existences buried in their ruins."⁶ Thus, for Bugg, deep time, if true, portrays God, in effect, as a continual destroyer of one habitat after another, rendering God an unwise creator. For Bugg, this does not support divine wisdom, but impugns it.

The New Geology Negatively Impacts the Goodness of God

In considering the scheme of earth history framed by Hutton, Cuvier, and Lyell, Bugg wonders how such is consistent with divine goodness as revealed in Scripture and as traditionally defended. He writes that "we have no information of the true character and perfections of the Divine Being, but what the Scriptures give us."⁷ Bugg wishes to know

¹Ibid., 1:109.
²Ibid., 2:43-48, 278-79.
³Ibid., 1:142.
⁴Ibid., 2:44.
⁵Ibid.
⁶Ibid.
⁷Ibid., 2:43.
exactly how the accommodationists are able to cipher divine kindness and justice in the penumbra of deep-time, prelapsarian, serial cataclysms, which each engulfs whole races?¹ In this vein, he lays out the following challenge to the advocates of deep-time geology.

That the location and adaptation of the strata to the use of man are wise and good, is fully admitted. But these are facts. That the time and manner of these formations, however, which the modern Geological Theory professes to develope, shew "... benevolent intention," and exhibit "proofs of the most exalted attributes of the Creator, is, I believe, what few will have boldness enough to assert. Yet, if Geologists would recommend their science (which involves their "theory" of formations), they must not only shew that there is wisdom and goodness manifested in the formation of the strata, but in their Theory of [the origin of] that formation.²

This vital issue shown above indicates that Bugg doubts that any deep-time interpretation of the fossil record can reflect God's goodness. This is an important theodical assessment of the new geology. He believes only one "shackled by the prejudices" of the Cuvierian school would ever think of deeming the formation system of geology either wise or benevolent.³

On one hand, Buckland and Bugg both agree "that the earth is very wisely and benevolently constituted for the comfort and utility of it inhabitants."⁴ But Bugg asks, "How do these appear on the face of our modern Geological Theories?"⁵ In Bugg's mind there is "nothing more decisive of the error of this Geology than its failure to exhibit the ... benevolence"⁶ of God the creator. Here we have an indirect challenge, from Bugg's vantage point, to the deep temporalists to show how their model is not detrimental to divine goodness.

¹Ibid., 2:37.
²Ibid., 2:47-48.
³Ibid.
⁴Ibid., 2:43.
⁵Ibid.
⁶Ibid.
The several penetrating quotations noted above show that Bugg has unearthed a major theodical difficulty in deep-time geology, in that it calls into question divine kindness.

Pondering the myriads of creatures that have "sunk," "perished," been "overthrown" and "become extinct before the existence of man," Bugg asks,

Where is the benevolence,' not to say justice of all this? Not a creature capable of offending its Creator. Nevertheless we find whole genera and whole nations of animals perishing in succession; and this numerous times repeated, as if their 'Author . . . were in sport, forming and destroying worlds again and again'!

Bugg unambiguously states that God's "moral perfections" are "lost if not destroyed in the details of geological revolutions," in which the whole mass of destruction and misery is gratuitous, uncalled for, and useless! . . . How many millions of animals perished on these naked rocks before vegetables sprung up, we know nothing. But this we do know, that no man living can see either wisdom or benevolence in such a process.

Bugg sees the new geology as not only falling woefully short in both of these areas,
but worse yet, it actually "thwarts, if not destroys them both." Pertaining to "the time and manner of the Creation," such a schema makes "the Word of God" to speak what is unintelligible or erroneous. This misconstrual "leads away the mind of the beholder from the awful import of that catastrophe, by presenting to him indefinite numbers of such events;" "Thousands of ages' passing over!--Animals destroyed, and animals created!--Whole races ingulphed [sic] that others nearly like them might succeed." The accommodational paradigm of deep-time serial "misery and destruction" carries an implicit decoupling of suffering and sin (i.e., offense), and as such, blunts the edge of one's moral feeling by familiarizing him with the misery and destruction of the earth's inhabitants, so many times repeated, without any connexion of offence, with the suffering beings.

And where the propriety of extirpating by miracles every race of fish, fowl, and animal, to create fresh ones for man to rule over!! If the numerous races of animals and the numerous revolutions which according to Geologists, destroyed them, were (as it now appears they were) unworthy of the least mention in this history of creation, is it a thing worthy to be ascribed to the Almighty, that he should have been for "thousands of ages" engaged, as it respects this globe, in doing nothing else, but making and demolishing the earth, and its inhabitants!!

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1Bugg, Scriptural Geology, 2:40.
2Ibid.
3Ibid.
4Ibid.
5Ibid., 37.
6Ibid., 40. Cutting the sin-death causal nexus in relation to the Flood has an Edenic parallel. The Fall and the Flood have sin resulting in massive death. To affirm that such death is divinely preferred and natural, blunts the gravamen of God's wrath and judgment on sin.
7Ibid.
8Ibid., 1:142.
Such a view as this, Bugg adds, seems more conducive to a Hindu deity who repeatedly creates and destroys worlds as if it were a sport. But believers do not have the Scriptural option, in Bugg's mind, of believing in such a profligate Creator, for the new geology undermines the time-honored attributes of God when its propounders advocate the absurdity that a wise, just and benevolent Deity has, 'numerous' times, wrought miracles, and gone out of his usual way for the sole purpose of destroying whole generations of animals, that he might create others very like them, but yet differing a little from their predecessors!

Similarly, Bugg queries over the meaning of the exhortation to "be fruitful and multiply and fill the waters in the seas." He asks "can any sane man who does not wish to insult the Almighty and disgrace [Moses], assert that this was said after the unchangeable God had just destroyed a whole sea full of fishes and had created a sea full of fresh ones!!"

The quotations analyzed above represent leading passages in which Bugg shows the impact which the new geology has upon the character of God.

Conclusion

We have found that Bugg detects profound theodical difficulties with deep-time geology, and has cogently registered his concerns. His appraisal of deep-time geology is important in that he clearly sees this outlook as tendering a very different view of God's

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1Ibid., 1:318-19. Bugg refers to this earlier as "the old heathenish and atheistic notion of an infinite series of revolutions" (ibid., 1:113). Cf. "the eternal series of the ancient heathen" (ibid., 1:xv). Elsewhere he implies that some Christian geologists put the inspiration of Moses on the same plain as that of Confucius (ibid., 1:11). For other musings on "Hindoos," see ibid., 2:331, 334-338, where Bugg predicts that Hindoo apologists will capitalize on the latest theorizings of "modern Geology." Once the Christian picture of creation is made non-literal, what prevents "the same with respect to redemption"? (ibid., 2:338).

2Ibid., 1:319.

3Ibid., 1:139.
nature and character than that embraced by the pre-geological Church. God's benevolence and mercy are the attributes which seem to suffer the most,¹ followed by His wisdom.² The stupendous carnage and loss of animal life before during and after each hypothesized geologic epoch correspond neither with a natural reading of Genesis, nor time-honored vignettes of God's goodness. The relentless series of charnel-house Lagerstätten potentially desensitizes our "moral feelings," in that the perpetual misery and destruction of earth's inhabitants, if conventional wisdom is correct, bears no connection to sin.

Thus, we have discovered that Bugg sees traditional dogma to be endangered by the new geology. Generally speaking, we find at stake Scriptural perspicuity,³ including a six-day creation, and a catastrophic, fossil-forming, global Flood. But more specifically, germane to theodicy, Bugg, as noted, finds several divine attributes impugned if the sin-death causal nexus is severed. For Bugg, the Fall is sufficient "to justify the ways of God to man," because he is convicted that "natural evil never precedes moral evil."⁴

The assessment of Bugg's position above helps to underscore why he is considered the most prominent Scriptural geologist. His commitment to the absolute historicity of Genesis, a literal six-day creation, and a single violent global Flood is so firmly held that Bugg is not intimidated by the growing consensus of deep-time geology that a 6,000-year limit for earth history is clearly passé. If objectivity is the hallmark of good science,

¹Ibid., 2:43 f., 47.
²Ibid., 2:42-47.
⁴Bugg, Scriptural Geology, 2:317.
detractors of Bugg should at least appreciate his call to scrupulously differentiate between geological fact and geological theory.¹ We now turn to our second Scriptural geologist.

Andrew Ure (1778-1857)

Biography and Publications

While not a professional geologist per se, Andrew Ure, chemist and science writer, deserves inclusion in the hall of Scriptural geologists. He is esteemed by associates as a "contributor to geological method,"² but is also derided by Lyell as a fanatic.³ Ure studied at the universities of Edinburgh and Glasgow, receiving an M.D. from the latter institution in 1801.⁴ Following a brief stint as a military surgeon, he took a professorship in chemistry and natural philosophy at Andersonian University in 1804. At the end of the decade he resigned his teaching post, spending the rest of his life in London as an analytical and commercial chemist.⁵ During the course of his life his pen was quite productive.⁶ His scientific diversity

¹Bugg and the other Scriptural geologists, past and present, are frequently arraigned for denying geology as a source of knowledge, or even demonizing it. Nothing, however, could be further from the truth. Referencing Sumner, Bugg clearly states that "The Bible does not 'interfere with philosophical inquiry,' or repress the researches of mankind" (ibid., 2:40).


³See his January 21, 1829, letter to his sister, Marianne, in Katherine Lyell, 238.


⁵DNB, s.v. "Andrew Ure," 20:40.

⁶See Andrew Ure, Outlines of Natural or Experimental Philosophy (Glasgow, 1809); idem, A New Systematic Table of the Materia Medica (Glasgow: Duncan, 1813); idem, A Dictionary of Chemistry (London: T. and G. Underwood, 1821), which saw many translations and by 1875 had gone through seven editions; idem, Elements of the
is reflected by his memberships in several scientific organizations, including being an honorary Fellow of the Geological Society of London, a member of the Astronomical Society, and being elected as a Fellow of the Royal Society.

**Time Frame for Creation**

Ure argues colorfully and powerfully for a rapid and recent creation,¹ and is thus in harmony with the traditionalist rubric of a recent creation within six literal 24-hour days,² as opposed to a belief in the "Divine Agency" of the accommodationists, which allows our globe to exist "in a chaotic state" for epochs indefinitely remote."³

First we turn to Ure on the recency of creation. He accepts the same time frame as Ussher, believing that "according to the Hebrew Bible," creation took place "4004 years before the Birth of our Saviour,"⁴ and that 1656 years lapsed between the creation and the

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¹While rapidity and recency are usually taken as implied in each other, logically they are not. A rapid creation could have taken place in deep time, or a relatively recent creation could have been accomplished over a time period much longer than six literal days. This is not meant to be pedantic, but only to highlight that Ure himself seems to emphasize the necessity of both.


³Ibid., 9.

Flood. In Ure's mind there is no justification from either "Reason nor Revelation [which] will justify us in extending the origin of the material system, beyond 6000 years from our own days."1 In his thought the recency of creation is evident when he evaluates the thesis of a certain Canon Ricupero, who theorizes that a mountain near Ætna was 14,000 years old. According to Ure this is "most unphilosophical advice," in that it makes the mountain "older than Moses had made the earth."2

On the rapidity of creation, Ure emphasizes that creation took place within "six working" and "successive days." Moreover, these days are "creative,"3 not revelational days. Ure is aware of and is compelled to respond to scholarly speculations that the creation "days" may not be 24-hour days, or that while the creation week was literal, it applies only to the creation of mankind. He states that many

have considered the record of Moses as referring merely to the origin of the human race, without at all defining the epoch at which either the earth or the system of the world was made. This opinion seems quite incompatible with the direct and obvious meaning of his narrative of Creation. The demiurgic week, as it is called, is manifestly composed of six working days like our own, and a day of rest, each of equal length, and therefore containing an evening and a morning, measured by a rotation of the earth round its axis. That this rotation did at no former period, differ materially in duration from the present length, has been shown by Laplace in his Systeme du Monde. Hence it is to be regretted that any commentators of Scripture, misled by the fancied necessity of certain geological schemes of stratiform superposition, should have vexed themselves and their readers, in torturing the Hebrew words for day, and evening and morning, into many mystical renderings.4

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Rylands University Library of Manchester 67 (Spring 1985): 578.

1Ure, New System, 15.

2Ibid., xlv.

3Ibid., 11, 87, 81.

4Ibid., 10-11.
In the above quote, Ure takes issue over some scholars' category translation between univocal and equivocal renderings of Genesis based on the supposed challenge of the geologic column, which he calls "stratiform superposition." "Torturing" the text, they revile, disregard, and disesteem "the chronology and character of " the "inspired historian." To Ure, such a view seems "quite incompatible with the direct and obvious meaning of his narrative of creation." Given Ure's adherence to a traditionalist time frame, it is not surprising that Gillispie parodies him as pursuing a "blatant reconciliation of the geological with the Mosaic record," curtly dismissing him as "an extremist" on the "lunatic fringe," whose "egregious" and "grotesque" works are "unencumbered by original research," which offer views "too absurd to disinter." Let us begin to trace Ure's views and assessment of the new geology.

1Ibid., xx.
2Ibid., 606.
3Ibid., xlv.
4Ibid., 7.
5Ibid., 11.
7Ibid.
8Ibid., 152.
9While egregious used to have a positive sense, in this context Gillispie clearly intends the pejorative nuance of gross, monstrous, shameful, or outrageous (see *Compact Edition of the Oxford English Dictionary* [New York: Oxford University Press, 1971], s.v. "egregious").
10Gillispie, 194.
11Ibid., 162-163.
12Ibid., 152.
Recognition of the Fossiliferous Strata as a Deep-Time Phenomenon as Espoused by Leading Accommodationist Geologists

Since Ure had no formal geological training, his familiarity with the geologic column must be established. As indicated below, a perusal of his New System shows that he not only has a solid aptitude of the column, but does not hesitate to adopt its conventional nomenclature. Additionally, he recognizes the "mineral bed[s]" as being "successive," the lowest of which "are characterized by remains of the simplest forms of animals."¹

Ure sees deep time as clearly incongruent with the plain words of Moses, and is convinced that "the creation and the deluge, as described by Moses, are not discordant with the legitimate deductions of physical science."² When geological facts are properly interpreted, in Ure's opinion, they "do not essentially impugn the Mosaic text in its plain interpretation."³ So Ure wonders exactly what it is that necessitates leaning toward a deep-time origin for earth, in contrast to "that assigned by the inspired chronologist?"⁴ The disregard of Scripture, particularly the reviling of "the chronology and character of Moses,"⁵ is more alarming, when compared with the accommodationistic impulse of some savans who seem more comfortable defending the astrological tables of the Hindoos.⁶ He asks if "a more ancient origin" enhances the world's "rank, dignity, and importance?" and continues:

¹Ure, New System, xlviii-xlxi; cf. ibid., 81, 499, etc.
²Ibid., xiii.
³Ibid., xvi.
⁴Ibid., 12.
⁵Ibid., xliv.
⁶See ibid., 608-15. It will be remembered that Bugg makes a similar point.
Is this a taint of the pride of ancestry, common to the whole family of man? . . . But how can it be safely gratified? Even lynx-eyed science can pierce the dark veil of creation no further than common vision.¹ Here telescopic glasses, which pierce farthest into space, have no time-penetrating power whatsoever.²

Ure laments that too often, from his perspective, geologists (accommodationists or otherwise) are reticent to acknowledge their incapacity, and restrained by no rigid calculus, advance fearlessly into their pristine chaos, and . . . construct their favourite terrestrial schemes out of pre-existing confusion. They find no difficulty in bringing ancient chaos to its end, and in originating an entirely new order of things. To produce an effect without a cause never disturbs their philosophy.³

Here Ure has in mind the "hostile sects"⁴ of Abraham Werner, the Neptunist,⁵ and James Hutton, the Vulcanist,⁶ whom he refers to as "reckless"⁷ and "worshipers of Water and Fire."⁸

¹This indication of limitation should be compared with the notion of "forbidden province" addressed in James Mellor Brown, Reflections on Geology.

²Ibid., 12.

³Ibid., xix.

⁴Ibid., xxii.

⁵Named for the Roman sea god, this perspective, while holding to deep time, allows for a more recent creation than uniformitarianism, gives some credence to Genesis, and allows for the Flood as the last of many catastrophes. According to Ure, this theory is "an idol set up by a vain philosophy, to usurp the rank and functions of a creative intelligence" (ibid., xxxi).

⁶Named after the god of fire, this deep-time perspective espouses a more ancient creation than Neptunism, gives virtually no weight to Genesis, and makes room only for a local Flood, not a global one. More recent uniformitarianistic philosophy has allowed for a higher "catastrophic element" in its model. For recent points of contact in this regard, sample Derek V. Ager, The New Catastrophism: The Importance of the Rare Event in Geological History (Cambridge: Cambridge University Press, 1993), and John Eliot Allen, Marjorie Burns, with Samuel C. Sargent, Cataclysms on the Columbia: A Laymen's Guide to the Features Produced by the Catastrophic Bretz Floods in the Pacific Northwest (Portland, OR: Timber Press, 1986).

⁷Ure, New System, xxi.
To Ure, both schools, agree on three things: (1) the earth was originally crude and imperfect; (2) the earth was produced through "the ordinary forces of nature," involving "successive developments and catastrophes" which occurred, (3) over "a countless lapse of ages." Ure points out that the "parentage" of these systems, not well defined by the proponents, bespeaks of "the clumsy offspring of Deity and/or Chance." And as such it is obligatory for these schools, if they wish to be considered in keeping with classic Reformation orthodoxy, to clarify the "parentage" behind the deep-time carnage inherent in their systems.

Ure's Understanding of and Discomfort with the New Geological Theory of His Day

Though Ure has an enviable grasp of the views permeating the geologic landscape of his time, he readily admits that his geological assessments are derivative in nature, based on secondary sources, not "original observation." He acknowledges this when stating that his main motive for writing the New System is to give the most engaging and best established truths, illustrative of the structure and revolutions of the earth, in order of their physical connexions and causes; whence certain general inductions might be legitimately seen to flow. In executing this task I have drawn freely from every authentic source of geological knowledge within his reach—

Ure does not engage in a studied disregard of his opponents' work, but actually expresses appreciation for men such as Cuvier, who he believes has the talent to create as lively an interest for the ancient empire of the dead as for the

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8Ibid.
1Ibid.
2Ibid.
3Ibid., vii.
4Ibid.
kingdoms of living nature. In accompanying him through the dark cemeteries of the earth, a mysterious gleam from the primeval world penetrates our soul, and solemnly awakens its deepest faculties.¹

Ure does not blindly criticize any geologist’s field work, but often gives a glowing debt of gratitude to the sagacity of the likes of Boué, "Strata" Smith,² Greenough, Macculloch, Conybeare, Phillips,³ Buckland, De la Beche, Webster, Winch, Brogniart, Von Buch, 'the two Cuviers, Blainville, Lamarcke, and Defranee.⁴ In particular, Ure describes Cuvier's Ossemens Fossiles as "a magnificent production . . . worthy of admiration,"⁵ later adding:

In zoological and anatomical knowledge, in acuteness of discrimination, sagacity of comparison, soundness of inference, and above all, in general enlargement of thought, [Cuvier's] talents and genius have secured to the Ossemens Fossiles, a noble and enduring station among the trophies of science.⁶

Thus, Ure has no qualms using data from accommodationistic or even non-theistic geologists, regardless of whether their presuppositions and conclusions differ from his own. In doing so he allows these men to help to "enliv[en] the dark catacombs of the earth," and intersperse "among his descriptions of its mineral planes, an account of their ancient tenants."⁷

According to the increasingly dominant theory of Ure's day these tenants were progressively inhumed by successive catastrophes through deep time. The immediate context of our

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¹Ibid., liii.

²Ibid., 153.


⁴Ure, New System, xliviii.

⁵Ibid., xlix.

⁶Ibid., 247.

⁷Ibid., viii.
discussion, therefore, will be better informed after assessing Ure’s understanding of this idea of serial revolutionism.

**The Idea of Revolutions**

The centrality of revolutions, in Ure’s mind, is evident in the full title of his book, *A New System of Geology, in which the Great Revolutions of the Earth and Animated Nature, are Reconciled at once to Modern Science and Sacred History*. Ure contends that the “formation and revolutions of the earth, are subjects of the highest interest to man, and have exercised inquisitive minds in every age.” Ure depicts the Wernerian and Huttonian schools as promoting a view of earth history that is characterized by “successive developments and catastrophes.”

Ure contends that there is little room for doubt that such revolutions as that causing the vast Monte-Bolca formation “must have been sudden,” with the animals “speedily covered after death, by the mineral deposit in which they are now buried.” These devastating revolutions are characterized by such places as “Monte Bolca, and other localities; where a volcanic eruption, or some other sudden revolution” has killed huge numbers of animals “all at once,” as in the case of the Monte Bolca fish beds. Ure enumerates the principle localities of ichthyolites as Glaris, Mount Pilate, Eisleben, and the following superjacent formations: Grammont, Pietra-roya Mountain, Mount Mates, Stabia, the Paris basin chalk beds, Saint Pierre Mountain at Maestrict, Perigueux, Gravesend, the limestone quarries of Nanterre, St. Denys,

1Ibid., xxi.

2Ibid., 142.

3Ibid., 144-146.

4Here we find sea turtle remains so promiscuously mixed with such a variety of marine productions and bones of gigantic saurians (lizards and crocodiles) as to render this site legendary in geology. See Ure’s description of the most famous fossil from this site (ibid. 215 ff.).
Solenhoffen, and Pallenheim. Other prominent *Ichthyolites* locales include Monte Bolca, the fissile marly slates of the Vivarais, the Vicentin, Friuli, Antibes, Dalmatia, Cerigo, Mount Libanus, Tripoli, Malta, Sicily, near Cadiz, Barbary, Iceland and "many other places."

Ure quotes Cuvier, in agreement, on the last of numerous catastrophes, or revolutions, namely, if there is one fact established in geology beyond dispute it is this, that the surface of our globe has suffered a great and sudden revolution, the period of which cannot be dated further back, than five or six thousand years. This revolution has on the one hand, ingulphed and caused to disappear, the countries formerly inhabited by men, and the animal species at present best known.

Ure's Understanding of Geology's Deep-Time Scale Expressed in Chart Form

Ure, as with Bugg, provides us with a detailed outline of his understanding of the "geologic column," calling it "the tabular view of the mineral strata." He tends to give more detail than Bugg, dealing more substantively with the organic remains corresponding to each strata. His tabular view is reconstructed in Table 3, and indicates that he is fully conversant with the new geological construct of his day and the contents of the fossiliferous strata.

Ure's Reflections on the Organic Remains of the Fossiliferous Strata

Many important elements may be noted in Ure's assessment of the fossil record. He is aware, for example, of the index fossil method, whereby strata are identified by means of

1Ure notes crocodile remains and casts of a fish and insect found at this site (ibid., 207).

2Later he mentions the Thuringia schist's great quantity of crushed fishes (ibid., 168).

3Another word used by Ure, *bouleversement*, is one of the more apropos words used by any Scriptural geologist. The word means a subversion, convulsion, disorder, or complete overthrow. Ure quotes Voltaire, who uses the term (ibid., li; cf. 439 and 481).

4Ibid., 350.
### TABLE 3
URE'S TABULAR VIEW OF MINERAL STRATA

<table>
<thead>
<tr>
<th>Class</th>
<th>Order</th>
<th>Concomitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS V.—SUPERIOR OR TERTIARY ROCKS</td>
<td>V. — Last fresh water deposit</td>
<td>Buhr stone, Marls, sand</td>
</tr>
<tr>
<td></td>
<td>IV. — Second Tertiary Limestone</td>
<td>Marls, gypsum</td>
</tr>
<tr>
<td></td>
<td>III. — First local brackish-water deposit</td>
<td>Sand, lignite, fresh and salt, water shells, clay-marl, plastic clay</td>
</tr>
<tr>
<td></td>
<td>II. — First Tertiary Limestone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I. — London, Paris; Isle of Wight basins</td>
<td></td>
</tr>
<tr>
<td>CLASS IV.—SUPER MEDIAL OR SECONDARY ROCKS</td>
<td>VII. — Chalk</td>
<td>Chalk with flints, earthy chalk, chalk marl, chloritic chalk</td>
</tr>
<tr>
<td></td>
<td>VI. — Iron sand and greensand</td>
<td>Marls, oolites, or calcareous freestones, lias of England, argillaceous beds</td>
</tr>
<tr>
<td></td>
<td>V. — Third Floetz or Jura limestone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IV. — Second Floetz, or shell limestone</td>
<td>Variegated sandstone, gypsum &amp; salt beds, breccia—like gypsum, copperslate with fishes, bituminous marl— slate</td>
</tr>
<tr>
<td></td>
<td>III. — Red Marl</td>
<td></td>
</tr>
<tr>
<td></td>
<td>II. — Magnesium limestone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I. — New red sandstone</td>
<td></td>
</tr>
<tr>
<td>CLASS III.—MEDIAL OR CARBONIFEROUS ROCKS</td>
<td>IV. — Coal measures or strata</td>
<td>Compact, or Alpine limestone, calcareous marl, coal, carbonate of iron, bituminous shale, slaty-clay, coal-sandstone</td>
</tr>
<tr>
<td></td>
<td>III. — Millstone grit or shale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>II. — Carboniferous or Mountain limestone</td>
<td>Now classified as Devonian; numerous fish remains</td>
</tr>
<tr>
<td></td>
<td>I. — Old red sandstone</td>
<td></td>
</tr>
<tr>
<td>CLASS II.—TRANSITION SUBMEDIAL ROCKS</td>
<td>Order I. — Greywacke</td>
<td>Encrinites, with dolomite, limestone, alum-slate, flinty-slate, clay-slate, conglomerate</td>
</tr>
<tr>
<td>CLASS I.—PRIMITIVE OR INFERIOR ROCKS</td>
<td>Order III. — Clay-slate</td>
<td>Gypsum, dolomite, alum-slate, whet-slate, gneiss, chlorite-slate, talc-slate, mica-slate</td>
</tr>
<tr>
<td></td>
<td>Order II. — Mica-slate</td>
<td>Gypsum, and as below</td>
</tr>
<tr>
<td></td>
<td>Order I. — Gneiss</td>
<td>Quartz rock, limestone, hornblende rocks, granites</td>
</tr>
</tbody>
</table>

certain fossils they contain.\textsuperscript{1} He is also aware of the concept of intermediate fossil links,\textsuperscript{2} though he himself said such links do not exist, or could come about only through the tyranny of man.\textsuperscript{3} And he also acknowledges that the lowest strata "are characterised by remains of the simplest forms of animals,"\textsuperscript{4} indicating that an increasing biological complexity, or "successive suite of characters,"\textsuperscript{5} is seen higher in the column.\textsuperscript{6}

In Ure's references to extinctions and what we would today call fossil-\textit{Lagerstätten},\textsuperscript{7} we encounter issues apropos to the current study. Among the "enormous congeries of bones"\textsuperscript{8} or "vaults of death"\textsuperscript{9} that he is aware of,\textsuperscript{10} he mentions the Siberian mammoth beds\textsuperscript{11} and the fossil elephants locked in the hills in the region of the upper \textit{Val d'Arno} in Tuscany.\textsuperscript{12} The latter bed is "promiscuously mingled" with rhinoceros and hippopotamus remains.

\textsuperscript{1}Ibid., l (i.e., Roman numeral 50).

\textsuperscript{2}Ibid., 541. He makes a point later which can be construed as an argument against incipient stages based on irreducible complexity (ibid., 507).

\textsuperscript{3}Ibid., 515.

\textsuperscript{4}Ibid., xlix.

\textsuperscript{5}Ibid., 442.

\textsuperscript{6}Note the quote of M. Adolph Brogniart, ibid.

\textsuperscript{7}See particularly, ibid., 557-593.

\textsuperscript{8}Ibid., 619.

\textsuperscript{9}Ibid., 558.

\textsuperscript{10}Here Ure is utilizing Cuvier's data.

\textsuperscript{11}Ibid, 519.

\textsuperscript{12}These remains are so abundant "that the peasants formerly used them along with stones for building the rude partition walls for their fields" (ibid.).
Pachyderm remains "occur in considerable abundance in North America" and England.¹ Ure agrees with Cuvier that the extinction of this fossil elephant came "by a sudden cause, by that same great catastrophe which destroyed all the species of the same epoch."² Rhinoceros remains, Ure notes, have "been found in almost every part of Europe" and Asia, which also appear to "have been buried by a sudden revolution of the globe, which has destroyed the whole species."³ He also reflects on the remains of the *elasotherium*, fossil horses, daman, giant tapirs, *palaeotheriums*, *lophiodons*, *megatherium*, *megalonyx*, which are often "mingled *pele mele*" with the remains of such diverse creatures as hyena, tiger, bear, wolf, fox, weasel, ox, deer, hog, castor, hare, mouse, glutton, polecat, and bison.⁴ Referring to the rat remains in Kirkdale cave, Ure notes "that a piece of loam can hardly be lifted from the bottom, which is not replete with them."⁵ The fossil-beds of Westphalia and Franconia are said to contain rations of 800 cavern bear for every 60 northern bear, 30 gluttons, 25 tigers or lions, 50 wolves, and 25 hyenas, "which is just the inverse proportion of the contents of Kirkdale."⁶ At another Lagerstätte, Kühloch, there is a mass of 5,000 cubic feet of "black animal dust,"⁷ interspersed with broken fragments of bones, including the remains of 2,500 bears.⁸

¹Ibid., 521.
²Ibid., 526.
³Ibid., 539-40.
⁴Ibid., 541-556.
⁵Ibid., 570.
⁶Ibid., 580.
⁷This seems to be pulverized bone.
⁸Ibid., 579.
Thus, we see that Ure is informed regarding well-known bone yards. The point he initially seems to wish to emphasize is that these concentrations of organic remains are indicative of catastrophe and rapid deposition. Only later will he suggest that these formations indicate something of God's character, and are reflectors of divine judgment rather than of God's original creative method.

**New Creations**

When critiquing the Huttonian model, Ure offers some insightful observations. According to Ure, the Huttonian school contends "that the present earth sprung up out of a preceding one, by a spontaneous growth or transition, without the intervention of a divine creative energy."\(^1\) Ure argues that this position holds that the geologic column has resulted from progressive deep-time operations of physical forces, and that mountain masses of the pre-existing globe became submarine concentric layers of rock, which were thence elevated by catastrophe into the present dry lands.\(^2\) This means that the continual renovation of the earth inherent in such deep-time serial catastrophism, therefore, could be seen as new creations.

However, Ure's reference to new creations is of a completely different genre. Ure notes that some "more ancient"\(^3\) animal remains in the fossil record "bear good evidence of having been inurned at a period long antecedent to the deluge."\(^4\) His conviction is that the post-diluvial "kindred skeletons" are of the same species of the extinguished "parent world," but

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\(^1\)Ibid., xxviii.

\(^2\)Ibid., xxviii-xxix.

\(^3\)Ibid., 499.

\(^4\)Ibid.
that there is no genealogical connection. He believes that these species are of the same "living
types," and of identical osteology, and thus "display the renewing hand of Providence." The
God who "raised the new earth out of the ruins of the old, must have created new animals to
suit the changed terraqueous constitution." Such a position may represent one form of what
we might call a recent progressive creationism. The species of animals on the ark, in Ure's
perspective, were to keep the seed alive for the immediate use of Noah's family.

The Origin of Natural Evil

Prior to the Fall, in Ure's system, the "very good" creation had "lost none of its
original brightness. . . . All its parts display so clearly the work of an almighty hand, as to
impress moral and religious sentiments, on every unperverted naturalist." Ure believes that
an Edenic curse ruined all creation, and tarnished its "original brightness." He also theorizes
that the pre-diluvial animal kingdom subsisted on a vegetarian diet, indicating logically that
he sees the original created order as a predation-free environment. Ure notes that we have
been told by many thinkers that "in the beginning [God] created a chaos." But such a
"pristine reign of elemental strife and confusion," for Ure, seems "inconsistent with the
Government of Omnipotence."\(^1\) He believes that such a picture is more reflective of Persian
dualism, and is surprised that "Doctors of Divinity dared to introduce the heathen and
atheistical absurdity of a Chaos into their commentaries on the Mosaic record of Creation."\(^2\)

In critiquing the deep-time *zeitgeist* of his day, and in the process implicating the
Cuvierian and the Huttonian paradigms, Ure is very conscious that his creed of a recent
creation will be deemed "the product of a narrow mind."\(^3\) Nonetheless, he sees this hill as
worth dying on because of the vast theological gravitas attending the adoption and consistent
application of deep time. As with Bugg, Ure agrees with the accommodationists on the
ontological status of the geologic column and the facticity of its fossil content. His cognitive
disonance with them, however, is with the *interpretation* of these facts, since he sees mass-
mortality "sepulchres,"\(^4\) and all natural evils, as sin-induced and emblematic of a fallen world,
rather than hard-wired into the original created order. Ure sees these primeval cemeteries as
showing the world to be "the victim of sin,"\(^5\) which once recognized it will perhaps "not have
perished in vain, if its mighty ruins serve to rouse its living observers from their slumberous
existence," and lead them to think seriously on the "origin and end of terrestrial things."\(^6\)

Ure accounts for manifest ruins, sepulchers, "bony relics,"\(^7\) and "enduring

\(^1\)Ibid.
\(^2\)Ibid., 13.
\(^3\)Ibid., 14.
\(^4\)Ibid.
\(^5\)Ibid.
\(^6\)Ibid., liii-liv.
mausoleums"\textsuperscript{1} of nature in the form of a penal "universal cataclysm."\textsuperscript{2} Thus, whatever natural evils are preserved for our appraisal in the fossil record are seen as God's just response to sin. Ure's conviction is that even "the ground of the antediluvian was cursed on account of Adam's transgression","\textsuperscript{3} "the fertile fields of Eden were forfeited."\textsuperscript{4} But regardless of which view one adopts, one can hardly look at the fossil record, says Ure, without profound emotion. In exhuming from their earthy beds, or spar-bespangled vaults, the relics of that primeval world, we seem to evoke spirits of darkness, crime, and perdition; we fell transported along with them to the judgment-seat of the Eternal, and hear the voice of many waters coming to execute the sentence of just condemnation, on an "earth corrupt and filled with violence." . . . How solemn to walk through this valley of death.\textsuperscript{5}

If Ure is correct geologically and theologically, it is the penal nature of the fossil record which should arrest the accommodationists' attention. A non-penal interpretation of the geologic column, however, makes it unlikely that they will experience the profound emotion or be impacted by the grim message which, according to Ure, the fossil record actually conveys.

\textsuperscript{7} Ibid., 129.

\textsuperscript{1} Ibid.

\textsuperscript{2} Ibid., 349-350, bk. 3 passim, 472-73, 499, and 506. Ure allots 240 pages for addressing the Flood. These references all work in concert to develop Ure's thesis that the Flood was sent because of sin. In addition to "this universal transflux of the ocean" (ibid., 458), Ure believes the global Flood was preceded by several partial, "precursor inundations" (ibid., 374, 451). He also defends auxiliary elements such as the absence of rain and rainbows before the Flood (ibid., 599-602). In response to tranquil or local Flood theories, Ure notes that "St. Peter's emphatic term, \textit{apΩλεσα} (perished), could never be spoken of a transient inundation." He asks, "Would any one affirm that Egypt perishes or is destroyed every summer, when its land disappears under the waters of the Nile?" (ibid., 598).

\textsuperscript{3} Ibid., 471.

\textsuperscript{4} Ibid., 473.

\textsuperscript{5} Ibid., 505.
Ure’s Understanding of the Bearing That Paleonatural Evil Implied by a Deep-Time Geological Column Has upon the Character of God

Having found Ure’s ideas on the origin of natural evil, we now have sufficient background to assess his view on the bearing of the origin of natural evil on God’s character. According to Ure the new geology renders God clumsy and malignant, compromises His prescience, goodness, and wisdom, and undermines the meaning of God’s rainbow covenant.

The New Geology Renders God Clumsy

Let us now turn to Ure’s response to paleonatural evil. In reference to the notion of cyclic “vicissitudes of decay and renovation,”¹ found in John Playfair,² Ure grieves that such an accomplished mind should devote so many years to such a phantasm.³ Ure reminds his contemporaries of “the perpetual dupe of phantasms”⁴ and “monstrous dogma”⁵ in the geological systems of the previous century, but perhaps Ure is too optimistic when he states that the geographer would smile at the geologist “who should ask for Deity a countless lapse of ages” to construct the geologic column. Ure asks the Vulcanist, “Does the terraqueous

¹Ibid., xxix.
²After Hutton’s death in 1797, Playfair became the main defender of Hutton’s uniformitarian doctrine, which was to later receive energetic rearticulation by Lyell. See John Playfair, Illustrations of the Huttonian Theory of the Earth (Edinburgh, 1802).
³Ure, New System, xxix.
⁴Ibid., xx.
⁵Ibid., xxi.
globe . . . display no evidence of pre-concerted and preadapted wisdom in its structure?" \(^6\) He probes further into the implications of deep-time serial catastrophism with the following question: "Originally a crude and rugged mass, did [this terraqueous globe] gradually acquire its actual form and constitution from the antagonist powers of waste and reconsolidation tending towards their present equilibrium, during infinite ages?" \(^2\) This position, which Ure calls a "very strange proposition," \(^3\) allows for the earth, after an indefinite period, to eventually become an abode for living beings. But the abode of these living beings, in Ure's words, has a "precarious existence," \(^4\) involving "progress of waste," "universal [fatality] to organic motion and life," "mortal consummation," and "fortuitous explosions," which result in a "finished spheroid, unfit for every useful purpose." \(^5\) In light of such a predicament, Ure notes what a slim hope Huttonians have to offer proselytes regarding the "duration of their system." Their "casual convulsion of a dying power, is a very precarious resource, and can be little relied on for resisting the steady pace of destruction." \(^6\)

For theists leaning toward the deep-time catastrophism, Ure ponders if creation was formed for mankind. If this is conceded, Ure wonders what purpose is served in imagining a more distant beginning? Why build a mansion in the wilderness of space, long ere tenants are prepared to occupy it? Nor are we warranted in ascribing

\(^1\)Ibid., xxiii.
\(^2\)Ibid.
\(^3\)Ibid., xxvi.
\(^4\)Ibid., xxvii.
\(^5\)Ibid.
\(^6\)Ibid., xxiii, xxvii.
an earlier date to the celestial orbs; for the heavens and the earth were the offspring of one creative mandate. And what advantage do Philosophers hope to gain, by going back a million ages?¹

When weighing the "Theistic Neptunists,"² Vulcanists, or whoever "would have us believe that our globe existed in a chaotic state" in the "indefinitely remote"³ past, Ure asks what is gained by such hypothetical premises. Could they not indicate that the human mind is too crippled to believe that Omnipotence could create all our terraqueous globe's intricacies by fiat?⁴

Drawing an inference from Ure here, it seems a valid surmisal that the skeptic may justifiably view the deity of this deep-time serial catastrophism as "clumsy," if not imbecilic.⁵ Ure believes that "neither reason nor revelation warrants"⁶ the suppositions of theorists who "have supposed the pre-existence or pre-creation of a chaos."⁷

The New Geology Renders God Malignant

Did not our omnipotent God, Ure asks, fashion the earth "with reference to the accommodation of living beings"?⁸ According to Ure,

It is difficult to imagine, therefore, what benefit, even theoretic cosmogony can derive from antedating the creation of a chaotic mass, any period of years,

¹Ibid., 14.
²Ibid., 9.
³Ibid. Other "deep time "terms include "uncounted ages," and "infinity of time" (ibid.).
⁴Ibid.
⁵Ibid., 8.
⁶Ibid.
⁷Ibid., 7.
⁸Ibid., 8.
whether thousands or millions. We thereby merely approximate Creative might to the standard of human imbecility. . . . Herein the cosmogonist perfectly resembles the idolatrous savage, in ascribing to Deity, capacities and dispositions similar to those of his own foolish or malignant heart.¹

Three elements in this powerful quotation deserve attention. First, emphasizing his previous point, Ure implores accommodationists to specify the benefit of adopting deep time. Second, it seems clear that Ure sees the deep-time perspective as making God out to be imbecilic. But even more poignant, third, Ure implies that any supposed intellectual gap between the deep-time cosmogonists and the philistine savages has been closed, and the cosmogonists have created a god in the image of the malignant-hearted god of savages. Ure might even probe further, by asking, "If God is reduced to our standards, where would the process stop?" These three considerations indicate how, in Ure's judgment, the deep-time theoretic cosmogony of accommodationism negatively impacts the character of God.

The New Geology Compromises the Prescience, Goodness, and Wisdom of God

In another statement leveled against deep-time serial catastrophism, Ure underscores several regrettable ways in which this perspective impacts the character of God.

Such a dismal ruin of all organic beings, such a derangement of the fair frame of nature seem to be irreconcilable difficulties in Natural Theism. For is not the wisdom of God impeached in constructing a world on foundations so infirm; his prescience in peopling so precarious an abode, with countless myriads of exquisite mechanisms; and his goodness in plunging indiscriminately every tribe and family of his sentient offspring in mortal agony and death?²

In Ure's estimation, then, a deep-time chronology, with its attendant derangement of nature's

¹Ibid.

²Ibid., 505.
fair frame, is derogatory, as Ure explicitly says, of God's "goodness," and "wisdom," and "prescience" (i.e., foreknowledge). Such a system implies that whether by design or that which is beyond God's control, non-penal, indiscriminate suffering and mass death permeate sentient creation. In stating that the mortal agony and death of every tribe darkens omnibenevolence, Ure's theodicy claims that such suffering and death were not part of the original created order.

Further amplifying the moral implications of this chronology, Ure writes:

A creation replete with beauty and enjoyment, suddenly transformed by its Creator's mandate or permission into a waste of waters, is a moral phenomenon which certes' no system of ethics can explain. Here, metaphysics, the boasted mistress of mind, with all her train of categories, stands at fault. But here, if reason will deign to forego its pride, and implore the aid of a superior light, the Hebrew prophet will lift up the dark veil from the primeval scene. In revealing the disobedience of Adam, the atrocious guilt of Cain, and the pestilence of sin, almost universally spread among the progeny, he shows, alas! too clearly, how justice outraged, and mercy spurned, inevitably called forth the final lustration of the deluge. This conclusion, no philosopher can reasonably gainsay... and this earth with all its apparatus of organic life, as mainly subservient to his moral and intellectual education.²

According to this claim, Ure indicates that there appears to be no moral justification for God's destructive action through deep time. In Ure's opinion, for a Creator to suddenly transform a beautiful creation into a "waste of waters" is a moral lapse which needs justification to maintain the face of a good God. By adopting the Mosaic account of Adamic disobedience, the pestilence of sin, and the Flood, Ure believes we can penetrate this dark veil. But ignoring Moses' words regarding God's just outrage against sin (whether by mythologizing or category translation), is to adopt a moral outlook seemingly incongruent with any meaningful ethical system.

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¹ An archaic term representing the concept 'certainty,' for a certainty, or as we would say today, "certainly."

² Ibid., 505-6.
The New Geology Compromises the Meaning of the Rainbow in Relation to God's Character

Additionally, in neglecting "the Hebrew prophet" one diminishes or misses the crucial significance of the emblem of divine goodness—the post-diluvial rainbow—which Ure sees as "a type of sin and suffering." Here Ure taps into a principle which is often missed by past and present Evangelicals. It is his contention, based on Gen 2:5-6, that rain was absent before the deluge. If true, this would seem to suggest the absence of antediluvian rainbows as well. The importance of this absence is brought out in the following statement.

Had a shower of rain been as common before the flood as it was after it, then the rainbow being a necessary result of the refraction and reflection of the sunbeams by the sheet of falling drops, must have been often seen by the family of Noah, in the land of their birth, and could not therefore be now hailed by them as an infallible seal of a peculiar covenant, graciously bestowed by their reconciled Ruler. He had just appeared in an awful light; as the inexorable judge of their guilty compatriots. Anxiously might they lift their eyes to heaven for some new token to inspire confidence in the stability of the new order of nature; to encourage them.

This statement indicates, according to Ure, that precisely because Noah had not seen prediluvial rainbows, the rainbow was a new phenomenon which could thus act as a unique sign of love. In other words, Ure implies that the use of a rainbow is pointless if rainbows were a common pre-Flood phenomena. According to Ure, God sent this new sign as a promise that He would not destroy the earth again by means of a global flood. Consistent accommodationists will regard deep-time serial catastrophism as the Creator's *modus operandi* from the beginning, and also that the natural order (and rainbows) were in operation

1Ibid., 602.


long before the advent of man. But Ure wonders how this can be embraced without
eviscerating the rainbow covenant's poignancy.

Conclusion

Ure, conversant with the geologic column and reflecting theodically, finds the
contemporary interpretation of the fossil record morally offensive to the character of God and
detrimental to biblical authority. Ure's theodicy for the destructive acts mentioned above, and
all of history's death and suffering, takes as its point of departure a literal Adamic
disobedience. The resulting "dire legacy"\(^1\) of the guilt of "Cain and his apostate brood,"\(^2\) and
the universal pestilence of sin, led up to a global flood brought on by holy justice and
shunned mercy. In the Christian geologist's moral education such a theodicy must add the
equally profound rubric of the carnage left in the wake of a literal global flood. Ure contends
that a penal, diluvial interpretation of the fossil record exonerates God from the maltheistic
implications which are associated with a non-penal, deep-time interpretation of the geologic
column. The fairest inference from Ure's writing is that if a non-penal interpretation is
applied to these "enduring mausoleums"\(^3\) (i.e., the fossil record), then the Creator's goodness
is deeply compromised since this renders Him the author of paleonatural evil. Even though
the "bony relics"\(^4\) of the fossil record bear witness to "the disordered fabric of the globe,"\(^5\) the

\(^1\)Ibid., 598.
\(^2\)Ibid., 349.
\(^3\)Ibid., 129.
\(^4\)Ibid.
bones, "instead of being obstacles to faith, become unimpeachable witnesses to the
destruction of the earth, along with its guilty inhabitants." To Ure, these claims indicate that
without a proper biblical interpretation, deep-time bony relics constitute an "obstacle to faith."
In other words, Ure believes that placed into a deep-time framework, "bony relics" impeach the
wisdom, prescience, and goodness of God. This conclusion constitutes the pinnacle of Ure's
theodical assessment of the fossil record when interpreted according to the theoretical deep-time
serial catastrophism of his day. Addressing the theodical point of how to reconcile a
"Benignant Governor" with "so tremendous a catastrophe, [which implicates] not only the
human race, but myriads of animals, in common destruction," it is sufficient to Ure to say that
this was required of "Divine justice." In his mind the fossil record is more congruent with a
righteous God's response to sin than a "very good" divinely intended prelapsarian created order.

In sum, Ure offers in New System an apt description of accommodationists as those
who "have created schemes of accordance between nature and revelation, producing too often a
male-sana admixtio of divine and human things." His focus is not primarily on countering the
accommodationists' deep time-scale with empirical data, so much as presenting a philosophical
and theological rationale for them to reconsider the repercussions of their position. One of

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5Ibid., 349.
1Ibid., 598.
2Ibid., 473.
3Ibid.
4I.e., mischievous admixture (Ure lifts the words from Bacon's, Novum Organum).
5Ure, New System, xvi.
Ure's catalysts to this end, as seen, is to urge his readers "to a moral and religious use"\(^1\) of their geological knowledge, and especially to inculcate "the great moral truths"\(^2\) which come from researching "bony relics."\(^3\) Ure's thoughts will be further assessed in chapter 6, but having looked at he and Bugg, we now shift our attention to a final Scriptural geologist.

**George Young (1777-1848)**

**Biography and Publications**

In the summer of 1777, near Edinburgh, George Young was born into a large farm family and to devout Church of Scotland parents. Being born with only one hand would prevent his following in his father's agronomic footsteps,\(^4\) and thus his parents encouraged him to pursue theological training. His academic background was quite substantial, and fostered an increasing interest in natural science and geology. At age 15 he began literary and philosophical studies at the University of Edinburgh, studying under the emerging champion of Huttonian uniformitarianism, John Playfair. This was followed by five years of theological training and mentoring by noted Scotch divine, George Lawson, also quite interested in natural science.\(^5\) Pursuing this degree, Young acquired a working knowledge of Arabic, Chaldee, and

\(^{1}\)Ibid., xxxvii.

\(^{2}\)Ibid., 499.

\(^{3}\)Ibid. When Ure discusses bony relics, and the "gravelly soil that the fossil bones of ancient animals are usually found," and the "treating of their sepulchers," it is apparent that these are the equivalent of what would, in contemporary parlance, be called the fossil record.

\(^{4}\)Mortenson, 314.

\(^{5}\)See Nigel M. de S. Cameron, ed., *Dictionary of Scottish History and Theology* (Edinburgh: T & T Clark, 1993), 474.
Syriac to complement his proficiency in French, Greek, Hebrew, Italian, and Latin. In addition to a significant literary output, Young's "extensive knowledge of numismatics enabled him to decipher ancient manuscripts, coins, and inscriptions with great skill."

The last four decades of his life Young served as a Presbyterian clergy at Cliff-lane Chapel, Whitby, North Yorkshire, where he was held in high esteem, and had a reputation for zealously preaching the Word of God. Fulfilling normal pastoral duties, however, did not preclude his being able to pursue academic interests. He was a member of the Wernerian Natural History Society, and an honorary member of several literary and philosophical societies. His honorary membership in the Yorkshire Philosophical Society should not indicate negligible involvement, for he was in frequent contact with the Society, and served in both an advisory capacity and as their "coastal representative," which included securing fossils and minerals for the Society's collections. In his mid-forties he became a founding member of the Whitby Literary and Philosophical Society, which eventually led to the birth of


2Mortenson, *Century,* 315.

the Whitby Museum.

In accord with the opinion of the other major Scriptural geologists, Young expressed appreciation for the discipline of geology. He states that

the researches of the geologist are far from being unworthy of the Christian, or the philosopher: for, while they enlarge the bounds of our knowledge, and present a wide field for intellectual employment and innocent pleasure, they may serve to conduct us to that glorious Being. . . . And we see his wisdom and power and goodness, not only in the luminaries of heaven, and in animated nature, but also in the rugged rocks, the stones of the brook, and the clods of the valley.  

As glorious as geology might be, Young pleads that those who "penetrate into the bowels of the earth" should construct "a true theory of the earth" which is derived from "actual observation", adding that "facts are much more valuable than theories." In the tradition of natural theology, Young advocates that these "close investigations of the works of Omnipotence, if pursued with a proper spirit . . . are a part of the homage due to the Creator, whose infinite perfections are more and more illustrated and displayed."  

On the inference to design, Young believes it to be well ascertained "that the substances composing our globe are not thrown together in confusion . . . [but] display a regularity of structure." He believes the positioning of the strata to be "one of those provident arrangements, by which the wisdom and goodness of the supreme Ruler are

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1Young and Bird, Geological Survey, 2.
2Ibid.
3Ibid., 3.
4Ibid., 311.
5Ibid., 4-5.
6Ibid., 5.
beautifully illustrated."¹ Young's God can bring "order and beauty out of seeming confusion and deformity, and the most precious benefits out of overthrow and destruction. . . . He can make the very ruin and wreck of nature to shew forth his praise."² In order to better understand how such "overthrow and destruction" could be providentially arranged for our benefit, we survey Young's understanding of the chronology of creation.

**Time Frame for Creation**

In consonance with Bugg and Ure, Young does not use chronological doublespeak, or exegetical equivocation, when he refers to the time frame of creation. His understanding of the time frame of creation focuses on two particular issues of importance, namely the recency and rapidity of creation. Let us assess first the recency issue.

**The Recency of Creation**

Young refers to "the assertions, or insinuations, of some modern geologists, that to restrict the age of our planet to five or six thousand years, is to limit the displays of the Creator's glory; that to assign millions of ages to our globe, must afford a much better exhibition of his riches."³ But Young disagrees that a recent creation diminishes the glory of God. As a matter of fact, he believes that

the very attempt to extend the period of the creation to an indefinite length, looks like detracting from the honours of the Almighty, whose power, instead of requiring six ages for the work, could easily have accomplished it in six hours. The instantaneous execution of the several parts of the work, is represented as an

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¹Ibid., 7.
²Ibid., 7-8.
³Young, *Scriptural Geology*, 36.
important accession to its grandeur.1

Young refers to the Zodiac of Dendera, which had been invoked by "some French philosophers"2 as allegedly having "battered down the chronology of Moses,"3 because the stone itself was said to be 15,000 years old, with some estimations even being 40,000 years. But Young notes the conclusions of "Dr. Young and M. Champollion [who] discovered the method of reading proper names in the hieroglyphic character [of] this formidable stone," which more accurately date the stone to within "the era of the Caesars."4 By clear inference, then, for Young the Mosaic chronology of the creation of the earth has to be less than 15,000 years; to go beyond this is to batter Scripture.

Additionally, Young believes in "the great longevity of the antediluvians"5 and that 1,656 years intervened between the creation and the Flood.6 When coupled with the statements above, this suggests that Young adopts an Ussherian time frame, since Ussher used, in part, the ages and genealogies of the antediluvians to construct his chronology.7 Young writes that it cannot be doubted that God "created our globe at the best time,"8 which

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1Young and Bird, Geological Survey, 341-342.
2Young, Scriptural Geology, 40.
3Ibid.
4Ibid.
5Ibid., 42.
6Ibid.
8Young, Scriptural Geology, 37.
for Young, would be within 6,000 years. Having established Young's view on the recency of creation, let us assess his stance on the rapidity of creation.

**The Rapidity of Creation**

Young often refers to "the formation system," which designates any model advocating a relatively gradual formation of the geologic column over immense ages. For example, he notes that in recent years it had become a "fashionable opinion among geologists"\(^1\) that most of the strata were deposited before the creation of man; and some of the most respectable geological writers have attempted to reconcile the formation system with the Mosaic account of the creation, by supposing that the six *days* of the creation are six *indefinite periods*, of great length, corresponding with the eras of the different formations. Such writers fancy, that they have discovered a coincidence between the order in which organized bodies occur in the strata, and the order of the creation of vegetables and animals, as recorded by Moses.\(^2\)

But on closer inspection Ure finds these "orders" are "impossible to reconcile"\(^3\) with Moses' account. Along exegetical lines, Young notes that each of the days of the creation week in Genesis are linked to the coupling 'morning and evening'.\(^4\) He states that such language

\(^{1}\)Young, *Geological Survey*, 341.

\(^{2}\)Ibid.

\(^{3}\)Ibid. Some irreconcilabilities exist between geological theory and Genesis. For example, while mainstream geology posits that life has oceanic origins, Genesis suggests that life appears first on land; and while geology has fish preceding fruit trees, Genesis reverses this order; geology contends that insects came before birds, while Genesis has birds on day 5 and "creeping things" (defined as insects in Lev 11) on day 6; and aside from the problem of how plants created on day 3 could survive for an entire geologic epoch until the sun's creation on day 4, there is the additional conundrum of how they could survive without the aid of pollination if the pollinating insects did not arrive till day 6.

\(^{4}\)Ibid., 342.
cannot, "without the most violent straining, be applied to the formation periods."¹ He acknowledges "that the terms day, morning, and evening, are often in Scripture, as in other writings, used in a metaphorical sense; but it is contrary to the rules of sound criticism, to understand them in this sense, in the simple narrative of the work of creation. The mention that is made of the seventh day seems to put the matter beyond a doubt."² Why? The reason is twofold. First, though he does not reference Exod 20:8-11, in this context he seems to have such in mind when he writes that "God rested from his work on the seventh day . . . and man was directed, after the example of God, to labour six days of the week, and rest on the seventh."³ Second, he states that if "each of the six days was a long period, of a thousand or an hundred years, the seventh day must have been of the same duration; an idea glaringly inconsistent with the narrative of Adam's history."⁴ By this he at least partially has in mind that if Adam were created on the sixth day, and endured throughout the seventh day, this would not harmonize with the age ascribed to Adam in Genesis.⁵

In light of the above, we are better prepared to understand why Young unequivocally and simply states that God "created the world in six days."⁶ He asks rhetorically: "Shall we

¹Ibid.
²Ibid.
³Ibid.
⁴Ibid.
⁵Ibid.
⁶Young, Scriptural Geology, 37.
affirm that the work would have been more magnificent, if performed in six years?"7 For Young, the "facility and speed" in which the creation "was completed, demonstrate more strikingly the wonders of his power and skill. He spake, and it was done; he commanded, and it stood fast."2 Young elaborates further:

The amount of his glory, as exhibited in his creatures, is not a question of time; and the wonders of his wisdom, power, and goodness, apparent in the construction of animals and vegetables, now found fossil, are the very same, whether their age be five thousand years, or five millions.3

At least five conclusions may be fairly inferred from the above statements. First, while Scripture may not be exhaustive in providing temporal earmarks demarcating the duration of the creation week, in Young's estimation the data that Genesis does furnish are sufficient to warrant that Moses unequivocally intended to limit the time span of creation to six literal days. Second, the enthusiasm with which accommodationists embrace "fashionable opinions" of geological theory as fact, reveals that they give higher epistemological priority to extra-biblical authority than special revelation. Third, beyond expressing minor disharmonies between the formation system's order of strata and the order of creation found in Genesis, in the strongest language possible Young says that the two "are impossible to reconcile,"4 the two being "glaringly inconsistent"5 with each other. Fourth, Young connects God's wisdom, power, and goodness with the issue of the rapidity of creation. The accommodationists insist

1Ibid.
2Ibid.
3Ibid.
4Young and Bird, 341.
5Ibid., 342.
"that a longer period was necessary to manifest [God's] greatness," in Young's opinion, "savours of ignorance, as much as of presumption." And fifth, recalling that Young was a seasoned linguist, with knowledge of Hebrew, it is important to notice his awareness of the contextual, temporal qualifiers surrounding 'day' in Genesis. Such days, he notes, are bracketed by "morning and evening," which, despite occasional metaphorical usage, such usage cannot be adopted in this context "without the most violent straining" of "the rules of sound criticism."  

Recognition of the Fossiliferous Strata as a Deep-Time Phenomenon as Espoused by Leading Accommodationist Geologists

As with the two other Scriptural geologists examined in this chapter, if at some point Young is going to criticize the new geological theories as impacting negatively upon God's character, it is necessary for him to be acquainted with the deep-time evidences implied in the new geology. Thus, it is important for the purpose of this dissertation to discover the degree to which Young intellectually grasps the deep-time implications of the new geology.

According to Young, the new geological theories of his day contend that the "present

1Young, *Scriptural Geology*, 37.
2Young and Bird, 342.
3Ibid. Young is perhaps aware, first, that of the 38 times outside of the creation narrative where *yom* is qualified by evening (*eh'reb*) and morning (*bo'ker*), a literal day is always indicated; and second, that *bo'ker* is used over 200 times in the Old Testament, with no self-evident metaphorical usage. Though additional syntagmatic details are not manifest in his writings, it is reasonable to surmise that Young was probably aware that elsewhere, in the Old Testament, whenever *yom* occurs with ordinals (i.e., first, second, third, etc.), the reference is to a normal day (Hos 6:2 being a possible exception); and that of the numerous occurrences of *yamim* ('days'; 845 such occurrences), the context clearly indicates literal days, thus allowing Exod 20:8-11, by way of the *analogia fidei*, to delimit the intended meaning of *yom* in Gen 1-2.
strata, have resulted from the gradual demolition of more ancient strata."4 Whether of a
Vulcanist bent,2 or Neptunist persuasion,3 both assert "that the same process is now going
forward,"4 and that "a long succession of ages would be requisite."5 In vivid contrast to the
much deeper time of coming schools of geological thought, Young refers to the proposed
"thirty thousand years, to form the chalk strata only," as an immense period.6 Young knows
that if such immense deep-time periods are adopted, the Mosaic chronology is strained, and if
extrapolated to the rest of the column the Genesis record is battered. But Young, like all
Scriptural geologists, is persuaded that the "strata must have been produced by very different
means, and deposited on a far grander scale."7 Not so with the accommodationists, who
picture a multitude of primeval worlds . . . each subsisting for thousands of years,"8 and are
further willing to "ascribe an almost immeasurable antiquity to the organic remains occurring
in the crust of the earth."9 Such geologists "carry back . . . antiquity to a time inconceivably

1Ibid, 326.

2Through "the effect of a supposed central fire or heat, in the interior of the globe" (ibid.).

3Sedimentary rocks resulting from materials "being washed away by the rains and
streams . . . [and] deposited in the bottom of a former ocean" (ibid.).

4Ibid.

5Ibid., 327.

6Ibid. Young's use of italics emphasizes how immense this figure seems to him,
though by modernity's standards, this is relatively shallow time. One can only imagine how
he would react to the far more immense deep time of contemporary geological theory.

7Ibid.

8Young, Scriptural Geology, 6.

9Ibid., 5.
remote."1 They hold to "a long succession of [pre-adamic] creations and destructions," and appear "resolved to spin out the duration of the globe to as great a length as possible."2 From this discussion it becomes clear that Young understands the fossiliferous strata of the column as interpreted by leading geologists of his day to be a deep-time phenomenon. We are now prepared to appreciate his subsequent, detailed understanding, and assessment of that system.

Young's Understanding of and Discomfort with the New Geologic Time Scale

Young refers to the many efforts which "have been made, to arrange all the beds composing the crust of our globe into a complete series, exhibiting the order in which, with a few variations, the strata have been deposited, and may be expected to occur."3 He believes such attempts have generally "failed in establishing any precise order observed by the strata."4 Young is speaking generally here, for there are some discernible sequential stratigraphical patterns.5 He is merely looking at the larger picture, and denouncing the "concentric coatings, like an onion," view, or what he calls "universal formations."6 Such is "not borne out of the facts before us,"7 nor conducive to the bouleversments "which threw the strata into their

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1Ibid., 6.
2Ibid.
3Young and Bird, 321.
4Ibid.
5Cf. ibid., 332.
6Ibid., 320.
7Ibid.
present form." In the same vein as attempting to "arrange all the strata into a regular series," Young notes that a similar attempt is being made to identify strata by means of the respective fossils they contain. Regarding (what are currently called) index fossils, he writes:

As attempts have been made to arrange all the strata into regular series, so it has also been attempted, to assign to each member its proper fossils, on the supposition that we may distinguish each stratum by its organic remains. The latter idea, like [the attempt to arrange all the strata into a regular series], may be admitted to a certain extent; but the arrangement is far from possessing that universality and certainty which some suppose.

Such ideas as index fossils and deep-time serial catastrophism, according to Young, stem in part from some "French authors" whose thinking has "been imported into England, and zealously patronized." Young has Cuvier chiefly in mind here, as one with "a disposition to set up theory against fact," and who promotes the idea of multiple revolutions in earth history.

The Idea of Revolutions and New Creations

Young understands that the continual cycle of successive creations and multiple destructions is definitive for the formation system. He observes that according to accommodationists, our planet has experienced deep-time creations and destructions, each

1Ibid.
2Ibid., 332.
3Ibid.
4Ibid. Young is of the conviction that "any regular or constant series" cannot be arranged (ibid., 340).
5Ibid., 328-329.
6Ibid., 329.
inhabited with its own peculiar animals and plant destined "to be destroyed."\(^7\) Such cyclic "destruction and renovation,"\(^2\) which Lyell describes as "a complete revolution in organic life,"\(^3\) is paralleled by entities such as numerous beds of coal "alternating with strata of sandstone, shale, limestone or ironstone,"\(^4\) and is allegedly caused by alternate geophysical elevations and submersions. Some such scenario is fundamental to the formation system, though adherents do not always clarify "in what way these destructions can have taken place, or in what form the new creation followed them."\(^5\) The supposition that "the ruin of each successive world was never complete, but that a portion of its inhabitants escaped, to mingle with those of the next," is just as fanciful to Young as mice being generated spontaneously from mud on the banks of the Nile river.\(^6\)

According to Young, though the idea of "successive creations, or formations, separated by ages or long intervals," is fashionable among "some of the most respectable geological writers," such a view is "impossible to reconcile . . . with the scriptures,"\(^7\) and "wholly imaginary."\(^8\) He believes a scientific case can be made that the alleged deep-time

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\(^1\)Young, _Scriptural Geology_, 6.
\(^2\)Ibid., 76.
\(^3\)Charles Lyell, quoted in ibid., 76-77.
\(^4\)Ibid., 11.
\(^5\)Ibid., 76.
\(^6\)Ibid.
\(^7\)Young and Bird, 341.
\(^8\)Young, _Scriptural Geology_, 25.
depositions were "formed nearly about the same time,"¹ and offers evidence that the "series" of creations "bear the marks of having been deposited about one period,"² and can "be assigned unto one age."³ Such evidence includes the general conformity of the strata,⁴ instances of "bent strata,"⁵ and incongruities in denudation and alluvial coverings.⁶ He tends to give more detail than Bugg, and provides substantial data on the organic remains which correspond to each strata. Young's description of the mineral strata can be reconstructed as shown in table 4.

Young's Reflections on the Organic Remains and Origin of the Fossiliferous Strata

Young briefly recounts the responses to fossils by various historical figures such as Herodotus, Strabo, Pliny, Theophrastus, Tertullian,⁷ and Orosius.⁸ The latter two early Christian writers saw fossiliferous mountains as indicative of a universal deluge. Others wove fantastic tales regarding these petrifactions, connecting them with the fabled miracles of lady Hilda.⁹ Even in more recent times, Young notes, learned men regard fossils "as mere

¹Young and Bird, 341.
²Young, Scriptural Geology, 23.
⁴Ibid., 23.
⁵Ibid., 25.
⁶Ibid., 25-27. For details on the fossil remains of vegetable, zoophytes, testacea, Crustacea, etc., of the geologic column, see Young and Bird, 187-279.
⁷An Early Church Father (c. 160–c. 220), in his De Pallio.
⁸A 5th-century writer, and friend of Augustine, in Historia adversus Paganos, bk. 1.
<table>
<thead>
<tr>
<th>Strata</th>
<th>Concomitants with Young's Residual Comments on Organic Remains</th>
</tr>
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<tbody>
<tr>
<td>Alluvial Covering</td>
<td>In descending order these include: Vegetable soil, Marl, Sand and Gravel, Brown, coarse clay, Darker, ash-coloured clay, Blueish, tenacious clay</td>
</tr>
<tr>
<td>Chalk</td>
<td>Soft grey marl, iron pyrites, flint</td>
</tr>
<tr>
<td>Upper Shale or Schist</td>
<td>Crystals of selenite, iron pyrites, blende, and lias</td>
</tr>
<tr>
<td>The Oolite</td>
<td>Compact beds; Lighter colour beds, with slender stems of coral, with pectens and other shells; Several beds of lighter colour; Oolite, numerous and large ova, shells; Blueish oolite, numerous small ova, few shells; Blueish bed, with few large ova; Grey or dusky bed, few large ova; White or light coloured clay; Blue, with a few large ova; and Dark blue limestone, without ova [Petrifications here, particularly shells, abound to an incredible degree; a chief repository for quadruped bones/teeth]</td>
</tr>
<tr>
<td>Limestone</td>
<td>Blue and grey limestone, Hildenley limestone</td>
</tr>
<tr>
<td>Calcareous Sandstone</td>
<td>Calcareous sandstone with yellow marl</td>
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<tr>
<td>The Second Shale</td>
<td>Beds of whitish or light grey limestone; Thick bed of argillo-careous sandstone, large nodules of limestone, and yellow marl; Grey limestone, calcareous sandstone; Blueish limestone; Calcareous sandstone; Shale alternating with schistose sandstone; Shale [not as much organic remains as in the upper shale]</td>
</tr>
<tr>
<td>Ironstone Sandstone</td>
<td>19 substrata here</td>
</tr>
<tr>
<td>Blue Limestone</td>
<td></td>
</tr>
<tr>
<td>Sandstone, Shale and Coal</td>
<td>12 substrata here--Petrified plants very numerous in the shale over the coal seams</td>
</tr>
<tr>
<td>Great Beds of Alum Shale</td>
<td>12 substrata here--This bed &quot;abound[s] with organic remains.&quot;</td>
</tr>
<tr>
<td></td>
<td><em>Ichthyosaurus communis</em>; plesiosaurs; crocodile; megalosaurus-like remains.</td>
</tr>
<tr>
<td>Red Sandstone w/Gypsum</td>
<td>Bed of sandstone; Yellow grey sandstone; and a similar bed [these beds are parted in some places by seams of blue clay]</td>
</tr>
<tr>
<td>Magnesium Limestone</td>
<td>[few organic remains]</td>
</tr>
<tr>
<td>Balsaltic Dyke</td>
<td>&quot;We find in some parts of the of the dyke, the clayey substance known by the outlandish name wacké.&quot;</td>
</tr>
</tbody>
</table>

sports of nature, produced by an occult plastic power."1 In this vein Young refers to Whitby historian, Mr. Carlton, who, along with the likes of physician naturalist, Martin Lister, is persuaded that none of the petrified bones of horses and men were ever animated "or in any other state than that in which we now find them."2 Young notes that "though men of science still differ, as to the time and manner in which these substances have been imbedded in their rocky habitations, all agree in pronouncing them to have been real animals or vegetables, at some remote era."3 Young, too, unhesitatingly affirms the organic origin of fossils.

Regarding the origin of the strata itself, there is no doubt, in Young's opinion, that "the whole of our rocks have been formed by aqueous deposition."4 The parallelism of the beds and the arrangement of the organic remains, among other things, prove "that all our strata have been covered by the sea, at the time of their formation."5 Aside from their aqueous origin, Young notes that while some of "the organic bodies imbedded in our strata . . . are in a high state of preservation, others are greatly mutilated, compressed, and otherwise injured."6 Having looked at Young's views on the new geologic time scale, the ideas of

1Ibid.

2Ibid.

3Ibid. Recall how crucial the referents of "time and manner" are to Bugg. See Bugg, Scriptural Geology, 1:39, 48. Cf. Young and Bird, 341.

4Young and Bird, 312.

5Ibid.

6Ibid., 330. Young describes some petrifications as "violently broken, distorted, or mutilated," and elsewhere, fossils of large marine animals as "mangled and broken; often parted into a thousand pieces, and their fragments scattered in all directions" (ibid., 331, 338).
revolutions and new creations, and his reflections on the organic remains in the column, it is clear that he possesses a familiarity with both the ordering and nomenclature of the formation system. Additionally, the above indicates that Young knows something of the organic remains in the "column," and is thus in a position to reflect on the implications which such "promiscuous assemblage[s]" would have on God's character.

The Origin of Natural Evil

Perhaps Young is too optimistic when he states that "all agree" that our globe "is widely different than its original state." But there is no denying his conviction that earth history is characterized by two massive transmutations: the Fall and the Flood. Concerning the latter, Young writes that earth's "strata have been deposited by water," and "that through some powerful agency, they have suffered great change."

Accommodationists, according to Young, see "death had reigned and triumphed on the globe . . . thousands of years before man existed," and hence could not have resulted from sin. But Young believes Scripture depicts "the misery and destruction of the creatures are represented as the bitter fruits of man's transgression." He still claims, a decade later, after the advent of Buckland's *Bridgewater Treatise*, that man's disobedience "brought death

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1Ibid., 328.
2Ibid., 3.
3Ibid., 340.
4Ibid., 42. See the Buckland section in chapter 5 for elaboration on this point.
5Ibid. There can be little doubt here, that Young, whether consciously or not, is borrowing this wording from the first four lines of Milton's *Paradise Lost*. 

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into the world, with all our woe."

The statements indicated above suggest several issues which are settled in Young's mind. First, a traditionalist reading of Scripture yields a vastly different picture of the origin of death than that indicated by the accommodationist geological model. This is because, second, according to the formation system, death and extinctions reigned long before the advent of mankind, thus dissolving any causal nexus between man's disobedience and death. The traditionalist paradigm, however, posits sin as the cause of death, extinctions, natural evils, and the like. Third, Young expands the impact of sin beyond mere death, but also attributes "all our woe" to the Fall, which by plain inference would include all natural evils. Fourth, granting the legitimacy of the previous point, then, the Fall did not just affect the human realm, but "the misery and destruction of the creatures" are also part of the bitter fruit of original sin. Fifth, geophysical catastrophes also stem from original sin, in that Young implies that the concomitants of the formation system (earthquakes, denudations, etc.) do not antecede sin. And above all, sixth, Young clearly grants cognitive priority to the Scriptures in reaching the conclusion that our globe "is widely different than its original state." Having laid out these six important rubrics in Young's mind, his assessment of the interplay between the origin of natural evil and the nature of God's nature can be more fully appreciated.

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1Young, *Scriptural Geology*, 41-42.

2Ibid.

3This is addressed further below.

4Young and Bird, 3.
Young's Understanding of the Bearing That Paleonatural Evil Implied by a Deep-Time Geological Column Has upon the Character of God

With Young's ideas on the origin of natural evil now understood, we now move to his view on how one's philosophy on the origin of natural evil bears on God's character. Even apart from any notion of natural evil, Young is persuaded that the deepening of time, beyond a univocal reading of the creation narrative, leads "to an indefinite length [of time], looks like detracting from the honours of the Almighty."¹ Young lays out three ways in which deep time detracts from God's wisdom and goodness.

The New Geology Reflects Negatively on God's Claim of a Very Good Creation

First, in Young's mind, lengthening the time in creation reflects negatively on the original very good creation. Recounting that God describes the whole of creation as "very good,"² and reflecting on the formation system's deep-time serial "destruction and renovation,"³ Young registers the following rhetorical inquiry: "With what propriety could these words have been used, if the work of some of the preceding days had been destroyed, before the sixth day began?"⁴ The poignancy of this question will later intensify many orders of magnitude in the wake of the deluge of deep-time Fossil-Lagerstätten to be exhumed before the turn of the millennium.

¹Ibid., 341.
²Ibid., 342.
³Young, Scriptural Geology, 76.
⁴Young and Bird, 342.
The New Geology Challenges God's Skill and Wisdom

Second, a major theological objection of Young's toward the formation system has to do with its impact on divine wisdom. Young, like Bugg and Ure, sees that deep-time serial destruction is definitive of the formation system. Advocates of this position, according to Young, believe our planet has experienced "a long succession of creations and destructions . . . each garnished with its peculiar race of animals and vegetables," destined "to grow, to flourish, and to be destroyed."1 Young realizes this opens the door to a factor potentially derogatory of the Creator, namely that some of these deep-time catastrophists allege "that in tracing the beds upwards, we discern among the inclosed [sic] bodies a gradual progress from the more rude and simple creatures, to the more perfect and completely organized; as if the Creator's skill had improved by practice."2 He states that it seems scarcely consistent with the wisdom of the Divine Being . . . that a succession of creation, all beautiful and interesting, would occupy our globe throughout long ages, without any intelligent creatures, to enjoy the scene, and praise the Creator. All his works, indeed, praise him, independently of man; but there is a rational praise, which man alone can render on earth; and it is unreasonable to suppose that, during so long a period, no provision should be made for an object so important.3

1Young, Scriptural Geology, 6.

2Ibid., 9. Bugg, Ure, and Young all express reservations about how the "succession" in the geologic record could be misconstrued to imply gradualism. Bugg highlights Cuvier's belief that "there is also a determinate order observable in the deposition of these bones in regard to each other, which indicates a very remarkable succession in the appearance of the different species" (Scriptural Geology, 1:231). Bugg recognizes that modern geology rests upon the remains of extinct genera and species, and that their orientation in the strata supposedly demonstrates successive revolutions (ibid., 1:276). The fossils in the geologic column indicate to some that "species and even their genera, change with the strata," indicating an "advance by regular gradation, from shells, fishes, amphibious reptiles, birds, and so up to quadrupeds" (ibid., 1:183). Cuverian-like paradigms would increasingly presage Darwinian-like transformationism, in positing that each geological revolution is also a revolution upward, exhibiting an increase in biological complexity the further one advances up the column.

3Young, Scriptural Geology, 41. Bert Thompson makes a similar point in the next century, thinking it incoherent that God should fritter away billions of years with random
Thus, the existence of a beautiful creation back into deep time, with no opportunity for a rational appreciation and praise, in Young's view, seems unwise of God.

**The New Geology Undermines the Reliability of God's Word by Placing Death before Sin**

Third, Young sees the issue of suffering, death, and destruction in the prelapsarian sub-human order as reflecting negatively on the perspicuity and reliability of God's pronouncements. As to His character, God is not trustworthy. Young states initially that it may be observed, that, according to scripture, it was man's disobedience that brought death into the world, with all our woe; but, according to this geological system, death had reigned and triumphed on the globe, in the destruction of numerous races of creatures, thousands of years before man existed.¹

Four important dimensions can be identified in the above quotation. First, Scripture is Young's initial point of departure. Even though he believes geology enlarges "the bounds of our knowledge, and present[s] a wide field for intellectual employment and innocent pleasure," even enhancing the glory of God, when Scripture speaks clearly on an issue the Christian is bound to take it as final authority. Second, as the above quote shows, Young is affirming that Scripture teaches that sin brought death into the world. This means, by clear implication, that in Young's thinking death was not part of God's original created order, but was a post-lapsarian intrusion. Third, the formation system takes quite a different point of departure, evolutionary cul-de-sacs before getting to the point. Thompson sees the accommodationist view as inconsistent with God's purposiveness, asking "if God's ultimate purpose was the creation, and redemption, of man (as theistic evolutionists presumably believe), why then, would he use a process devoid of purposiveness?... What semblance of purpose could there have been in the hundred-million-year reign and eventual extinction of the dinosaurs, for example?" (*Creation Compromises*, 2d ed. [Montgomery: Apologetics Press, 2000], 327).

¹Young, *Scriptural Geology*, 41-42.
contending that "death had reigned and triumphed on the globe, in the destruction of numerous races of creatures, thousands of years before man existed." Fourth, the impact of original sin extends beyond mere death. In attributing "all our woe" to the Fall, including the extinctions referred to in the previous sentence, and the geophysical activities referred to in the quote below, it is clear that Young sees sin as having affected the entirety of nature.

By natural inference, then, Young believes that all natural evils are the result of sin, while the formation system sees natural evils as part of, and non-intrusive to, the original created order. Young underscores the former perspective when he notes elsewhere,

that in the sacred volume, the misery and destruction of the creatures are represented as the bitter fruits of man's transgression; and how then can we admit, that the catastrophes belonging to the formation system, were antecedent to the introduction of sin, and even to the creation of man?2

The full theodical import of this query carries two latent questions: (1) How can the perspicuity of Genesis, and specifically, (2) the reliability of God's declarations, be reconciled with deep-time prelapsarian catastrophe and creaturely misery?3 For Young, such creaturely misery and destruction stem from sin, as suggested by a natural reading of God's Word.

The issue is compounded all the more if creation is filled with all manner of natural evil far back into deep time. As indicated previously, Young states that the advocates of the formation system see our planet as having experienced many successive destructions,

1 Ibid.

2 Young and Bird, 342.

3 If it be posited that "creatures" does not necessarily refer to the sub-human realm, it should be noted that Young refers "to the numerous races of creatures destroyed before man existed," indicating that he has in mind the sub-rational realm (ibid.).
destroying primeval races of animals. By clear inference, death and destruction are not part of the original created order in Young's model. On the contrary, death and destruction are seen as intrusive and penal, the exact antithesis of the accommodationists' formation system, which subtracts from the glory of God.

Young's objections against deep-time serial catastrophism are both scientific and theological. But the most significant price exacted by the formation system, and its assumptions, in his mind, is that the formation system ultimately ends up "detracting from the honours of the Almighty."2

Conclusion

The above analyses clearly establish that Young is in complete alignment with Bugg and Ure on the essentials of Scriptural geology. As far as the time frame of creation, he champions both a rapid and recent creation. Young has a strong grasp of the new geology and its understanding of the origin and ordering of the column and its organic remains. He is not only sensitive, but vocal, regarding the impact that deep-time serial catastrophism has on God's character. As far as natural evil, Young unambiguously assigns blame to Edenic disobedience, and believing that the reign of death and "the destruction of numerous races of creatures, thousands of years before man existed,"3 subtracts from the glory (i.e., honor, wisdom, and goodness) of the Creator.

1See again, Young, Scriptural Geology, 6.

2Ibid.

3Ibid., 41-42.
Common Themes Among the Three Traditionalists

The above analyses have established that there is a readily discernable ideological solidarity and trend among three leading Scriptural geologists, as represented by Bugg, Ure, and Young. They exhibit philosophical, theological, and exegetical unity in the essentials, though exceptions and personal inconsistencies exist on peripheral matters.¹ Our interest here is to codify the non-negotiable themes which typify and buttress the traditionalists' theodicy in response to paleonatural evil. This work provides part of the infrastructure for a detailed, comparative analysis in our penultimate chapter, between the theodicies of the traditionalists and the accommodationists.

With little variation, these three Scriptural geologists unreservedly affirm the following six tenets. First, they affirm the Mosaic authorship, divine inspiration, and infallibility of Gen 1-11, and that, when responsibly exegeted, the creation, Fall, and Flood narratives can be taken as literal history. They deny that geology, when properly interpreted, contravenes the natural sense of the Mosaic narrative.

¹Such differences can be found with a substantive consultation of the primary sources. For example, not all traditionalists think the Noachian deluge was responsible for all sedimentary strata. Samuel Best is nebulous regarding the geological significance of the Flood and makes significant personal hermeneutical shifts over the course of his career, ending up with a composite belief of the gap theory, the day-age theory, and a catastrophic, global flood (cf. Mortenson, 216, 218-220). David Lord (along with Granville Penn and Andrew Ure) holds that after the Flood, God created new species to comport with post-diluvial habitats (see David Lord, Geognosy; or, The Facts and Principles of Geology against Theories, 2d ed. [New York: Franklin Knight, 1857], 393f.). Another difference is found in John Murray's uncertainty regarding which day the Sun was created (see John Murray, Experimental Researches on the Light and Luminous Matter of the Glowworm, the Luminosity of the Sea, the Phenomena of the Chameleon, the Ascent of the Spider into the Atmosphere, and the Torpidity of the Tortoise, etc. [Glasgow: W.R. McPhan, 1826], 10-12).
Second, they affirm the Bible’s ultimate authority in all matters, and that belief in a literal creation and global Flood provides the foundation for trusting subsequent miracles in Scripture. They never suggest that Scripture is authoritative only in matters of faith and practice.

Third, there is consensus that creation took place approximately 6,000 years ago within six literal 24-hour days. They deny that there is any orthodox exegetical basis which could accommodate deep time.

Fourth, these traditionalists affirm the total historicity of the biblical Flood, as well as its penal, global, and catastrophic nature. This Flood is sufficient to account for most fossil-bearing sedimentary rock formations. They deny that a proper interpretation of Scripture allows for either a local or tranquil flood. They further deny the accommodationist claim that there is no geological evidence which could substantiate a global deluge.

Fifth, these three Scriptural geologists affirm that the created order was initially perfect. They consensually deny that imperfections of any type came from the Creator's hands.

Sixth, there is no indication that these thinkers allow the existence of prelapsarian death and paleonatural evil. These phenomena are intrusive to God's original "very good" creation. These Scriptural geologists deny that God's benevolence can be unreservedly proclaimed if He originally ordained sub-rational suffering, death, extinctions, and all other paleonatural evils.

While the Scriptural geologists and traditionalists are regarded today as nuisance people, and are frequently remembered simply for disagreeing with the new geology because the latter counters the Genesis account of creation and the flood when taken literally, the traditionalist responses by Bugg, Ure, and Young run far deeper than this. The analyses of this chapter have discovered and shown that these traditionalists perceive and strongly voice
profound theological difficulties regarding the negative effect that an interpretation of the fossil record as reflecting deep-time serial catastrophism has on the character and attributes of God. This later thesis, regarding the particular nature of the theodical uniformity among these three traditionalists, constitutes the first of two broadly based contributions offered by this dissertation.

We now turn to the discovery of the nature of the theodical responses of the accommodationists to a deep-time serial catastrophist interpretation of the fossil record, and its effect on the character and attributes of God.
CHAPTER V

THREE EARLY NINETEENTH-CENTURY REPRESENTATIVE BRITISH ACCOMMODATIONIST RESPONSES TO THE PALEONATURAL EVIL SUGGESTED BY A DEEP-TIME INTERPRETATION OF THE FOSSILIFEROUS GEOLOGIC COLUMN

Strange that these wonders should draw some men to God and repel others.
--Alfred Lord Tennyson

Alfred Lord Tennyson: A Memoir

Presumably, each time, 'God saw everything that he had made, and behold, it was very good.' But each separate creation might well have thought: 'If I so very soon am done for, I wonder what I was begun for?'

--Edwin Tenney Brewster

Creation: A History of Non-Evolutionary Theories

Our religion,--blessed be God!--is not a religion of contrivance and expediency. We want only TRUTH: and we cannot barter it for ease, custom, or fashion.

--John Pye Smith

On the Relation Between the Holy Scriptures and Some Parts of Geological Science

Introduction

The objective of the present chapter will be to discover, describe, and assess basic theodical formulations arising in three representative early nineteenth-century accommodationists, represented by William Buckland, John Pye Smith, and Hugh Miller, in response to the new geological axioms which were replacing the older paradigm. Even though the accommodationists, like the traditionalists, did not possess the full picture of
mass mortality as that depicted in chapter 3, by the early nineteenth century sufficient geological findings had accrued to alter substantially the trajectory of theodical dialogue.

As late as the 1820s, diluvial catastrophism was still an academically acceptable position given to account for the earth's fossiliferous strata. Rodney Stiling asserts that in the previous century "geologists routinely associated the mass of stratified fossil-bearing rocks with the Flood." By the 1830s, however, diluvial geomorphology gave way to Lyellian uniformitarianism and its resolute commitment to deep time. When the philosophy of uniformitarianism took hold in the early nineteenth century, and its deep-temporalization of the fossil record, the notion of biblical/diluvial catastrophism was slowly displaced. In adopting the new uniformitarian paradigm in the early nineteenth century, some British Christian scholars acknowledge some apparent incongruities between the tenets of this deep-time perspective and traditional interpretations of the Genesis record on creation and the Flood. The need arose, therefore, for them to offer a theodicy for the geology-intensified issue of paleonatural evil, and prelapsarian sub-

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1See, for example, Richard Kirwan, *Geological Essays* (London, 1799), 4-5.

2Stiling, 52.

3Uniformitarianism is the philosophical principle that assumes that present gradual geophysical processes, which are observed to be modifying the earth's surface at a measurable rate in the present, can be extrapolated into the geologic past to estimate the age of some formation. The phrase, "the present is the key to the past," sums up this position. It is perhaps fair to portray the traditionalist position as just the opposite; i.e. the past is the key to the present.

4This does not mean that catastrophe plays no role in uniformitarian thinking. Derek Ager compares uniformitarianism to a soldier's life: long periods of boredom and short bursts of terror (*The Nature of the Stratigraphical Record*, 100). Uniformitarians allow for numerous catastrophes, while the Scriptural geologists allow for just two: the Fall and the Flood.
rational suffering, death, and extinctions. Several qualified individuals clearly felt themselves up to this demanding task of reconciliation.

Who Are the Accommodationists?

Those scholars, by and large having some affinity both in the geo-sciences and theology, will be referred to in this dissertation as accommodationists. The term is in no way meant to be pejorative, for accommodation in this context simply refers to the attempt to reconcile two opposing concepts in order to derive compatibility, as in the reinterpretation of Scripture to be in harmony with the findings of science as conventionally interpreted. William Buckland, William Conybeare, and Adam Sedgwick are not only pacesetters in English geology, but are Anglican clergymen who adhere to a Cuvierian brand of catastrophism. They pursue their studies, however,

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1 William Gillespie's description of accommodationists as "hybrid critics, half-men of science, half Scripture-interpreters," belies the hint of disingenuousness which will be avoided here (The Theology of Geologists, 3). The term is used here neutrally, as in James C. Livingston, "Darwin, Darwinism, and Theology: Recent Studies," RSR 8 (April 1982): 112, 114. Kenneth Hermann uses the term "superficial accommodation" ("Innocent as Doves, But Not Wise as Serpents: Nineteenth Century Evangelicals and Evolution," Pro Rege 19 [September 1990]: 2). Hermann claims that "the evangelical strategy of accommodation not only failed to win many converts, but it made unbelief a serious intellectual option. Disbelief in a designer, ironically, "was rooted in the Church’s effort to shore up Christian belief with the best science" (ibid., 7).

2 Carl F.H. Henry uses the term "mediating evangelicals" (God, Revelation and Authority, vol. 6 [Waco, TX: Word, 1983], 137).

3 This triad might be more accurately categorized as semi-deists, as is suggested by Hooykaas (192 f.). Other key players under this rubric are Roderick Murchison, William Whewell, and Charles Lyell.

4 I.e., multiple catastrophes. Cf. "The Significance of George Cuvier," in chapter 3. William Conybeare proposes three deluges prior to the Genesis Flood, and, according to Lyell, Buckland "adds God knows how many catastrophes" (in Katherine Lyell, 253). Other
disencumbered from the literal hermeneutic which characterizes the Scriptural geologists. Such latitude allows them to travel geological paths which their theological consciences deem viable.

While there is a general consensus that the Mosaic creation account is to be taken as mostly historical, there is disagreement, often passionate, between their respective accommodationist paradigms. A highly notable bone of contention, for example, is the issue of the Genesis Flood. Early on in the debate accommodationists are not willing to deny the Flood altogether. They offer different hermeneutical options to either localize or tranquilize the Flood, so as to allow for a "nonviolent" interpretation. However, these men set the stage geologically and exegetically for later ahistoricizations of the Flood.

The Significance of the Bridgewater Treatises

In the early 1830s the eighth Earl of Bridgewater, Reverend Francis Egerton, endowed a series of works known as the Bridgewater Treatises. Egerton wished to provide the means for

a person or persons . . . to write, print, and publish one thousand copies of a work On the Power, Wisdom and Goodness of God, as manifested in the Creation; illustrating such work by all reasonable arguments, as for instance the variety and formation of God's creatures in the animal, vegetable, and mineral kingdoms; the effect of digestion, and thereby of conversion; the construction of the hand of man, and an infinite variety of other arguments; as also by discoveries ancient and

parson-naturalists, besides Buckland and Conybeare, who were both catastrophists and leading men in Victorian geology, include Thomas Chalmers, Philip Duncan, John Fleming, Adam Sedgwick, John Pye Smith, John Bird Sumner, and William Whewell. United as they were on deep-time and serial catastrophism, these ministers still found occasion to differ on numerous other theological, philosophical, and scientific issues.

1This will be substantiated below.
modern, in arts, science, and the whole extent of literature.²

Among the pool of those selected were four scientist/physicians and four ministers, with three of the eight having lectured on geology at the university level.² The authors included the Scottish theologian, Thomas Chalmers;³ Regius Professor of Medicine at Oxford, John Kidd;⁴ renowned philosopher of science, William Whewell;⁵ surgeon and celebrated anatomist, Sir Charles Bell;⁶ physician and Secretary to the Royal Society, Peter Frank Roget;⁷ Oxford Reader in Geology and mineralogy, William

²This statement is found in the prefatory notice of all eight volumes.


³Thomas Chalmers, *On the Power Wisdom and Goodness of God as Manifested in the Adaptation of External Nature to the Moral and Intellectual Constitution of Man* (London: William Pickering, 1833), saw its eighth edition by 1884. All Bridgewater authors, except Chalmers, were Fellows of the Royal Society at the time of their selection. Chalmers was selected to the FRS in 1834.


⁵William Whewell, *Astronomy and General Physics Considered with Reference to Natural Theology*, went through nine editions by 1864.


Buckland;\textsuperscript{1} ordained curate and accomplished entomologist, William Kirby;\textsuperscript{2} and a
trailblazer for modern biochemistry, William Prout.\textsuperscript{3}

Response to the \textit{Treatises} varies, even to the present, but they can hardly be
ignored. Mathematician Charles Babbage responded by contriving his own unofficial
\textit{Ninth Bridgewater Treatise}.\textsuperscript{4} Charles Darwin was well aware of the series.\textsuperscript{5} The eight
volumes epitomize classic natural theology, and have become a metaphor for other works
which "seek to find in science indications and proofs concerning ultimate questions of
meaning and value."\textsuperscript{6} But while these works, unfortunately, may currently slumber "dust-

\textsuperscript{1}Buckland's \textit{Geology and Mineralogy} enjoyed nine editions by 1860.

\textsuperscript{2}Kirby's \textit{On the Power, Wisdom, and Goodness of God, as Manifested in the
Creation of Animals, and in their History, Habits, and Instincts}, had gone through six
editions by 1853.

\textsuperscript{3}William Prout, \textit{Chemistry, Meteorology, and the Function of Digestion
Considered with Reference to Natural Theology} (London: William Pickering, 1834), saw
four editions by 1855.

\textsuperscript{4}Charles Babbage, \textit{Ninth Bridgewater Treatise: A Fragment} (London: John
Murray, 1838). This work is directed mostly against Whewell. Hearing that Babbage
attempts to show how mathematics supports theology, Gundry notes that this was
sufficient to detour him away from reading it (150, n. 3). Perhaps others found a greater
deterrence, as implied by Gillispie, in that "Babbage's remote and lofty Deity had little in
common with the God of the [Bridgewater] authors" (211).

\textsuperscript{5}See Howard Gruber and Paul Barrett, \textit{Darwin on Man: A Psychological Study of

\textsuperscript{6}John C. Greene, \textit{Science, Ideology and World View} (Berkeley: University of
California Press, 1981), 163. It must be noted that Greene here refers to some of the
writings of authors such as Julian Huxley, George Gaylord Simpson, C.H. Waddington,
E.O. Wilson, and Garrett Hardin as "the Bridgewater Treatises of the twentieth century"
(ibid.). One wonders if any of these authors, however, could consent to the prefatory
notice in the \textit{Treatises} mentioned above.
laden on the remoter shelves . . . in the darker recesses of our libraries," seven one wonders whether they deserve the condemnation of Gillispie as a "deadly series." two Considering the pedantic and monochrome nature of the treatises, perhaps Bowler's criticism is closer to the mark, when he states that the problem with the treatises, and their endless cataloguing, was that they did not produce "a sense of divine benevolence but sheer boredom in the reader." three Be that as it may, several of the Bridgewater authors are the leading accommodationist spokesmen of their day, and use the opportunity to address the theodicy issue. four

Having clarified the towering import of the Bridgewater Treatises, we can now turn to one of the chief authors, William Buckland, as a prominent, if not definitive, spokesman for accommodationism. It will be seen that the other figures chosen as representatives of accommodationism, namely John Pye Smith and Hugh Miller, reflect the mainstream views of the treatises in general, and Buckland in particular. five The order in which these thinkers are assessed is primarily chronological, using the publication dates of their main works in which they address deep-time serial catastrophism and the origins of natural evil.

one Gundry, 140, 151.
two Gillispie, 209.
three Bowler, 123.

those at least touching upon the theodicy issue, include Bell, 175-190; Roget, 2:331-333; and Prout, 341-3. For slightly more substantial treatments, in addition to Buckland, see Chalmers, 102-105, 112, 118 125, 128; and Kirby, 1:xvii, xxii, xl, xxx-xxxii, 9-11, 39, 42-43, 93; 2:525.

five Inclusion of figures in this chapter is not based primarily on volume of publishing, but on their recognition, response and clarity toward the issue of paleonatural evil, and its impact on the character of God. Other non-traditionalists who indicate having thought about theodical issues include James Hutton, Edward Hitchcock, and Robert Chambers. Post-Darwinian thinkers of merit who comment on the notion of paleonatural evil include Alfred Russel Wallace, John Stuart Mill, Thomas Huxley, George John Romanes, and Sir George Jackson Mivart.
William Buckland (1784-1856)

Biography and Publications

William Buckland was born in 1784 into a prominent home, and his larger family was imbued with many Anglican clerics. In his boyhood, Buckland is said to have expressed interest in the study of the contents of the rocks in his native town of Axminster, Devonshire.1 As a young student he formed a collection of fossils and sponges in chalk,2 and had interests in natural phenomena and the mineral kingdom for the rest of his life. In 1805 he graduated from Corpus Christi College, Oxford, where he took holy orders and was elected a fellow of Oxford.3 In addition to being a Reader in Geology at Oxford and a fellow of the Royal Society, and later becoming President of the Geological Society and Dean at Westminster, Buckland was able to produce about fifty works between 1817 and 1849. His published works are too voluminous to list here.4 The basic works which carry theodical import (after his recant of belief in the Flood) are Buckland's Bridgewater Treatise, and An Inquiry Whether the Sentence of Death Pronounced at the Fall of Man Included the Whole Animal Creation, or Was Restricted to the Human Race.5

In his mid-thirties Buckland offered his now-famous antediluvian interpretation of the hyena remains of some Yorkshire caves. This essentially catapulted him to the fore as

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2 Ibid.

3 Rupke, 7.

4 See ibid., 279-282, for a fuller listing.

5 These two works are hereafter cited as Geology and Mineralogy and An Inquiry.
"England's first great academic geologist." Succeeding John Kidd as the chair of mineralogy at Oxford, Buckland owned an enviable reputation as a popular lecturer of geology for the next thirty years, his lectures often filled to capacity. It has been said that his popularity was in part based on his "ability to amuse or shock an audience," complemented by a coarse sense of humor, which some disdained as "undignified buffoonery." Darwin did not hide his disdain for Buckland, stating that though he was "good humored and good-natured seemed . . . a vulgar and almost coarse man. He was incited more by a craving for notoriety, which sometimes made him act like a buffoon, than by a love of science." In a letter to Lyell, Darwin writes, "What a fool (though I must say a very amusing one) Buckland did make of himself." Be that as it may there is no denying that Buckland was one of the most popular geologists of his day, as indicated in the following statement to his wife by renowned paleontologist Sir Richard Owen:

How true is all that you say in the comparison of the poor Dean’s style of communicating knowledge with that of the best of us. His like will never be listened to again! Only those who have heard him can appreciate the loss. It was the most

1Stephen Jay Gould, Time’s Arrow, Time’s Cycle, 99.

2It is worth noting in passing that Charles Lyell had Buckland for a professor.

3Rupke, 7.

4Ibid. An example of such foolhardiness is cited by geologist Roderick Murchison, who describes one of Buckland’s lectures as follows: "The fun of one of the evenings was a lecture of Buckland’s. In that part of his discourse which exhibited ichnobot, or fossil footprints, the Doctor exhibited himself as a cock or hen on the edge of a muddy pond, making impression by lifting one leg after another. Many of the grave people thought our science was altered to buffoonery by an Oxford don" (Gundry, 149).

5Charles Darwin, quoted in Gould, Time’s Arrow, Time’s Cycle, 99.

6Darwin, The Correspondence of Charles Darwin, 4:151.
genial inspiration ever vouchsafed to a teacher of the Creator's doings of old.7 Regarding "the delicate matter" of addressing "territorial disputes between geologists and biblical scholars," Rupke believes that few people are better placed than Buckland for such a task.2 "He was a leading scientist; he occupied an ecclesiastical position of some weight; he was patronized by conservative politicians and church dignitaries."3 The fact that Buckland was a minister in the Church of England offers insight into how some notable Protestants in academia respond to the geology-generated theodical questions which arise regarding the "Creator's doings of old."

Time Frame for Creation

While no one considers the mature Buckland a biblical literalist, he initially gave credence to diluvial geology, as evidenced in his Vindiciae Geologicae,4 and Reliquiae Diluvianae,5 both of which indicate that at one time he took the Genesis narrative, more

1E.O. Gordon, The Life and Correspondence of William Buckland (London: John Murray, 1894), 126.

2Rupke, 203.

3Ibid.

4William Buckland, Vindiciae Geologicae; or the Connexion of Geology with Religion Explained (Oxford: University Press, 1820). Here, Buckland refers to "the grand fact of an universal deluge at no very remote period is proved on ground so decisive and incontrovertible, that, had we never heard of such an event from Scripture, or any other authority, Geology of itself must have called in the assistance of some such catastrophe, to explain the phenomena of diluvian action which are universally presented to us, and which are unintelligible without recourse to a deluge exerting its ravages at a period not more ancient than that announced in the Book of Genesis" (ibid., 23-24).

or less, at face value. This includes not just a belief in a global Flood, but also an
acceptance of a comparatively recent creation. Thus, it is not surprising that Millhauser
describes Buckland as "originally one of the Noachian fundamentalists of geology," who
later devoted "some of the energy of his maturer years to explaining away the diluvial
extravagances of his youth."¹

By the 1830s Buckland had drifted away from diluvial catastrophism. This shift was
so pronounced that he hardly mentions the Flood in his Bridgewater Treatise, opting instead
for a "comparatively tranquil inundation," where the rise and fall of the waters was "gradual,
and of short duration," and produced "relatively little change on the surface of the country
they overflowed."² All the while, however, Buckland contends that he does not violate "the
authority of Scripture."³ However, Buckland seems to elevate geological theory to a position
perhaps equal to that of Scripture, when reading his affirmation that with geology

we are enabled to extract from the archive of the interior of the earth, intelligible
records of former conditions of our planet, and to decipher documents, which were
a sealed book to all our predecessors in the attempt to illustrate subterranean history.
. . . Evidences like these make up a history of a high and ancient order, unfolding
records of the operations of the Almighty Author of the Universe, written by the

¹Millhauser, Just Before Darwin, 46.

²Buckland, Geology and Mineralogy, 95. Unless otherwise noted, references to
this work are from vol. 1. The idea of a tranquil Flood had already been suggested as
early as the 1820s, by Scotch zoologist, Rev. John Fleming. Since traditionalists hold to
a penal and catastrophic deluge, responses like that of James Mellor Brown to Buckland's
local Flood exegesis are not surprising. See Mellor Brown, Reflections. Certainly the
priority which Scripture accords this event, Brown argues, warrants more than the
"extremely cursory" discussion with which Buckland accords it (ibid., 29). Even worse in
Brown's view, is that Buckland's two meager allusions seem "calculated to disparage" the
Flood's gravamen and extent (ibid.). The theses of a local and tranquil flood, in Brown's
opinion, forcibly contradicts Scripture (ibid., 30-33). Cf. Gen 6:7, 17; and 7:19-23.

³Buckland, An Inquiry, vi.
Regarding these records entombed in the interior earth, Buckland believes they are recoverable "only by the labours of the Geologist, who in the petrified organic remains of former conditions of our Planet, deciphers documents of the Wisdom in which the world was created." In referring to geology as a sealed book, containing documents we need to decipher and written by the finger of God Himself, the reader is left to her own judgment as to how far Buckland takes these metaphors.

Buckland refers to those who "have long been accustomed to date the origin of the universe, as well as that of the human race, from an era of about six thousand years ago." To this class some apparent "doubts and difficulties" arise from reading the unsealed geological documents, and thus they are reluctant to modify "their present ideas of cosmogony." Thus, Buckland relays, "geology has shared the fate of other infant sciences, in being for a while considered hostile to revealed religion." He is convinced that "many sincere believers in Revelation" neglect, or even hold in contempt, the visible works of natural religion. In his view, this myopia comes from being "too little versed in

1Buckland, Geology and Mineralogy, 7-8.
2Ibid., 593.
3Cf. Exod 31:18.
4Buckland, Geology and Mineralogy, 8.
5Ibid., 8.
6Ibid., 8-9.
7Ibid., 9.
8Buckland, An Inquiry, 10.
biblical criticism"¹ and in geology. Both deficiencies, in Buckland's mind, lead to a woeful underestimation of the age of the earth.

Buckland’s Understanding and Affirmation of the Geologic Column and Its Fossiliferous Remains as Deep-Time Phenomena

In critiquing the traditionalist view, Buckland writes that some individuals attempt
to ascribe the formation of all the stratified rocks to the effects of the Mosaic Deluge; an opinion which is irreconcilable with the enormous thickness and almost infinite subdivisions of these strata, and with the numerous and regular succession which they contain of the remains of animals and vegetables, differing more and more widely from existing species, as the strata in which we find them are placed at greater depths.²

The mention of "regular succession" of animal remains that "differ more and more" opens an enticing door for an evolutionary interpretation, though Buckland does not defend transmutation.³ But from the quote above, it can be fairly inferred that he downplays a global Flood, which he sees as "irreconcilable" with the conventional interpretation of the column. He affirms:

The fact that a large proportion of these remains belong to extinct genera, and almost all of them to extinct species, that lived and multiplied and died on or near the spots where they are now found, shows that the strata in which they occur were deposited slowly

¹Ibid. Perhaps some traditionalists would benefit from thinking more critically, but it could be asked whether accommodationists might be versed too much in biblical criticism.

²Buckland, Geology and Mineralogy, 6.

³Later he writes that in the strata "we find abundant evidence in the presence of organic remains, in proof of the exercise of creative power, and wisdom, and goodness, attending the progress of life, through all its stages of advancement upon the surface of the globe" (ibid., 53). But if Buckland embraces the fixity of biblical kinds, it seems semantically misleading to talk of "stages of advancement" rising in the geologic strata. Elsewhere he alludes to "the gradually descending scale of animated beings," and "the great chain whereby all animated beings are held together in a series of near and gradual connexions" (ibid., 107, 114). Cf. ibid., 585, n. 2.
and gradually, during long periods of time, and at widely distant intervals. These extinct animals and vegetables could therefore have formed no part of the creation with which we are immediately connected.1

Accepting the deep-time rubrics of slow, gradual deposition over deep time "at widely distant intervals," Buckland must do two things. First, he must view countless animals and vegetables as extinct, and not contemporaneous to any part of the creation with which humanity is connected. Second, he must locate deep time in the Genesis narrative. He the latter by legitimizing the day-age and gap theories. He writes

that the Days of the Mosaic creation need not be understood to imply the same length of time which is now occupied by a single revolution of the globe; but successive periods, each of great extent . . . There is, I believe, no sound critical, or theological objection, to the interpretation of the word "day," as meaning a long period; but there will be no necessity for such extension, in order to reconcile the text of Genesis with physical appearances, if it can be shown that the time indicated by the phenomena of Geology2 may be found in the undefined interval, following the announcement of the first verse.3

Finding "great satisfaction" and precedence in Chalmers' gap theory, Buckland defends the idea that "millions of millions of years may have occupied the indefinite interval" between the first two verses of Genesis.4 Within this matrix, the clause tohu bohu "may be geologically considered as designating the wreck and ruins of a former world."5

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1Ibid., 16-17.

2Here Buckland approvingly footnotes Benjamin Silliman's contention that the opening verse of Genesis admits "of any extension backward in time" (ibid., 18).

3Ibid., 17-18.

4Ibid., 21. If by "millions of millions" Buckland means "millions times millions" (i.e., trillions), this indicates an allotment for deep time far deeper than any required by non-theistic geologists.

5Ibid., 126.
Buckland's Deep-Time Scale Expressed in Chart Form

Buckland depicts twenty-eight\(^1\) well-defined divisions of sedimentary deposits and eight varieties of unstratified rocks "to represent the order in which the successive series of stratified formations are piled on one another."\(^2\) Though he labels his reconstruction "imaginary," Buckland nonetheless believes it to reflect relatively accurately the actual state of stratified rocks,\(^3\) and that "the aggregate of all the European stratified series may be considered to be at least ten miles" thick, and evidence of a "long series of changes and revolutions."\(^4\) His sequencing of the strata (see table 5) shows his commitment to the accepted rubrics of deep time.

Reflections on the Organic Remains in the Geologic Column

The study of fossil remains, according to Buckland, provides "the great master key whereby we may unlock the secret history of the earth. They are documents containing the evidences of revolutions and catastrophes, long antecedent to the creation of the human race."\(^5\) The strongest evidence of deep-time catastrophes and revolutions, to Buckland, is shown by the extensive death portrayed in the column. Applicable to the

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\(^1\) Elsewhere Buckland refers to "30 kinds of sedimentary deposits" (ibid., 2:5, n. 1).

\(^2\) Ibid., 37.

\(^3\) Ibid., 2:1.

\(^4\) Ibid., 38, 42.

\(^5\) Ibid., 128.
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*Source: William Buckland, *Geology and Mineralogy Considered with Reference to Natural Theology* (London: William Pickering, 1836); 2; plate 1.*

then new geological Zeitgeist, Charles Raven describes the Buckland-like mind-set as seeing all of nature as "a charnel-house and its presiding goddess 'red in tooth and claw
with ravine."1 Buckland can be included in this description, for he believes that nature's best "secrets" are made evident from investigating the history of organic remains,2 from which it can be quickly concluded that huge portions of the column are composed of the remains of once-living bodies. In fact Buckland states that few realize that "the walls of our houses are sometimes composed of little else than comminuted shells, that were once the domicile of other animals, at the bottom of ancient seas and lakes."3 Buckland sees the fossil record as "abundantly charged" with the remains "of innumerable generations of organic beings,"4 noting that some fossil beds are nearly 1,000 feet thick,5 and contain "countless myriads" of animal exuviae.6 Buckland observes the irony that man's

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3Ibid., 12. Here Soldani's estimation is cited that a 1½ oz. stone from Casciana, Tuscany, contains 10,454 microscopic chambered shells (ibid., 117).
4Ibid., 117-118.
5Similar accumulations can be found in Sussex marble, Purbeck limestone, and certain clay beds of the Wealdon formation of Tilgate forest (ibid., 118-119). In the later formation are found megalosaurus, iguanodon, hylæosaurus, and plesiosaurus remains.
6Ibid., 119. Some nineteenth-century accommodationists think that while a flood plausibly accounts for surface diluvium deposits, a global deluge is mitigated against by the lack of proven examples of human fossils in the secondary strata. This is one of the main reasons for Adam Sedgwick's shift away from taking the Flood as a geologically significant event. See Adam Sedgwick, "Address to the Geological Society," *Philosophical Magazine*, n.s. 9, no. 52 (1831): 314-17. In 1820, a mixed deposit of animal and human fossils was discovered near Köstritz, Germany, which challenged this conviction. But Buckland denounced the site without ever having seen it, and his discussion of human fossils does not even mention the Köstritz find (*Geology and Mineralogy*, 1:103-106). Another find, according to Bugg, the "Guadaloupe fossil," contradicts the accommodationists/uniformitarian model while comporting with a Flood model, and that "we have a right to suppose it to be as genuine and as ancient a fossil as..."
sepulchers are "composed of the skeletons of millions of organized beings," and echoes Paley in affirming that these beings were "susceptible of enjoyment."\(^1\)

Cuvier, Buckland's respected geologic mentor, is also awed by the extent of deep time and sub-rational death, and sees the "wreck of animal life" during the immeasurable past as "so imposing, so terrible . . . forming almost the entire soil on which we tread."\(^2\) Buckland shares this bewilderment, and adds that our extensive plains and mountains as "great charnel-houses of preceding generations, in which the petrified exuviae of extinct races of animals and vegetables are piled into stupendous monuments of the operations of life and death, during almost immeasurable periods of past time."\(^3\) Earth's strata is "loaded with the exuviae of innumerable generations of organic beings, [which] afford strong proof of the lapse of long periods of time, wherein the animals from which they have been derived lived and multiplied and died."\(^4\)

The Idea of Revolutions and/or New Creations

Early in his career Buckland appealed to John Bird Sumner that no naturalist or any shell or bone in existence" (Scriptural Geology, 1:312). Bugg's principle reference was Charles König, "On a Fossil Human Skeleton from Guadaloupe," Philosophical Transactions 104 (1814): 107-120. See George Bugg, Scriptural Geology, 1:312. Ure's answer to the lacuna of human fossils is that the Flood permanently submerged the antediluvian abodes of man (New System, 472). See Mortenson, 230, n. 39.

\(^1\)Ure, New System, 430.

\(^2\)Ibid., 113.

\(^3\)Ibid., 112-113; quoted in Georges Cuvier, Rapport Historique sur le Progrès des Sciences Naturelles, 179. Cf. Lyell's quote in Buckland, Geology and Mineralogy, 18-119.

\(^4\)Buckland, Geology and Mineralogy, 116.

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theologian is "called upon to deny the possible existence of previous worlds, from the
wreck of which our globe was organized."¹ Later, he still refers "to the various stages of
change and revolution, affecting the strata which compose" the earth's surface.² Buckland
interprets this variety of disturbing geophysical forces as proofs of design.³ For him,
there is "certain evidence of a long series of changes and revolutions; affecting not only
the mineral condition of the nascent surface of the earth, but attended also by important
alterations in animal and vegetable life."⁴ Holding to some type of modified gap theory,
the mature Buckland defends the notion that the first verse of Genesis allows that "a long
series of operations and revolutions may have been going on; which, as they are wholly
unconnected with the history of the human race, are passed over in silence by the sacred
historian."⁵ He holds as more geologically probable that the Genesis Flood "was the last
of many geological revolutions," and that it was a "comparatively tranquil inundation."⁶

In Buckland's mind, to be noted below, far from slandering the Creator, the
manifold catastrophes engraved in the geologic column, and the countless organic
remains with which the strata are interspersed, on the contrary, provide evidence not only
of design, but also of goodness. Anticipating theodical objections, and in order to

¹Buckland, Vindiciae Geologicae, 26.
²Buckland, Geology and Mineralogy, 6.
³Ibid., 539.
⁴Ibid., 42.
⁵Ibid., 19.
⁶Ibid., 95.
demonstrate the compatibility of nascent geology with revealed religion, Buckland knows that he must address the origin of natural evil.

The Origin of Natural Evil

Three years after the publication of his Bridgewater Treatise, Buckland delivers his famous Oxford sermon, titled An Inquiry Whether the Sentence of Death Pronounced at the Fall of Man Included the Whole Animal Creation, or Was Restricted to the Human Race.1 Buckland's primary motivation in this sermon is to demonstrate "the unfounded nature of an opinion entertained by many persons, that death was inflicted on the entire animal creation, as a penal dispensation consequent upon the sin of the parents of the human race."2 According to Buckland, sincere believers (by which he means traditionalists) sense an antagonism between prefall sub-rational mortality and God's goodness. But in his judgment such a dichotomy is misplaced, with any incongruency being only apparent.3 Buckland reminds his readers that we should not be apprehensive of any discrepancy between the "Works of Creation"4 and the written Word; a principle on which traditionalists would energetically concur. The key difference is that while traditionalists see sin as ushering in natural evils, 

1Buckland, An Inquiry. This 31-page pamphlet is read most profitably in conjunction with chapter 13 of Buckland, Geology and Mineralogy, 1:129-134.


3Ibid., 8.

4Ibid. It may perhaps be unfair to read too much into his capitalization of "Works" here, but, along with the written "Word," this strongly infers that both are on an equal epistemological par with one another; the written Word and the "unwritten" Word being co-authoritative. It is common for twentieth-century accommodationists, who promote this same dual-revelation, to refer to Nature as God's "67th book." Cf. Hugh Ross, Creation and Time, 56 and passim.
Buckland personally opts for the standard accommodationist route that our present world, though "crowded with evidences of Death" and extinction,1 and the death of brutes, "is in no way connected with the moral misconduct of the human race."2 This clearly means that the curse predominately affected humanity. The curse's "pains and penalties . . . appear strictly and exclusively limited to the human race."3

Buckland claims that there is nothing in Scripture to warrant the opinion "that death was inflicted on the entire animal creation, as a penal dispensation."4 He notes that Rom 5:12 refers to death as passing upon all men, due to one man's sin. Commenting on a more formidable passage, Rom 8:22, Buckland contends that the "whole creation" (πᾶσα η κτίσις) would be better translated "the whole human race."5 This is because in the same context (9:19-23), κτίσις is used three other times to clearly refer to man: the "expectation of the creature" (τῆς κτίσεως); "the creature" (ἡ κτίσις); and "the creature itself" (αὐτή ἡ κτίσις).6

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1 Buckland, An Inquiry, 11.
2 Ibid.
3 Ibid., 15.

5 Interpreting this passage as isolating physical death to the human race, however, is not where the issue stops. Later accommodationists try to truncate the passage further so that "spiritual death," not physical death, was what Adam's race inherited. If true, this means that man was created mortal, meaning Adam would have died even if he had not sinned. This position was part of the heresy of Pelagius, which was condemned by the early Church. See ODCC, s.v. "Pelagius."

6 Buckland also uses Col 1:23 and Mark 16:15.
While Buckland concedes that Gen 3 indicates that the inanimate creation seems to be partially implicated in the curse,\textsuperscript{1} he emphasizes that "no mention whatsoever is made of any beast, excepting the serpent."\textsuperscript{2}

In the same year as the appearance of The Origin, William Gillespie makes an \textit{a fortiori} point, countering Buckland's interpretation of Rom 8:20-21. Gillespie's idea is one merely assumed by other traditionalists, but seldom articulated unambiguously, regarding what can be called a hierarchicalization of entities affected in the curse.

If, at the beginning [of Scripture], we have the account of the very soil, with so many at least of its vegetable products, cursed for man's sake, we have therein contained the subsumption, that, much more, were the lower animals, which are so much more allied to man than are any vegetables, included in the curse.\textsuperscript{3}

In other words, Gillespie is suggesting that if the plant kingdom, being so much more removed from man, experienced the curse, how much more so it would be expected that the sub-rational animate order (being closer to man) would taste more of the curse. Yet to Buckland, uniformitarianism and its destructive tenets are still in concord "with our rational conviction of the greatness and goodness of the Creator."\textsuperscript{4} If anyone "be tempted to ask, why is this universal system of life and death, renovation and destruction" in existence, Buckland responds that "we are parties too nearly and personally concerned to

\textsuperscript{1}"Cursed is the ground because of you. . . . Thorns and thistles it shall grow for you" (Gen 3:17b-18a). Cf. Tennyson's "thornless garden" ("Maud," part one, section xviii).

\textsuperscript{2}Buckland, \textit{An Inquiry}, 21.

\textsuperscript{3}Gillespie, \textit{The Theology of Geologists}, 15.

\textsuperscript{4}Buckland, \textit{An Inquiry}, 11.
be disinterested judges in such a question."

Buckland tries to show that the idea that death in the natural realm is a consequence of the fall of Man "has no foundation in Scripture."2 Such an interpretation, he avers, seems "inconsistent with many phenomena of the world around us," one "crowded with evidences of Death."3 The "dispensation of death,"4 this "inevitable termination of life,"5 in Buckland's words, is a "covenant from the beginning,"6 which applies to "all organic beings upon earth, man himself has no exemption."7 Not only is Buckland of the firm conviction that the death which permeates the "brute creation . . . is in no way connected with the moral misconduct of the human race,"8 and thus animal death is willed by God apart from human sin, but even natural phenomena such as fire, hail, and snow can be attributed to "the Will of the same Creator" who created the world.9 Thus, Buckland leaves no room for doubt that he sees natural evil as part of the Creator's original dispensation, and these are included in the divine affidavit that the whole creation (including sub-rational pain, death, and extinctions, and all habitat-destroying geophysical phenomena) is very good.

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1Ibid., 28.
2Ibid., 11.
3Ibid.
4Ibid., 17.
5Ibid., 25
6Ibid., 26.
7Ibid., 25.
8Ibid., 12
9Ibid., 9.
Regarding the "violent and disturbing forces"\(^1\) which permeate the inorganic realm, Buckland believes such geophysical disturbances to be divinely designed for the benefit of the "Vegetable and Animal kingdoms, especially to the condition of man."\(^2\) He notes that these upheavals are paralleled by "myriads of petrified Remains which are disclosed by the researches of Geology all tend to prove, that our Planet has been occupied in times preceding the Creation of the Human Race, by extinct species of Animals and vegetables."\(^3\)

According to Buckland, for example, the massive Jurassic fish graveyard of Torre d'Orlando (as with similar graveyards, Molte Bolca, et al.) is due to water contamination or a rapid change in water temperature.\(^4\) Buckland describes one such bone-bed as follows:

>The skeletons . . . are always entire, and so closely packed on another, that many individuals are often contained in a single block. . . . The thousands of specimens . . . must have died suddenly on this fatal spot, and have been speedily buried in the calcareous sediment . . . before decomposition of their soft parts had taken place.\(^5\)

Anticipating questions regarding pain elicited by the appearance of fishes having a "distorted attitude," Buckland says this has too often been misdiagnosed as indicating that the fish were "writhing in the agonies of death."\(^6\) He disagrees, crediting such examples

\(^1\)Buckland, *Geology and Mineralogy*, 1:vii.

\(^2\)Ibid.

\(^3\)Ibid., viii. In part, such adds to what Buckland calls "a chain of connected evidence," which amounts to a demonstration "of the continuous Being, and of many of the highest Attributes of the One Living and True God" (ibid.).

\(^4\)Ibid., 122-123.

\(^5\)Ibid., 123

\(^6\)Ibid., 125.
to an "unequal contraction of the muscular fibres." 7

Buckland’s Theodicy for the Paleonatural Evil Implied by a Deep-Time Geologic Column and Its Bearing on God’s Character and Attributes

In the light of Buckland’s understanding and interpretation of the fossiliferous geologic column described above, the history of sentient creation seems to be a "scene of protracted misery," 2 and a "mass of daily suffering." 3 Buckland suggests that this has been interpreted by some as a universal, deep-time "scene of perpetual warfare, and incessant carnage." 4 In light of the *Bridgewater Treatises*’ stated theme to highlight the Creator’s goodness, many questions arise. Do these discoveries trouble Buckland? In what manner do they contribute or detract from the glory of God? What is his theodical?

In view of these queries, several theodical responses are discernable in Buckland. First, he employs a theodical element common to accommodationists past and present, namely responding to sub-rational pain and suffering 5 by first attempting to decatastrophize fossil graveyards. This is done to counter any notion that the fossil record is indicative of divine judgment, and to promote the thesis that death and extinction are part of what an all-loving God has intentionally designed into His creation. Additionally,

1Ibid.

2Buckland, *Geology and Mineralogy*, 130.

3Ibid., 131.

4Ibid.

5Traditionalists might ask: "What rationale do natural theologians offer for magnifying nature’s teleology, while simultaneously ignoring or under-assessing apparent dysteleologies?" Responding that these are only apparent or temporary begs the question, and leaves the sticky dilemma of demonstrating why all alleged teleological phenomena cannot be similarly dismissed.
Buckland suggests that the writhing and agony suggested by the orientation of some fossils is only apparent.\(^1\) These themes of localized catastrophism and merely apparent suffering regarding sub-rational pain continue to be popular to the present day in accommodationist circles.

Second, Buckland applies a notable utilitarian facet in his theodicy. In a section titled, "Aggregate of Animal Enjoyment increased, and that of Pain diminished, by the existence of Carnivorous Races," he refers to "the economy of Nature," and an "enlarged view . . . [which] resolves each apparent case of individual evil, into an example of subserviency to universal good."\(^2\) Such "aggregate amount of animal enjoyment" is beneficial, if not symbiotic, to carnivores and herbivores.\(^3\) While this utilitarian arrangement affirms "the greatest possible amount of animal enjoyment to the greatest number of individuals,"\(^4\) it begs the question in assuming that the Creator is satisfied merely with the greater aggregate amount of enjoyment, serial mortality. It would seem obligatory of the true believer to defend this, once she accepts the validity of deep-time theory. This greater good hypothesis allows any amount of natural evil so long as it is superseded by the greater good, and seems just as precarious to God's goodness as a hedonic calculus,\(^5\) hinging in large measure on how one defines good and evil.

A third element builds on this notion of what is called "the greater good." Buckland

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\(^1\) Cf. Buckland's "overlay" explanation for the celebrated *Blochius longirostris* fossil of one fish seemingly eating another (ibid., 123), and Ure, who has another view (*New System*, 142-143).

\(^2\) Buckland, *Geology and Mineralogy*, 131-132.

\(^3\) Ibid., 132.

\(^4\) Ibid., 293.

notes that although many animals have their allotted share of life cut "short, it is usually a period of uninterrupted gratification; whilst the momentary pain of sudden and unexpected death is an evil infinitely small, in comparison with the enjoyments of which it is the termination."¹ On balance, then, a creature's long life is a good offsetting the infinitely small evil of a sudden, brief, and perhaps painful² termination of its life. In addition, Buckland writes that while nature's economy "may seem" permeated with "incessant carnage," the notion of "subserviency to universal good"³ effectively nullifies any "individual evil."⁴ His use of the phrases "may seem" and "each apparent case of individual evil" is significant since they imply another notable aspect of Buckland's theodicy; namely, dismissing natural evils, no matter how intense, as merely apparent due to our finite perspective.

Fourth, Buckland adds an euthanasic facet to his theodicy. He believes the office of carnivores is "to effect the destruction of life,"⁵ and evinces no theodical discomfort in referring to "the law of universal mortality [as] being the established condition, on which it has pleased the Creator to give . . . to every creature on earth."⁶ Thus, Buckland claims that being predated upon is a universal "dispensation of kindness to make the end of life to each individual as easy as possible."⁷ Hence, the divine "dispensations of sudden

¹Buckland, Geology and Mineralogy, 131.
²In contrast to some accommodationists who deny any sentiency in the sub-rational order, Buckland admits that the animal kingdom includes sentient creatures (ibid.).
³Ibid., 132.
⁴Ibid., 131-132.
⁵Ibid., 130.
⁶Ibid.
⁷Ibid.
destruction"¹ which speedily relieve the feeble from suffering are to be expected of a good God. Despite what at first sight seems "inconsistent with the dispensations of a creation founded in benevolence," Buckland surmises from the anatomies of ancient creatures that they were equipped with organs clearly designed "for the purpose of capturing and killing their prey."² Differing from the traditionalist view that all creatures were initially created herbivorous, Buckland holds, as noted above, that carnivores were present long prior to the Fall. God's appointment, then, "of death by the agency of carnivora" is a "dispensation of benevolence . . . [to abridge] the misery of disease, and accidental injuries, and lingering decay."³ Thus, while "we deprecate the sudden termination of our mortal life," the termination of inferior animals "is obviously the most desirable."⁴

One can discern, fifth, a Malthusian strain in Buckland's theodicy. The population principles of Thomas Malthus were published in 1797, and thus predate Buckland by about 40 years. While principally targeting the British poor, Malthus portends that any population (animal or human) will eventually tend to outstrip available food resources.⁵ Such thinking can hardly be absent from Buckland's mind, when he writes that carnivory

¹Ibid., 131.
²Ibid., 129.
³Ibid., 133.
⁴Ibid., 130.
⁵Malthus, the father of social science, refers to "preventative checks" and "positive checks." By these he means limiting the birth rate, and eliminating or shortening lives. These can be accomplished by contraception, sterilization, abortion, and euthanasia. See his An Essay on the Principle of Population as it Affects the Future Improvement of Society [1798] (London: Reeves and Turner, 1878), especially 411-412; and 430-31. To nineteenth-century traditionalists, the profligacy and suffering inherent in the Malthusian model seem to be in direct conflict with traditional notions of the Creator's providence and omnibenevolence.
controls excessive increase of some prey, and that

without this salutary check, each species would soon multiply to an extent, exceeding in fatal degree their supply of food, and the whole class of herbivora would ever be so nearly on the verge of starvation, that multitudes would daily be consigned to lingering and painful death by famine.¹

This statement indicates that some realms of the natural order require carnivores, or what Buckland calls the "police of nature," to provide a "restraint upon excessive increase of numbers."² Thus, the "evils [of predation] are superseded by the establishment of a controlling Power in the carnivora."³

Lastly, Buckland appeals to "the providential contemplation of the Creator" in allowing the manifest "violent Perturbations" which inundate the history of our globe.⁴ The "Disturbances" which "have taken place at periods long antecedent to the creation of our species" were necessary to prepare the way for "the last, and most perfect creatures" God was to place on the earth.⁵ No matter what amount of aboriginal, life-extinguishing geophysical perturbations took place, or any natural evils before the creation of man, such is permissible as necessary preparation to render our planet "a fit and convenient habitation for Mankind."⁶ Thus Buckland can close his work by saying that while some are alarmed at "the physical history of our globe, in which some have seen only Waste, Disorder, and Confusion," on the

¹Buckland, Geology and Mineralogy, 132.
²Ibid., 133.
³Ibid., 132.
⁴Ibid., 555.
⁵Ibid.
⁶Ibid., 581.
contrary, he sees "endless examples of Economy, and Order, and Design."¹

In sum, six factors emerge as Buckland's theodicy for paleonatural evil. They include his attempt to de-catastrophize Fossil-Lagerstätten, and the suggestion that any writhing and agony suggested by fossil orientations is only apparent. He also appeals to utilitarian, euthanasic, Malthusian/superfecundity, "greater good," and providence elements. Contrary to the notion that paleonatural evil negatively impacts God's character, Buckland establishes a philosophical construct where virtually any level of natural evil can be renuanced to reflect divine goodness. We have discovered that Buckland does not avoid the issue of paleonatural evil and the character of God. Rather we have found how Buckland labors to show how paleonatural evil does not adversely affect God's goodness. This investigation turns now to Buckland's contemporary, John Pye Smith, to discover how he addresses paleonatural evil.

John Pye Smith (1774-1851)

Biography and Publications

The Reverend John Pye Smith grew up the son of a bookseller, and picked up considerable knowledge as a lad "by desultory reading in his father's shop."² This compensated for his lack of regular education in his early years. Choosing not to continue the family business, he pursued four years of study at the Rotherham Academy. Upon completion of his studies, Smith was appointed as "resident tutor at Homerton College, where, besides the litteræ humaniores, he lectured on Hebrew, the Greek

¹Ibid., 595.

Testament, logic, rhetoric, mathematics, and the more modern branches of science."¹ A well-known evangelical congregationalist, he contributed regularly for almost fifty years to the Eclectic Review, and was an energetic defender of Trinitarianism.

Though Smith himself was not a professional geologist, he became a key player in the geology-theology dialogue, garnering much attention with his work On the Relation Between the Holy Scriptures and Some Parts of Geological Science.² It has been said that Smith "did more than any other theologian to bring exegesis into harmony with geology."³ This is somewhat ironic, since he was convinced that persons were only qualified to discuss geological questions if they possessed "considerable acquaintance with the principles of chemistry, electricity, mineralogy, zoology, conchology,⁴ comparative anatomy, and even of the sublimest mathematics,"⁵ areas in which he evidenced no advanced proficiency.

Smith believes that geology "has claims upon the regard of all cultivated and pious minds."⁶ This discipline "leads us to study that which God has made our earthly abode, in

¹DNB, "John Pye Smith."


³Millhauser, Just Before Darwin, 49.

⁴I.e., the study of shells and shell-fish.

⁵John Pye Smith, "Suggestions on the Science of Geology, in Answer to the Question of T.K.," Congregational Magazine, n.s. 1 (1837): 774-76. One wonders if any geologist, past or present, could live up to these requisites. In another context, James Mellor Brown (1796-1867), clergyman, Scriptural geologist, and "pamphleteer," infers that one could keep adding such disciplines "ad infinitum" (19). For Smith's charge that Brown exaggerates these prerequisites, see Smith, On the Relation, 7, note. However, a salient point to bear in mind, as Gillispie reminds us, is that in Smith's time "geology was still not so technical that one need specialize in it in order to master the material well enough to write a good textbook" (89).
its present state, filled with monuments of past conditions, and presages . . . of the future."¹

He notes that certain "echos of ignorance" are floating around, and it behooves Christians to be aware that a "vague idea has obtained circulation," namely "that certain geological doctrines are at variance with the Holy Scriptures."² Smith portrays Scriptural geologists as well-intentioned detractors, who display a shameful lack of knowledge of the fundamental facts they presume to write about. Hence, they have dishonoured the literature of this country, by 'Mosaic Geology,' 'Scripture Geology,' and other works of cosmogony with kindred titles; wherein they have overlooked the aim and end of revelation, tortured the book of life out of its proper meaning, and wantonly contrived to bring about a collision between natural phenomena and the word of God.——They have committed the folly and the SIN, of dogmatizing on matters which they have not personally examined, and, at the utmost, know only at second-hand; of pretending to teach mankind on points where they themselves are uninstructed.³

It is against the backdrop of such "false philosophy," as he calls it, that one finds the primary motivation for Smith writing On the Relation.

Time Frame for Creation

As with other prominent accommodationists, Smith knew that he must establish a concord between deep time and the common (i.e., natural) reading of Genesis. Given his idea of inspiration, however, his views were not likely to please strict concordists. He believes, for example, that issues in Scripture dealing with things such as "genealogical,

⁶Smith, On the Relation, 1.

¹Ibid.

²Ibid., 6. Cf. 22f.

³Ibid., 23. Such a statement is a sweeping and misleading generalization since Fairholme, Murray, Rhind, and Young were well versed in geological studies.
topographical, numerical, civil, military, fragments of antiquity, domestic or national”⁴ are not necessarily inspired, or at least they do not have "the qualities of sanctity and inspiration" which belonged "only to the religious and theological element diffused through the Old Testament."² Despite his form/function dichotomy, his attempts at accommodation were warmly received by the likes of William Whewell, John Herschel, Adam Sedgwick, and Baden Powell,³ though his hermeneutic has been characterized elsewhere as an "odd mixture of originality and desperate textual literalness."⁴ Whatever the case, Smith’s exegesis would become increasingly typical among accommodationists.

For Smith, geology shows that earth has endured "vast physical revolutions . . . each of which may have required a thousand ages."⁵ This means that geology provides "incontrovertible evidence . . . that there were former conditions of our planet, separated from each other by vast intervals of time."⁶ Asserting that this interval has nothing to do with "the moral history of our race," Smith claims it is passed over in silence by Scripture.⁷ Thus, he asks: "Between the first creation of the earth and the day in which it pleased God to place man upon it, who shall dare to define the interval?"⁸

¹Smith, "Suggestions on the Science of Geology, in Answer to the Question of T.K.,” 765-76.
²Ibid.
³DNB, "John Pye Smith."
⁴Millhauser, Just Before Darwin, 49.
⁵Smith, On the Relation, 219-220.
⁶Ibid., 22.
⁷Ibid.
⁸Ibid.
Scriptural geologists, Smith says for them to "pretend that there is any proof in Holy Writ, that God created [all things] six thousand years ago," is to substitute mere personal "interpretation in the place of the inspired word."2

Perhaps most original in Smith's hermeneutic is the surmisal that if the Church could entertain the notion of a localized deluge, why not consider the same for the six creative days?; i.e. why not a localized creation?3 In the same manner that some restrict the Flood to the Tigris-Euphrates valley, could not the creation narrative refer solely to Eden. He hypothesizes that the six creative days of Genesis refer only to a portion of earth lying between the Caucasian ridge, the Caspian Sea, and Tartary, on the north, the Persian and Indian seas on the South, and the high mountain ridges which run at considerable distances, on the eastern and the western flank [sic]. I venture to think that man, as first created, and for many ages afterwards, did not extend his race beyond these limits; and therefore [had no awareness of these remote regions in which we] have ocular demonstration that animal and vegetable creatures had existed, to a vast amount, uninterruptedly, through periods past, of indescribable duration.4

By thus entertaining such a phenomenological hermeneutic,5 in Smith's view, both the creation and the Flood can be truncated to reflect the limited perspective of the ancient Jewish narrator, both events representing nothing more than "localized convulsions." This position necessarily entails a "reorganization" of a previous world, where some portion of Asia was laid waste and flooded, restored, and populated as Eden, all within six literal days six

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1Ibid., 159.
2Ibid., 160. Cf. 189-193, 221, and 240.
4Ibid., 190.
5The phenomenological hermeneutic alleges that the biblical authors describe phenomena from an existential, limited perspective; describing things as they appear to the naked eye rather than their real nature. E.g. Moses' account of a world-destroying Flood is not to be taken literally, but as a deluge which destroyed the region in which he or Noah lived; i.e., the world as understood from their limited vantage point, or the finite purview of a pre-enlightened audience.
thousand years ago.\textsuperscript{1} Thus Smith is able to posit deep time and a literal six-day creation.

Smith's Understanding and Affirmation of the Geologic Column and Its Fossiliferous Remains as Deep-Time Phenomena

Smith claims that "there is scarcely a spot on the earth's surface which has not been many times in succession the bottom of a sea, and a portion of dry land."\textsuperscript{2} His references to "period of time to us immeasurable,"\textsuperscript{3} "indescribable periods of time,"\textsuperscript{4} and "past periods of immeasurable duration,"\textsuperscript{5} indicate his commitment to deep time. Smith recognizes the untold sub-human mass mortality revealed in the geologic strata as on "the most magnificent scale," and which occupies "the recesses of an unfathomable antiquity."\textsuperscript{6} This antiquity is depicted in his "synoptic table of stratified formation," as shown in table 6.

The Origin of Natural Evil, Principally Death

In numerous places, Smith addresses the issue of sub-human pain and death before the Fall; an issue that he admits is "a difficulty of great moment,"\textsuperscript{7} which appears to some of his contemporaries as a problem that is "not only formidable but insuperable."\textsuperscript{8}

\textsuperscript{1}The hypothesis that the six days of creation may be understood as indefinite periods of time is taken by Smith to be untenable (On the Relation, 139 f.).

\textsuperscript{2}Ibid., 53.

\textsuperscript{3}Ibid., 38.

\textsuperscript{4}Ibid., 45.

\textsuperscript{5}Ibid., 68.

\textsuperscript{6}Ibid., 67.

\textsuperscript{7}Ibid., 65.

\textsuperscript{8}Ibid., 196.
In part, this is because geologic theory suggests untold sub-human death on "the most magnificent scale," and occupies, as indicated above, "the recesses of an unfathomable antiquity."\(^1\) Regarding the question of the origin of death, Smith states that the present condition of the natural order should cause us to see that "production and growth . . . have their correlates in decay and dissolution."\(^2\) For Smith, death is not intrusive to the created

\(^{1}\)Ibid. Descriptions such as "unfathomable antiquity" and "past periods of immeasurable duration" (ibid., 68) are the semantic equivalent of McPhee's "deep time."

\(^{2}\)Ibid., 197. Smith apparently believes that even before the Fall man was not exempt from the law of progress towards dissolution. Had there been no transgression,
order, but it is necessary, as made evident when he states that

   everything that has life, vegetable and animal, is formed upon a plan which renders
dearth necessary, or something equivalent . . . . The mysterious principle of their life is
universally maintained by the agency of death. From dead organic matter, the living
structure derives its necessary supplies. . . . The processes of nutrition, assimilation,
growth, exhaustion, and reparation, hold on their irresistible course, to decay and
dissolution; in another word, to death.¹

Smith holds that to deny this last clause is to abolish "the very essential condition of
organized existence." According to Smith, "when a certain point was reached, separation,
changed combination, and dissolution of the molecules, must take place; the rudiment
and sure introducer of death."²

In response to the notion of a pre-Fall order that could be sustained exclusively on a
vegetarian diet,³ Smith believes this idea can be dispelled by merely thinking through one's
next sip of water, since,

   in every leaf or root or fruit which they feed upon, and in every drop of water which

Adam "and his posterity would, after faithfully sustaining an individual probation, have
passed through a change without dying, and have been exalted to a more perfect state of
existence" (ibid., 199). The traditionalist and skeptic might both wonder why God would
not create this perfect state of existence from the very outset. And if it could be done for
man, why not for all creation?

¹Ibid., 66.

²Ibid., 198.

³It is virtually impossible for Smith to fathom that animals were not as carnivorous
before the Fall as they are now. See Mellor Brown, 47. Mellor Brown, however, responds
that the Author of the laws of nature can alter any law he pleased, and we have the authority
of Scripture that He has done so, "not only in individual cases . . . but on the largest scale, and
with permanent results" (ibid., 47-48). Examples include the conversion of man from a
herbivorous diet to a carnivorous one, and the post-lapsarian advent of thorns and thistles. If
the eschaton holds promise of the divine transformation of the carnivorous nature to a
herbivorous state (cf. Isa 11:6-9; 35:9; and 65:25), then what prevents us from entertaining the
mere possibility that there has been a previous time, when this same divine power
transformed the herbivorous into the carnivorous? (ibid., 48-49).
they drink, they put to death myriads of living creatures, whose bodies are as 'curiously
and wonderfully made' as our own . . . and enjoyed their mode and period of
existence as really and effectively under the bountiful care of Him who is good to all,
and whose tender mercies are over all his works,' as the stately elephant, the majestic
horse, or man, the earthly lord of all.\footnote{Smith's use of Ps 139 appears to be eisegetical. Scriptural geologists would agree
that paramecia are wonderfully made. Aside from arguing over whether paramecia have a
womb or not, traditionalists would doubt whether God would extend the same tenderness He
affords those beings stamped with the \textit{imago Dei}, saying to infusoria: "While you were still
in the womb I knew you."}

Smith believes that carnivory, "in a thousand instances, is the immediate cause of
inestimable benefits to man."\footnote{While traditionalists are often accused of committing the pathetic fallacy,
accommodationists are just as capable, as Smith does here, of doing likewise when it suits
their purpose.} Clearly then, for Smith, carnivory and death have always
been intended by the Creator, and thus cannot be the result of the Fall. He states that
"through past periods of immeasurable duration," demonstrated by geology, predation has
"been the will of the All-wise Creator," who designed the created order so "that life and
death should minister to each other throughout the whole extent of the animal tribes." To
Smith, such a position is "inscribed" in the geologic record, and "cannot be mistaken."\footnote{Smith, \textit{On the Relation}, 66-67.}

\textbf{Smith's Theodicy for the Paleonatural Evil Implied
by a Deep-Time Geologic Column and Its Bearing
on God's Character and Attributes}

As detailed above, Smith characterizes the geologic record as being packed with
deep-time animal and vegetable remains, and is well aware that for his view to be

\footnote{Ibid., 68.}
accepted in the Church he has to address directly the issue of prelapsarian sub-human pain and death. He suggests seven discernable responses to paleonatural evil, to which we now cast our attention.¹

First, Smith sees the divine exhortation to "Be fruitful and multiply"² as implying that death is a pre-Fall necessity, and thus intended by a good God. For Smith this death does not mean merely "the preservation of species, but a succession of individuals; which would necessarily imply a departure of precedent individuals," i.e., death.³ He believes, as noted above, that "every thing that has life, vegetable and animal, is formed upon a plan which renders death necessary," in the original plan of the Creator. Thus, we see Smith's theodicy for death. But recalling our perusal of Luther, Calvin, and Wesley above, and extrapolating to the best inference of their respective theodicies, it seems unlikely that they would agree with Smith that death is necessary in the plan of the Creator.

Second, like Buckland, Smith employs a Malthusian argument. He states that if animated beings were allowed to procreate and increase

without the departure of the preceding generation, they would, at no immense distance of time, go beyond the provision of nutritive support, and the limits of appropriate habitation: the land, the air, and the waters, would be filled; food would fail, and death with aggravated suffering would be the infallible consequence. This terrible consummation would the more speedily ensue, as, by the supposition made, the only means of nutrition would lie in vegetable matter.⁴

Thus, the above words of Smith indicate that death is necessary to keep animal populations

¹These views will be assessed in the next chapter.

²Gen 1:22.

³Smith, On the Relation, 197.

⁴Ibid., 198.
in check, and as a benevolent gesture on God's part to diminish aggravated suffering.

Third, if death is natural and necessary, then a corollary inference is that Smith, in concord with other eminent accommodationists, holds that death (at least in the sub-human realm) and species extinction are divine ordinances, and thus that death bears no causal link with an Edenic curse. This inference is supported by Smith's dismissal of Milton's portrayal of the causal link between an Edenic curse and death. Invoking the pathos of Milton as representative of the traditionalist position that sin ushers in death, Smith highlights the very position which he decries as contrary to the evidence.

Of man's first disobedience, and the fruit
O that forbidden tree, whose mortal taste
Brought DEATH into the world, with all our woe;
Sing, heavenly muse.¹

Smith responds that such Miltonic sentiment,² though very natural, can be dispelled with a little "acquaintance with the natural history of the animal tribes."³ Yet Smith is fair enough to admit that the main reason traditionalists deplore any hint of paleonatural suffering and death is not some mere squeamish aversion to nature's redness. Rather, he correctly pinpoints that a main reason people in his day are repulsed by deep-time death as an "insuperable problem" is their Miltonian understanding of Scripture.⁴ To people with a Miltonian bent, in Smith's mind, a natural reading of Rom 5:12 and 8:20-22

¹Ibid., 66. Smith expects his readers to know this quote from the opening lines of Paradise Lost, since he merely credits "our great poet." Smith omits two lines from Milton.

²Labeling traditionalists as tenderhearted or 'sentimental theists,' as inferred by Smith, will become increasingly common. Cf. similar reactions to Tennyson's "In Memoriam."

³Smith, On the Relation, 66.

⁴Ibid.
appears to sustain traditionalist convictions. But Smith believes that the hard data of geology serve as a helpful corrective to such overly literal, if not sentimentalized, exegesis. The alleged death-free prelapsarian environment posited by these literalists is a mere inference that should be categorically excluded as a live option when exposed to the "light which undeniable [geological] facts afford."

Fourth, Smith observes that "by far the larger portion of the animal creation is formed, in every part of its anatomy, internal and external, for living upon animal food; and cannot live upon any another." The anatomical design, he writes, "of the larger part of animal species presents demonstration that they were created to live upon food." To posit an exclusively vegetarian creation would cause every physiologist "to smile at this monstrous absurdity." Take, for example, the aggregate parts of many organized beings, which give every appearance of being designed for predation. Smith quotes David Ansted, who writes,

Thus, if the stomach of an animal is so organized as only to digest fresh animal food, its jaws must also be so contrived as to devour such prey; its claws, to seize and tear it; its teeth, to cut and divide it; the whole structure of its locomotive

\[\text{1Ibid.}\]
\[\text{2Ibid.}\]
\[\text{3Ibid., 67. Perhaps Smith extrapolates too much here. To say that animals cannot subsist by any other means than carnivory may be begging the question since this amounts to merely asserting the very thing to be proved. Perhaps it is not too strong to claim that we even have here a non sequitur, since it does not follow ipso facto that an Edenic sip of water was the carnivorous equivalent of a pack of lions devouring an infant Thompson gazelle. Further, when a microbe "dies," is this death in the biblical sense; and is there sentience at this level?}\]
\[\text{4Ibid., 199.}\]
\[\text{5Ibid.}\]
organs, to pursue and obtain it; its organs of sense, to perceive it from afar; and nature must even have placed in its brain the necessary instinct to enable it to conceal itself and to bring its victim within its toils.¹

Such a citation, in Smith’s mind, applies to “every order of corporeal animated creatures [in the Creator’s prelapsarian order] and is demonstrated in the structure and habits of every species.”² This means that Smith’s emphasis on this point is to infer that, within a theistic context, deep-time biological predatory apparatuses ipso facto indicate divine approval, if not an intentional design by the Creator.

Fifth, Smith assumes that animal death and plant death are comparable. He admits that the “general opinion has been that, before our first parents fell from innocence and happiness, death and its harbingers had no place in the inferior animal creation.”³ In response, however, Smith charges traditionalists for being inconsistent in not also affirming “that the vegetable kingdom was also preserved from decay, withering and dying.”⁴ He writes that probably no one has defended this because it would lead to “manifest absurdities.”⁵ Here he implies that there are some traditionalist thinkers, given their belief that prior to the Fall there was no death or its harbingers among the inferior animal creation, who should also be logically obliged to also hold that no blade of grass could wither prior to the Fall. While there

¹Ibid. Smith quotes here from David Ansted, Geology, Introductory, Descriptive, and Practical (London: Van Voorst, 1844), 74.

²Smith, On the Relation, 199.

³Ibid., 197.

⁴Ibid. Smith seems to agree with the idea that plants have “some kind of sensitiveness.”

⁵Ibid.
is no difficulty in finding statements from traditionalist literature about some levels of the animal kingdom not originally being created to perish, the present author finds no defense of never-dying plants stated in the early nineteenth-century traditionalists.\(^1\) The manifest absurdities appear to be only in Smith's mind, and appear to be used as a wedge to register his contention that since the biblical Creator built death into the vegetable realm, why could He have not done it also for the animal kingdom. The reason he attempts to align these two "types" of death appears solely motivated to portray the traditionalists' position as absurd. However, this ploy of affirming animal death and plant death as roughly equivalent will continue into the next century.\(^2\)

\(^1\)If by "inferior animal creation" Smith includes infusoria and the like, the onus is upon him to cite at least one source that makes such a claim. If he cannot, then he is merely begging the question and erecting a straw man. The traditionalist also should ask whether the equivocation of microbic death with vertebrate death is a fair one? In several years of research, the present author has not come across one traditionalist, past or present, who defends the view that there was no prelapsarian vegetable decay or withering of plants, strongly suggesting that this is a straw man. Even if such a thinker could be located, the deafening silence of established traditionalists on this issue would show that this is not a mainstream option.

\(^2\)If the Bible nowhere refers to plants as living things, Smith, and other accommodationists, perhaps beg the question when equivocating plant death with animal death. Equivocation on plant "death" (with nephesh death) continues to be raised by modern-day accommodationists (see Stoner, 48-49; Lyle Francisco, The Weight of Evidence [Orange, CA: Promise Publishing, 1998], 272; and Hugh Ross, Creation and Time, 63). Ross believes that "plants suffer when they are eaten. They experience bleeding, bruising, scarring, and death." He then asks: "Why is the suffering of plants acceptable and not that of animals?" (ibid., cf. Ross, Beyond the Cosmos: What Recent Discoveries in Astronomy and Physica Reveal about the Nature of God [Colorado Springs, CO: NavPress, 1996], 119; and idem, The Genesis Question: Scientific Advances and the Accuracy of Genesis [Colorado Springs, CO: NavPress, 1998], 99-100). Colin Groves questions God's goodness, for having destroyed "innocent plants" (The Skeptic [19:2], 45). To refer to botanical suffering and/or innocence is to raise the pathetic fallacy to a new level. But even some with a more traditionalist outlook, like Wayne Grudem, will contend that in Eden there "was no doubt death in the plant world" (Systematic Theology [Grand Rapids: Zondervan, 1994], 293).
Sixth, and closely related to the previous point, Smith's theodicy places a high premium on microscopic death. For example, he calculates that a one-tenth-inch cubed piece of Tripoli\(^1\) polishing stone entombs the remains of about 1.5 billion "individuals."\(^2\) While traditionalists agree that the fossil record's most arresting characteristic is death, they might demur whether it is fair to use a chip of marble as the conceptual, if not ontological, equivalent of the Karoo formation.\(^3\)

Additional analysis of Smith's theodical use of infusoria\(^4\) might lead to some

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\(^1\)Recall Buckland's discussion above regarding countless myriads of exuviae with which the fossil record is "abundantly charged" (Geology and Mineralogy, 118).

\(^2\)The use of the word "individuals" here by Smith is just as emotive as his numerics. Are we to say that these dead individuals are "corpses"? Were these "sentient" beings who, as Smith described in the previous paragraph, enjoyed the brilliance of a summer day? Such rhetoric is prone to the charge of over-sentimentalization which was to soon characterize Tennyson's work, and the later charge of over-anthropocentricity to be directed at traditionalists.

\(^3\)This area, cited in chapter 3, allegedly contains billions of vertebrate remains.

\(^4\)I.e., microscopic organisms. In this connection, one of Tennyson's friends records an anecdote that he shared with her, about a "Brahmin destroying a microscope because it showed him animals killing each other in a drop of water . . . as if we could destroy facts by refusing to see them" (quoted in Stevenson, 60). Cf. the variation on this story, in Smith, On the Relation, 23. Later, upon viewing animalcula through a microscope, Tennyson said: "Strange that these wonders should draw some men to God and repel others" (Hallam Tennyson, A Memoir, 1:102). Annie Dillard, reflecting upon the "milky clouds" of a million million larvae of the rock barnacle, asks: "Can I fancy that a million million [human] infants are more real?" (166). Mattill describes every blade or grass and every drop of water as "a battle ground in which living organisms pursue, capture, kill and eat one another" (32). Robert Ingersoll, it will be remembered, had a similar description: "Life feeding on life with ravenous, merciless hunger-- every leaf a battlefield--war everywhere" (The Letters of Robert G. Ingersoll, ed. Eva Ingersoll Wakefield [New York: Philosophical Library, 1951], 660). William J. Tinkle may be mixing apples and oranges, in writing that since "every seed contains an embryo plant, what multitudes of lives are snuffed out by a grain-eating animal! . . . The wren is as much a bird of prey as the eagle" ("Why God Called His Creation Good," JASA 2
clarifying questions, given Smith's desire for the Church to move beyond superficial thinking.

In what meaningful sense is there a difference between ingesting a million micro-organisms on the one hand, and aeons of wholesale prelapsarian extinctions and sub-human sufferings on the other hand, suggested by geological theory of his day?1 Contemporary scholar Colin Russell asks whether there is

any fundamental difference between the wholesale extinction of species in evolution and the massive slaughter of animals in the world today? . . . All of us drink natural water, a glassful of which contains millions of living creatures (micro-organisms) to which we never give a thought. Even vegetarians do this, apparently unaware of the carnage they are perpetuating.2

[December 1950]: 21). Edward Hitchcock made a similar point, stating that it is imprudent to suppose that carnivorousness is a post-diluvial phenomenon, since prior to the Fall herbivores must have "destroyed a multitude of minute insects, of which several species inhabit almost every species of plant. Much more would it have been, to avoid destroying millions of animalcula, which abound in many of the fluids which animals drink, and even in the air which we breathe. . . . [Death] appears to be a universal law of organic being, as it exists on earth . . . [and] could not be excluded from the world, without an entire change in the constitution and course of nature" (Edward Hitchcock, Elementary Geology [Amherst, NY: J.S. & C. Adams, 1840], 274).

1This could also be asked of present geologist, like Keith Miller, who writes that "death is woven into the very fabric of creation. . . . Nearly all [oceanic] macroscopic organisms are carnivores. . . . Death is essential for the continuation of life" ("Theological Implications of an Evolving Creation," 156-157).

2Colin Russell to author, July 16, 1996. Whether such designates as carnivory, or even cannibalism, and carnage legitimately apply to the microscopic world are questions for future research. At the moment it is instructive to bear in mind that this is a common example invoked by past and present non-traditionalists to both soften the harshness of a prelapsarian natural order "red in tooth and claw," and show that similar Tennysonian "carnage" is impossible to avoid in the present. Dobzhansky highlights the relativity and ambiguity at times in designating what is living, in stating that "it is a matter of opinion, or of definition, whether viruses are considered living organisms or peculiar chemical substances. The fact that such differences of opinion can exist is in itself highly significant. It means that the borderline between living and inanimate matter is obliterated" (Dobzhansky, "Nothing in Biology Makes Sense Except in the Light of Evolution," 125).
The distinction, however, between beings which are most likely sentient,¹ and those which are not,² is just as critical in the early 1800s as it is in the contemporary dialogue on paleonatural evil. Smith reminds us, perhaps by way of negative example, that if such carefully nuanced distinctions are not kept in mind, then traditionalists and accommodationists cannot hope to maintain any meaningful dialogue between themselves.

Thus it seems that Smith is on much firmer ground when he shifts the theodical discussion to the skeletal remains of "formidable creatures, some of gigantic size," from which we can see their "powerful teeth," apparatuses conducive to carnivory, and stomach cavities containing "chewed bits of bone, fish-scales, and other remains of animal food."³ Smith claims that the brute existence of such data conclusively demonstrates, as stated above, that sub-human death has always been the "will of the All-wise Creator."

But closer inspection reveals that the status of Smith's conclusion here is tantamount to a mere brute statement. In other words, it is not apparent to this researcher that Smith has actually theologically substantiated his theodical thesis, which, briefly restated, claims that all subhuman death from the present back into unfathomable antiquity demonstrates God's all-wise will. Smith's conclusion appears similar in status to the axiom, "Whatever is, is right." Smith does not specify what it is about the Creator's employment of death as a necessary concomitant of the created order which should elicit

¹This is stated thus because vertebrate sentience is not a given in the current debate.

²Like the infusoria mentioned above, which lack anything reminiscent of a central nervous system, and thus are not likely to feel pain or pleasure.

³Smith, *On the Relation*, 68.
such praise and joy from Christian theists. What we find is the simple claim that the presence of fossils, if they are deep-time phenomena, shows that death is approved by God.

Seventh, Smith believes that if there was no death prior to the Fall, then the threat of death (i.e., the exhortation to "not eat of the fruit lest you die") would have been incomprehensible to Adam and Eve. Smith writes:

The threatening of death, upon a violation of the easy test of obedience, seems very clearly to imply, that the subjects of this law had a knowledge of what death was; otherwise they could not have known what the threatening meant. The idea of their having had set before them, as the penalty of violating the law, an unknown and undefined suffering, does not seem congruous to the wisdom and dignity of legislation.

The above words of Smith seem to imply that he is suggesting that only if Adam and Eve had already witnessed the pangs of death in the sub-rational creation would they have then been in a position to understand what the penalty of death was. For this reason Smith implies that the justice of God's prohibition demands the reality of antecedent death.

Lastly, we can infer some other theodical strands in Smith's thinking when he

\[1\] Thus, J.B.S. Haldane asks the theist whether God created the Bilharzia worm? If so, he acknowledges that such a designer "may have been intelligent, but was not perfectly good," and states further that such a deity is not "worthy of Man's worship" (Science and the Supernatural: A Correspondence Between Arnold Lunn and J.B.S. Haldane [New York: Sheed and Ward, 1935], 175). This worm bores its way into the urinary bladder and/or rectum and often results in a very excruciating cancer. Recall from chapter 1 that David Hull, reflecting on this same type of data of deep-time natural history, does not deduce a wise God either, but concludes that the God implied by the data of natural history is careless, indifferent, almost diabolical, and thus "certainly not the sort of God to whom anyone would be inclined to pray" ("The God of the Galápagos," 486). Bear in mind that Haldane and Hull are looking at the data through geological and evolutionary filters, while Smith favors mostly the first).

\[2\] Smith, On the Relation, 198.

\[3\] Ibid., 245.
approvingly quotes William MacCombie, a Christian philosopher, whose work Smith
describes as evidencing "powerful reasoning, with the spirit of reverential piety." Smith quotes MacCombie as follows:

[Geology’s] astonishing disclosures open to us an entirely new view of the constitution of the universe: and in casting about for a solution of the (as it seems to our notions) awful and anomalous fact of the universal prevalence of suffering and death, the idea presents itself, that trial and pain may be indispensable to the development of mind. It has been generally assumed, but unphilosophically, we think, and certainly without any authority from Scripture, that the original state of man must have been one of unmingled enjoyment; and preachers and poets have strained their imaginations and exhausted nature, for images to picture its felicity. -- We are not entitled to pronounce that the most anomalous of all the modes of suffering which come under our view, that of the lower animals, is to them evil; seeing we know not how far it may contribute to enhance their enjoyment; and are ignorant whether they may not have a future destination, in regard to which it may be subserving the most important purposes.

Several theodical themes are evident in this quote, with which Smith evidently agrees. First, the new geology offers an "entirely new view of the constitution of the universe." This mandates an overhauling of any dogma based on the previous ideas of the constitution of the world and universe.

Second, MacCombie implies that, even in the garden, Adam and Eve may have been subject to some degree of suffering. This is in direct contradiction with the understanding of the Reformers that pain, suffering, and death are all harbingers of original sin.

Third, by affirming that the pain may be indispensable to mental development, the use of the word "development" is precariously open to a transformationist interpretation.

\[Ibid., 197, note. William MacCombie, \textit{Moral Agency and Man as a Moral Agent} (London: R.B. Seeley, 1842), part ii, section iii.\]

\[This sounds similar to Hick’s Irenaeian vale of soulmaking.\]
Smith seems to be implying that an all-loving, all-powerful God could not and would not devise another method to bring about mind. This represents one of Smith’s implied justifications of death as part of God’s method of creation.

Fourth, Smith agrees with MacCombie that we must not superimpose our mode of suffering onto lower animals. In a spirit of Paleyan optimism, Smith says we cannot claim that what seems to be evil from our purview (i.e., animal suffering) is evil to them. Perhaps these evils contribute to or enhance their enjoyment in ways we cannot see.

Fifth, and tantalizingly brief, is the inference that we are ignorant regarding the future destination of brutes. The entitlement of animals to a future recompense seems to be a theodical element, however, that accommodationists and traditionalists could both employ.

Having investigated Smith’s theodicy we have discovered various factors which play in his accommodation of Genesis to the new findings of deep-time paleonatural evil. These include the alleged necessity of prelapsarian death in order to justify the divine injunction to “Be fruitful and multiply”; the hyper fecundity argument; the decoupling of any penal-sub-rational death causal nexus; the divine anatomical design of predatory creatures; the assumption that plant death is synonymous with animal death; the unavoidability of death at the microbic level; and the inability of Adam and Eve to

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1 This is interesting given his view that traditionalists should not be troubled by prelapsarian plant death. In inferring that we should not apply human modes of suffering to animals, while he applies sentience and death to plants, Smith both equivocates and commits the pathetic fallacy.

2 Ibid. It is possible the MacCombie has in mind here, not some heavenly abode, but rather that animals are evolving to a new destination by suffering.

3 Two of Smith’s examples of animal pain and suffering are at the insect level and plants. But these hardly represent the creaturely “carnage” so repellent to the Victorian soul.
comprehend God's threat of death unless they had first observed death. Additionally, given Smith's affirmation of MacCombie, we can further infer that Smith agrees that geology ushers in a complete paradigm shift from the traditional view of origins; suffering and death may be necessary for the development of the mind; we are not entitled to claim that what is evil for us is also evil for animals; and suffering animals might be useful in their development to a new destination.

A contemporary of Smith, the Scot, Hugh Miller, also embraces geological deep time, and attempts to incorporate it into his theology. Shifting to this final accommodationist, and his theodicy for paleonatural evil, we encounter one of the more enigmatic figures of the nineteenth century.

Hugh Miller (1802-1856)

Biography and Publications

Upon seeing the odd cranial configuration of the newborn Hugh Miller, the midwife who birthed him predicted that he "was destined to be the Cromarty idiot." She could hardly have been more mistaken, since young Miller became one of the most bright and influential figures of the nineteenth century. By age ten he had digested much classic


2Rosie, 19. Gillispie describes the mature Miller's head as huge, and "out of proportion to the body in a startling way" (290, n. 64).
literature, and even as a youth had a reputation as a "keen observer of nature and a collector of stones and shells." He did, however, drop out of school as a teenager, due to a wildly insubordinate disposition. In his own words, he was tutored instead in a "worldwide school in which Toil and Hardship are the severe but noble teachers." Most of his life was spent in the highland village of Cromarty, a seaport town in the eastern highlands of Scotland known for its Old Red Sandstone. Miller's penchant for geological analysis was honed as a stone-mason which he began at age 17, apprenticing himself to his mother's brother-in-law. This position, thought Miller, would allow plenty of time during the long winters for him to read and write. This Scotch amateur naturalist would later become the most notable, if not successful, popularizer of science of his time, and commends the pursuit of geology as if it were a sport. As an indication of his popularity, in a series of lectures in 1854 Miller drew crowds of about five thousand people; more than Lyell drew

1Fenton and Fenton, 192. Miller's father was a voracious reader, a trait mirrored in Hugh, Jr., who "eagerly devoured" his deceased father's library (Leask, 17, 24). Reading would become one of Miller's most delightful amusements (Rosie, 21), and he "immersed himself in literary culture" (Paradis, 124).


3At age fourteen Miller carried a knife and assembled what would closely approximate a gang today, "who gypsied in caves on the seacoast, stole food, and frequently played truant" (Fenton and Fenton, 192-193). Miller was constantly fighting, once even stabbing another boy's thigh with his knife. Miller's school-master was so incensed with Miller's refusal to properly pronounce the word "awful" that he beat him with a belt. Miller's objection led to a fist brawl and Miller's permanent expulsion from school.

4Rosie, 28.

5Largely through Miller's efforts, this formation (now called Devonian), became known as the age of fishes. For recent analyses of this locale see W. Mykura, "Old Red Sandstone," in Geology of Scotland, ed. G.Y. Craig (London: Geological Society, 1991), 297-344.
for his famous Boston lectures. This is all the more astounding because Miller had stage fright, and could only deliver his address through the mouth of an assistant.

After some early attempts at poetry, and a brief stint as a banker, Miller shifted to addressing issues of local culture and politics. In 1840 he began a long career with what would become one of Edinburgh's leading newspapers, *The Witness*, the main organ of the evangelical wing of the Church of Scotland. The mature Miller always wrote with clarity and conviction. His books "sold like fashionable novels," with his most popular work, *The Old Red Sandstone*, going through twenty-six editions. It is quite remarkable that an untutored highlander could enter into a geological terre incognito, and ultimately

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1Fenton and Fenton, 203.


3This move allowed him time to write and fossil-hunt, but more important, promoted him from the artisan to middle class, removing a roadblock to him marrying Lydia Fraser, whose mother was aghast that her sophisticated daughter would wed a dusty stonemason.

4Miller was offered the editorship just after penning a *Letter from One of the Scotch People to the Right Hon. Lord Broughman & Vaux*, which was in reaction to those who denied Scottish congregations the right to select their own pastors. Miller's output alone for *The Witness* is nearly ten million words. The bibliographical references for Miller's 1,820 contributions to *The Witness*, 1840-1856, requires 66 pages in Shortland, 303-369.


6This volume grew out of seven installments in *The Witness*, Sept. 9-Oct. 17, 1840.

7Miller, *The Old Red Sandstone*, 45. The ubiquitous referrals to Miller as an amateur geologist are actually a compliment, highlighting the self-taught element in his background, and are not meant to indicate his lack of competence in these still-young disciplines.
be praised as a trailblazer in geology. No less an authority than Louis Agassiz, close friend to Miller, compliments his work as comprising a fresh conception, a power of argumentation, a depth of thought, a purity of feelings, rarely met with in works of that character, which are well calculated to call forth sympathy, and to increase the popularity of science which has already done so much to expand our views of the Plan of Creation . . . [a] successful combination of Christian doctrines with pure scientific truths.

Along with his mentor and noted ecclesial authority, Thomas Chalmers, Miller is

1Miller's decade as a stonemason paved the way for him and others "into uncharted intellectual territory" (David N. Livingstone, Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought [Grand Rapids: Eerdmans, 1987], 11). Miller's most notable works, as regards the interface of geology and theology, and ipso facto the foci of this present study, are The Old Red Sandstone; Footprints of the Creator; or, the Asterolepis of Stromness (London: Johnstone and Hunter, 1849; American edition, Boston: Gould and Lincoln, 1868); The Two Records: Mosaic and the Geological (London: James Nisbet and Co., 1854), later to be included as the third lecture in the following title; The Testimony of the Rocks; or Geology in its Bearings on the Two Theologies, Natural and Revealed (Edinburgh: Thomas Constable & Co., 1857). The most comprehensive Miller bibliography available is found in Shortland, 301-79.

2Louis Agassiz, preface in Foot-Prints of the Creator, xi, hereafter cited as Foot-Prints. This "appreciative introduction . . . created a steady American market for the rest of Miller's works (Gillispie, 175).

3Chalmers (1780-1847) is a respected preacher, astute mathematician, astronomer, Professor of Divinity at Edinburgh, philanthropist, and pioneer in methods of helping the needy. In a dispute arising over the editorial philosophy of The Witness, Chalmers virtually quells an attempted coup by simply asking the challengers at a specially convened meeting: "Which of you could direct Hugh Miller?" Miller's position was never challenged again. Chalmers is remembered most for introducing and championing the gap theory, convinced that an uncertain time gap is allowed for between Gen 1:1 and 1:2, permitting "an indefinite scope to the conjectures of geology" (William Hanna, ed., Select Works of Thomas Chalmers [Edinburgh: Thomas Constable, 1855], 5:146). This indefinite deep time, "might be safely given up to the naturalists," supposedly with no doctrinal repercussions (ibid., 149-150). Chalmers's authority and insights in his Bridgewater Treatise regarding the problem of natural evil helps pinpoint a widening accommodation among prominent clergy toward deep-time uniformitarianism. See Chalmers, Adaptation of External Nature, or the pertinent theodical sections which are restated in his On Natural Theology (New York: Robert Carter & Brothers, 1857), 144-247.
a "leading figure in the Disruption of the Church of Scotland." Theologically Miller was a loyal but "fierce Presbyterian stalwart," and has been variously referred to as "a perceptive prophet, a persuasive propagandist, a seer of disturbing genius," one of the "limping reconcilers," and even as a "trusted defender of Christian orthodoxy." In fact, Davis Young suggests that among the harmonizers, "Miller may have been first among equals." Because of this, along with his scientific competence, he was well respected by the likes of Agassiz, Buckland, Darwin, Huxley, Lyell, Roderick Murchison, Benjamin Silliman, and Richard Owen, and influenced Charles Hodge and James McCosh, thus

1Livingstone, 9.

2Ibid.

3Shortland, 3.

4Millhauser, Just Before Darwin, 134.

5Young, The Biblical Flood, 147.

6Ibid.

7Buckland admits that Miller writes about geology with a level of acumen that makes him ashamed in comparison of the meagerness and poverty of his Bridgewater Treatise, adding that he would "give his left hand to possess such powers of description" as Miller. See Fenton and Fenton, 197; and Rosie, 70.

8It must be noted that Miller was a tireless critic of evolution-like theories, but this vital assertion must await some future venue for full exploration.

9A report from the BAAS records Murchison as stating that Miller's papers on geology were "written in a style so beautiful and poetical, as to throw plain geologists like himself into a shade." Also, Miller was instrumental in directing young Archibald Geike toward Murchison (Report of the Proceedings of the British Association for the Advancement of Science, Wednesday, September 23, 1840, Section Geology and Physical Geography).

10Silliman's American Journal of Science lauds The Old Red Sandstone as reflecting "talent of the highest order.... No geologist can peruse this volume without instruction and delight" (quoted in Rosie, 71).
having a Princetonian impact. Charles Dickens,¹ Thomas Carlyle,² and John Ruskin³ were also enthusiastic about his literary talent.

Miller's romanticized conception of nature allows him to posit a telic element throughout creation. In tandem with this conviction, he relentlessly attacks any notion of biological progressivism. In fact, his Foot-Prints of the Creator is a direct response to the progressivism suggested in Chambers's Vestiges.⁴ One of Miller's chief arguments is that fish of higher orders appear first on the geological stage.⁵ But while Miller does not capitulate to the transformist scenarios proposed by the likes of de Maillet,⁶ Lamarck, or Chambers,⁷ this does

¹Owens writes of Foot-Prints that it is the first contemporary work in which he found some of his own favorite ideas articulated (Rosie, 77).

²After reading The Testimony of the Rocks, Dickens wrote to Miller's widow: "Believe me, it will find no neglected place in my book shelves." (Rosie, 84).

³Carlyle is a Scottish historian, essayist, and moral teacher.

⁴Ruskin is a social reformer, writer and art critic. Cf. Miller, Testimony of the Rocks, 67.

⁵It was not till after Miller's death that the anonymous author of Vestiges is found to be Miller's old friend, Robert Chambers, who had published several of Miller's pieces in Chambers's Edinburgh Journal, including "Gropings of a Working Man in Geology," the germinal form of The Old Red Sandstone. See Paradis, 146, n. 12, 371. Miller's pointed rebuttal of the arguments put forth in Vestiges was kindled by the vestigian's use of Miller's early work to substantiate the notion of a progressive sequence in the fossil record. See Chambers, 66-75, and Paradis, 140.

⁶The subtitle, "Asterolepis of Stromness" in Foot-Prints refers to a large ganoid fish (coelacanth) with star-shaped markings on the dermal plates of its head. It was discovered on the southern tip of a West Orkney peninsula which is comprised of granite-gneiss.

⁷One early "science" book Miller read was Benoît de Maillet's Telliamed, an early-eighteenth-century work which dispensed with the creation and Flood accounts, and adopted a deep-time scale of history, also suggesting that the ocean is nature's womb.

⁸The main theological objection that Miller has to Chambers's thesis is the issue of the human soul (Miller, Foot-Prints, 38-39).
not mean that he exercises comparable intransigence in other areas, most notably deep time. Livingstone concurs, asserting that Miller's diatribe against neo-Lamarckianism "must not be allowed to obscure the ease and energy with which Miller accommodated contemporary theological assumptions about the age of the earth to the findings of science."¹

**Time Frame for Creation**

It is virtually uncontested that the salience of earth's deep time arrested Miller during his years of fieldwork. Regarding the defense of the "great antiquity of the globe," Miller likens his battle to that of Galileo who bases his tenets on pure deduction.² Miller states that "geologists have the laws of matter on their side."³ For Miller the evidence was so compelling that "Ecclesiastical authority could not outweigh scientific experience,"⁴ but ironically, when mentor Thomas Chalmers demurred that the writings of Moses do not assign an age to the earth, Miller seems to take this ecclesial authority as conclusive.

Miller sees the older reading of the Mosaic account as having been abrogated by the harsh reality of geological fact,⁵ and as such "a new scheme of reconciliation"⁶ is needed, including the demand for a more geologically compatible biblical hermeneutic. Thus, in order to relieve the seeming tension between deep-time and traditional Mosaic chronology, Miller

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¹Livingstone, 12.
²Miller, *Foot-Prints*, 288-89.
³Ibid., 292.
⁴Livingstone, 13.
⁵Miller, *Old Red Sandstone*, 293.
resorts to taking the "days" of Genesis figuratively. Miller is thoroughly versed in the gap theory, which accommodates whatever chronology geology demands by merely interpolating this span of time between the first two verses of Genesis. Though this position allegedly maintains a literal reading of the creation account, Miller, as we will see below, is not able to embrace Chalmers on the point of locating all geologically required deep time between the first two verses of Scripture. Miller opts, rather, for a phenomenological hermeneutic which suggests that Moses had a "diorama" revealed to him of "six geologic periods"; i.e., the work-days of the Creator "rose in VISION before the inspired historian."\(^3\)

Once allowing for a phenomenalization of the creation "days," it is not surprising to find Miller suggesting a local Flood.\(^4\) He believes the author employs an eastern rhetorical device here, whereby a part is described as if it were the whole. The question for Miller is whether we are to regard the passages in which he describes the Flood as universal as belonging to the very numerous metonymic\(^5\) texts of Scripture in which a part--

\(^1\)Ibid., 164. The days of creation are also depicted as "a prophetic drama of creation (ibid., 158), "successive scenes of a great air-drawn panorama" (ibid., 160), "represented simply as parts of the exhibited scenery... forming the measures of the apparent time during which the scenery was exhibited" and "mere modules of a graduated scale" (ibid., 169-70).

\(^2\)Miller's main exposition of this thesis is in The Testimony of the Rocks, "The Mosaic Vision of Creation," 144-174, and is reminiscent of Adam's mountaintop visions in Paradise Lost. A similar proposal given by one of the "German Mosaic visionists," Johann Georg Rosenmüller (1736-1815), in Antiquissima Tellures Historica (1876).

\(^3\)Miller, The Testimony of the Rocks, 195.

\(^4\)Miller feels that the ark would be overcrowded. Given the ever-expanding number of species suggested by naturalists, he calculates that the ark need to be at least five times larger. He also sees biogeography data as discrediting the global Flood theory.

\(^5\)Miller's point would be better served by using the figure of speech known as synecdoche, not metonymy. Metonymy involves using one term for another which reflects a link between the things to which the terms refer; e.g., effect for cause, container for thing contained, material for thing made. Synecdoche, on the other hand, conveys exactly what

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sometimes a not very large part—is described as the whole, or to regard them as strictly literal and severely literal.¹

Building on this surmisal, Miller asks us to suppose that a 100,000-square-mile West Asiatic region, east of modern Ararat, sank 400 feet every day for forty days. Next, we must allow that surrounding waters rush in to fill this 16,000-foot depression. Third, we must hold that the waters abate after a time, without leaving any geological trace. After this he feels it is but a small step to hypothesize that this partial Flood "was sufficient to destroy the [human] race in an early age," which he does see "as by any means [to be] an incredible event."² It is interesting that in this polemic against "the palpable monstrosities"³ of older deluge theories, Miller himself crafts a rather eccentric local-Flood thesis. The inspiration of this model appears solely born of a desperate effort to avoid a universal Flood while finding some way to have the waters cover the "loftiest mountains" in the region.⁴

Miller’s Understanding and Affirmation of the Geologic Column and Its Fossiliferous Remains as Deep-Time Phenomena

In the penumbra of the Bridgewater authors and other accommodationists who paved the way, Miller affirms the credo that it is "enough for the geologist rightly to interpret the record of creation,—to declare the truth as he finds it,—to demonstrate, from evidence no clear intellect ever

Miller is after, as that figure of speech which depicts a part for the whole, or the whole for the part. The Reformers knew these figures of speech well; cf. Luther’s Works, 1:194; 2: 395; and Calvin, Institutes, 1:189, 376; 2:1385.

³Ibid., 314. The entire tenth chapter of Testimony of the Rocks is allocated for the refutation of the concepts of a young earth and a global Flood (348-82).
⁴Ibid., 314-315.
yet resisted."¹ In fact Miller avers that he yields to geological and paleontological evidence, which he finds "impossible to resist."² Miller’s reference to creation’s vast age is pervasive.³ Barber describes Miller as bravely facing the dangers that other writers shunned, and leading his readers safely through the thickets of geological controversy, with a fossil fish in one hand and the Book of Genesis in the other.⁴ One wonders if one of the countless Old Red Sandstone fossil fish from this tortured strata was in Miller’s hand when he noted that a terrible catastrophe involved in sudden destruction the fish of an area at least a hundred miles from boundary to boundary, perhaps much more. The same platform in Orkney as at Cromarty is strewed thick with remains which exhibit unequivocally the marks of violent death. The figures are contorted, contracted, curved; the tail in many instances is bent round to the head; the spines stick out; the fins are spread to the full, as in fish that die in convulsions . . . The attitudes of all the ichthyolites on this platform are attitudes of fear, anger, and pain . . . The record is one of destruction at once widely spread, and total so far as it extended . . . By what quiet but potent agency of destruction were the innumerable existences of an area perhaps ten thousand square miles in extent annihilated at once, and yet the medium in which they had lived left undisturbed by its operations?⁵ Miller sees evidence here of terrible catastrophe and sudden destruction on a huge scale,⁶ as

¹Ibid., 70.

²Ibid., xi.

³Miller’s works are replete with deep-time phrases such as "bygone ages, incalculable in amount" (Foot-Prints, 326); "myriads of ages" (Testimony of the Rocks, 3); "millenniums of centuries . . . bygone eternity" (ibid., x-xi, 103); "untold ages" (ibid., 70); "Ages beyond tale or reckoning" (ibid., 239); "immensely extended period" (The Old Red Sandstone, 237); "unmeasured ages" (ibid., 289); all of which reflect the "deep echoes of eternity" (ibid., 271).

⁴Barber, 225.

⁵Miller, The Old Red Sandstone, 237-238.

⁶Davis Young attempts to show how such fossil graveyards can be quickly formed by mere local catastrophes. He cites events like waterblooms and volcanic explosions, which under certain conditions are capable of producing effects similar to Miller’s fish beds (Christianity & the Age of the Earth, 74-78). Harold Booher, however, notes that Young may be robbing Peter to pay Paul in that "once formations routinely become interpreted as the results of catastrophe, what
well as indications of fear, anger, pain, and violent death on the individual level. But how to reconcile this agency of destruction with the goodness of God is a question he has to address.

In the field Miller happens across an ancient chapel and a group of mossy tombstones; a "field of graves" under which he discovers "a still more ancient place of sepulture." Regarding a certain stratum of the upper Ludlock fish-bed formation, Miller writes that over wide areas there "seems an almost continuous layer of matted bones, jaws, teeth, spines, scales, palatial plates and shagreen-like prickers, all massed together." These observations contribute to his view of the earth being "a vast sepulchre." But this vast sepulchral view of earth history, so seemingly incongruent with a "very good" created order, appears unavoidable for those adopting a deep-time geologic column. Thus, along with leading accommodationists, the discussion above indicates that Miller accepts, as shown in table 7, the conventional deep-time theory of his day.

The Old Red Sandstone is the formation predominantly associated with Miller's name. And with good reason, for Miller almost singlehandedly puts the formation on the geological map. The Old Red Sandstone, up to 1.5 miles thick, covers 10,000 square miles.

happens to the geological perception of great ages?" (Origins, Icons, and Illusions [St. Louis, MO: Warren H. Green, 1998], 263). Mass organic remains are not sole indicators of catastrophe, but sharp folds in strata, etc., do not assimilate well in uniformitarian models either. See photos in Ager, The New Catastrophism, 105-11, and Harold Coffin and Robert Brown, Origin by Design (Hagerstown, MD: Review and Herald, 1983), 154-55.

1Miller, The Old Red Sandstone, 133.

2Ibid. Sepulture means "place of burial."

3Ibid., 232. Though such can be assimilated into a uniformitarian framework, this does not seem to be the least biased interpretation. What could have catalyzed such catastrophic death? Where are similar mass fish burials (not merely kills) taking place today? These are questions, however, which do find system-congruence in Flood geology.

4Ibid.
One hundred-mile stretch is estimated to inhume billions of fossil fish. Most of the victims in this fish Lagerstätte are crammed together and compressed to paper-thinness, with their physiological details well preserved. These characteristics, along with the apparently contorted orientations, and the absence of signs of predation, all testify to catastrophe, or as Miller puts it, "disturbing agencies of this time." Miller likens this Devonian period to the opening scene of Shakespeare's *The Tempest*, which "opens amid the confusion and turmoil of the hurricane,—amid thunders and lightnings, the roar of the wind, the shouts of the seamen, the rattling of cordage, and the wild dash of the billows." 

Origin of Natural Evil

When perusing Miller's thought it is hard to escape the fact that he seems preoccupied with thoughts of death, making such frequent allusion to death as to almost border on the morbid. Barber agrees, noting that Miller refers to death "with astonishing frequency." 

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1 Ibid., 237.
2 Ibid., 233.
3 Ibid.
4 Two studies have been done apropos to Miller's theodicy. Shortly after Miller's death, William Gillespie wrote *The Theology of Geologists*, in which he singles out Miller for special attention. Gillespie points out several theodical aspects in Miller's stance on natural evil. More recently, John Henry has touched upon the theodical facet of Miller, though not with any focus on paleonatural evil, and actually accords only five pages to Miller. See John Henry, "Paleontology and Theodicy: Religion and Politics and the Asterolepis of Stromness," in *Controversies*, 151-170.
5 See Paradis, 137; and Barber, 236.
6 Barber, 236.
TABLE 7

MILLER'S UNDERSTANDING OF THE NEW GEOLOGY'S DEEP-TIME SCALE OF NINE EPOCHS

<table>
<thead>
<tr>
<th>Most recent strata</th>
<th>GEOLOGIC SEQUENCE</th>
<th>BOTANICAL SEQUENCE</th>
<th>ZOOLOGICAL SEQUENCE</th>
<th>ICYTHOLOGICAL SEQUENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tertiary</td>
<td>Dicotyledonous Trees</td>
<td>Man Placental Mammals</td>
<td>Ctenoid and Cycloid</td>
</tr>
<tr>
<td></td>
<td>Cretaceous</td>
<td>Dicotyledons</td>
<td>Mammals Birds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oolitic</td>
<td>Monocotyledons</td>
<td>Reptiles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Triassic</td>
<td>Gymnogens</td>
<td>Fishes</td>
<td></td>
</tr>
<tr>
<td>Older strata</td>
<td>Permian</td>
<td>Acrogens</td>
<td>Mollusca, Articulata, and Radiata</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carboiniforous</td>
<td>Thallogens</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old Red Sandstone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Silurian</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Gillespie concurs, stating that Miller "thrills with horror."1 John Hedley Brooke notes that some writers were

struck not by the beauty he [Miller] found in nature but the ugliness... He could transport his readers into a tormented world dominated by the distorted and the grotesque, by death, decay and destruction. There is no denying that Miller's vision has it sombre and repulsive side.2

Ours is a "universe of death," states Miller;3 the road to the past is an ever-extending

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3Miller, *Testimony of the Rocks*, 104. Miller has in mind here primarily biological death, but subsequent theodicies would increasingly allow inclusion of the non-biological world, where "nearly all of the observable Universe," in Booher's words, "represents different stages of death" (Booher, 159-160).
pavement of gravestones, with "its ever-lengthening streets of tombs and sepulchres."¹ Perusing his works one finds repeated reference to such things as burial grounds, burial-mounds, coffins, obelisks, tombs, tombstones, and sepulchres.² Miller acknowledges that "diseases of mysterious origin break out at times in the animal kingdom and well nigh exterminate the tribes of which they fall."³ On the eradication of "twelve distinct genera" in the Old Red Sandstone, Miller asks by what "potent agency of destruction were the innumerable existences of an area perhaps ten thousand square miles in extent annihilated at once ... ?"⁴ The ichthyolites on this "densely-crowded platform of violent death" are described by Miller as having attitudes of "terror and surprise," and even of "anger, and pain."⁵ Such "embryos of the present time," to adopt a metaphor of Miller's, point to "the womb of Nature."⁶ In other words, the creation indicates something about the Creator. Thus, David Oldroyd seems justified in claiming that "Miller's Old Red Sandstone was as much a theodicy as a work of geology."⁷

Miller was ever aware of the delicate problem of pre-Adamic sub-human death,

¹Miller, Testimony of the Rocks, 104.

²E.g. Miller, The Old Red Sandstone, 133, 136, 200, 236, 241, 247; and idem, Testimony of the Rocks, 50-51, 102-106.

³Miller, The Old Red Sandstone, 238.

⁴Ibid., 237, 239. Miller posits volcanic activity as the potential cause.

⁵Ibid., 237, 239, 242. Later Miller writes of the fish's "emotions of rage or feelings of panic and terror. Pain and triumph have each their index of colour among the mute inhabitants of our seas and rivers," and the "agonies of death [which] dye the scales of the dolphin" (ibid., 252-53).

⁶Ibid., 246.

the problem of evil even being a topic of discussion in the "metaphysical lovemaking" with his erudite fiance, Lydia Fraser. He shows himself to be versed in the writings of others who had touched upon the issue of theodicy, like Buckland, Butler, Hume, Jenyns, James McCosh, Pope, and Smith. Miller also make frequent use of poets whose palette includes deep time or theodical elements, like Cowper, Falconer, Goethe, Milton, Tennyson, and Wordsworth.

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1Rosie, 48.

2Fenton and Fenton, 195. The loss of Hugh and Lydia’s two-year-old daughter, Liza, to small-pox deserves mention here. Lydia wrote: "All the time she lay dying, which was three days and three nights, her father was prostrate in the dust before God in an agony of tears. . . . All the strong man was bowed down. He wept, he mourned, he fasted, he prayed. He entreated God for her life" (Bayne, Life and Letters, 1:120). Hers was the last tombstone Miller ever chiseled. As a teenager upon losing his two younger sisters to sickness, Miller overheard his mother “revile God for not taking her son and leaving one of her daughters” (Rosie, 27).

3Brooke, "Like Minds: The God of Hugh Miller," 174; Miller, Testimony of the Rocks, 186; and idem, My Schools and Schoolmasters; or the Story of My Education [1854], 13th ed. (Edinburgh: Nimmo, 1869), 410.

4Miller, The Old Red Sandstone, 88; idem, Testimony of the Rocks, 187.


6Miller, The Old Red Sandstone, 88-89.

7Miller, Testimony of the Rocks, 342.

8Cowper is Miller’s favorite poet (John Henry, 161).

9Miller, The Old Red Sandstone, 253.

10Miller, Testimony of the Rocks, 70. He also mentions in this context the Lisbon earthquake, which is so pivotal in the theodical dialectic between Leibniz and Voltaire.

11Ibid., 235, etc.

12Ibid., 104-105.
For a variety of reasons, which we will soon explore, Miller’s own field of experience led him to make an honest attempt to address the "brutality and murder that exist in the animal kingdom . . . [and] to address Tennyson’s great question, 'Are God and Nature then at strife?'"\(^1\) Miller found it a delightful animadversion to lay open Cromarty’s fossil-rich Devonian strata from which he exhumed a "tantalizing collection of fossil fragments."\(^2\) Immersion in the rocks for many years afforded Miller the opportunity to reflect on the mass catastrophe implied in the sepulchral breccias of the Cromarty region. Examining some fossils, for example, Miller was stunned by "the formidable character of the offensive weapons with which they were furnished"; especially "enormous jaws, bristling with pointed teeth, gape horrid in the stone." Dragonflies are described as "carnivorous tyrants of their race."\(^3\) Other carnivores are armed for "destruction, like the butcher with his axe and knife, and angler with his hook and sphere."\(^4\) "Monstrous creatures . . . haunt the rivers";\(^5\) oceans are patrolled by gigantic reptilian tyrants; and pterodactyls pursue "the fleetest insects in their flight, captured and bore them down."\(^6\)

Such findings, at least for Miller, put the death knell to any notion "in nature of that

\(^{13}\)Ibid., 51.

\(^1\)Kramer, 298-99.

\(^2\)Livingstone, 11.

\(^3\)Miller, Testimony of the Rocks, 49, 66, 131.

\(^4\)Ibid., 66.

\(^5\)Ibid., 171.

\(^6\)Ibid., 73-74.
golden age of the world of which the poets delighted to sing, when all creatures lived together in unbroken peace, and war and bloodshed were unknown."¹ This quotation indicates that, for Miller, death has been part of the equation of the entire natural order from the beginning.

Miller's maturest theodicizing is found in his last book, *The Testimony of the Rocks*.² Far from any notion of a golden age, Miller claims that since the advent of animal life upon our planet, there existed, in all departments of being, carnivorous classes, who could not live but by the death of their neighbours, and who were armed, in consequence, for their destruction, like the butcher with his axe and knife, and angler with his hook and spear. But there were certain periods in the history of the past during which these weapons assumed more formidable aspects than at others. . . . But one of the most remarkable weapons of the period was the sting of the pleurancanthus . . . sharp and polished as a stiletto . . . and along two of its sides . . . there ran a thickly-set row of barbs, hooked downward, and which must have rendered it a weapon not merely of destruction, but also of torture.³

In this segment Miller provides the following three ideas. First, some creatures could only subsist at the expense of another. Second, Miller claims that weaponry of the past was more formidable than the present. Third, at least one predatory apparatus, though perhaps designed only for predation, nonetheless would seem also to produce torture. Thus, to sum up Miller’s thought, predation, torture, and death have been components of the natural order from the very beginning, and therefore, by implication, they would seem to enjoy the approval of God.

¹Ibid., 66.


³Ibid., 66.
Advancing his argument further, in a single powerful paragraph of over two pages, Miller includes a vivid description of deep-time predation as it relates to human sin:

This early exhibition of tooth, and spine, and sting,—or weapons constructed alike to cut and to pierce... examples furnished in this primæval time, of weapons formed not only to kill, but also to torture,—must be altogether at variance with the preconceived opinions of those who hold that until man appeared in creation, and darkened its sympathetic face with the stain of moral guilt, the reign of violence and outrage did not begin, and that there was no death among the inferior creatures, and no suffering.¹

Six important elements in the above sentence merit underscoring. First, Miller's use of "primæval" is a pointer to deep time. Second, tooth, spine, and sting are described as "weapons" designed to cut, pierce, and kill. Third, Miller does not stop with mere predation, but believes that suffering and torture are part of the equation. Fourth, such deep-time suffering and torture took place in an epoch in which "violence and outrage" reign. Fifth, this primeval reign of violence, suffering, torture, and death has no connection with human moral failings. Thus Miller severs any causal link between animal death and Adamic disobedience.

Lastly, he acknowledges that his account of origins contradicts the literalists' opinion which claims that without moral evil there would be no natural evil.² Thus we can fairly infer that

¹Ibid., 69-70.

²Miller gives two examples of what he calls "preconceived opinion." First, he mentions the early apologist, and tutor to Constantine's son, Lactantius (c. 240-320), who argues against the deep time inclinations of Plato, Cicero, and the Chaldeans, but who also seemed to believe in a flat earth. Second, Cardinal Robert Bellarmine (1542-1621) and Tommaso Caccini (1574-1648) are cavalierly derided by Miller as unthinking geocentrists. Later, Miller claims an "exact" analogy between his position and that of Columbus, who argues against the "flat-earth" view of the Salamancans (Testimony of the Rocks, 122, 344). Thus, one finds a less-than-veiled identification of those who deny deep time and prelapsarian death with flat earthers and geocentrists. Traditionalists, by inference, mirror the ignorance of the former flat-earth proponents; both myopically predisposing themselves to resolve scientific debate under the fideistic banner of Sola Scriptura.
Miller sees paleonatural evil as divinely ordained.

Miller continues his description of this primeval scene with several system-coherent affirmations. As sure as the earth rotation on its axis, or heliocentricity, is also as certain . . . that, untold ages ere man had sinned or suffered, the animal creation exhibited exactly its present state of war,--that the strong, armed with formidable weapons, exquisitely constructed to kill, preyed upon the weak; and that the weak, sheathed, many of them, in defensive armour equally admirable in its mechanism, and ever increasing and multiplying upon the earth far beyond the requirements of the mere maintenance of their races, were enabled to escape, as species, the assaults of the tyrant tribes, and to exist unthinned for unreckoned ages.¹

Note eight principal implications from this statement. First, deep time is seen in his referral to untold or unreckoned ages. Second, Miller sees no connection between sin and the reign of violence in the sub-rational realm. Third, the state of war in the present is "exactly" the same as it has always been. Fourth, predatory weaponry of the tyrant tribes have been specifically designed to kill. Fifth, there is some compensation for the weaker species, in that many of them have equally admirable defense apparatuses. Sixth, there is further compensation in superfecundity, but the value of the individual is ultimately subordinated to the good of the species. Seventh, Miller sees the certainty of his geological assertions as apodictically equivalent to the existence of the southern hemisphere and heliocentricity. And eighth, by implication, carnivora could not subsist but by the death of another.

Thus, Miller, as noted, is convinced that the present state of animal warfare is "exactly" as it was in the very beginning; a truth as certain for him as heliocentricity.

Predatory apparatuses which cut, pierce, torture, and kill are components of the natural

¹Ibid., 70.
order, bear no connection to human moral failings, and are merely divine ordinations. However, because God might appear callously indifferent for having established a system requiring the sacrifice of countless deep-time sub-rational sentient beings, does Miller seek to justify the ways of God to man? Let us now turn to Miller's theodicy to discover his response to this question.

Miller's Theodicy for the Paleonatural Evil Implied by a Deep-Time Geologic Column and Its Bearing on God's Character and Attributes

Hugh Miller's background and experiences put him in a unique position to evaluate the problem of evil. As a mature geologist he notes that in his day it had been "weakly and impiously urged" that the "economy of warfare and suffering,--of warring and of being warded upon, would be . . . unworthy of an all-powerful and all-benevolent

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1Three early, vivid experiences of animal death certainly stuck with the young Miller. First, as a lad he witnessed the annual caravanserai of fishing boats, where countless fish were gutted by "bevies of young women . . . horribly incarnadined with blood" (Rosie, 22). In his later Old Red Sandstone discoveries he seems to see similar incardination back into deep time. Second, his parish school lay within earshot of Cromarty's charnel house, where a hecatomb of pigs was slaughtered daily. Though he never partook, Miller's classmates were sometimes allowed "to watch, or even join in the slaughter" (ibid.), returning to share gory details. Such feral privileges, third, were surpassed by the annual cock-fight, common in Scottish schools. This bizarre ritual, designed to teach boys bravery, "demanded that every boy pay the schoolmaster two pence for every bird he threw into the classroom cock-pit" (ibid.). Miller recalls that the event lasted from morning till evening, and for weeks afterward "the school floor would continue to retain its deeply stained blotsches of blood" (ibid.), with classmates recalling those "gallant birds which had continued to fight until both their eyes had been picked out" (ibid.). These three "lessons," not ones offered by every grammar school, had three common threads for Miller: animal death by human design through barbaric means.

Other lessons on natural evils likely impacting young Miller are his father's death, the loss of two sisters, and a devastating outbreak of cholera which killed over one hundred million people (Foot-Prints, 383). In Scotland, human carcasses were no longer taken to cemeteries, but heaped up in solitary holes and corners, conjuring up morbid pictures in Miller's mind, of numerous familiar faces strewn uncoffined and decomposing in shallow furrows (Rosie, 46).
Providence, and in effect a libel on his government and character.¹ But it must be asked what theodical tact will he take?

Miller is aware that he cannot renuance the accepted grammar of creation without provoking an *odium theologicum*. The traditional leitmotif was one of an order-loving God who creates a death-free creation, with suffering and death being later intrusions ushered in by sin. As noted, Miller considers this notion of a bygone golden age was deemed geologically unacceptable, and is to be replaced instead by a divinely ordained, but nonetheless daunting, aboriginal creation whose foremost feature was a free-fall of death. Does Miller perceive this to be unbecoming of an omnipotent and omnibenevolent God, and a blight on His character?² Miller responds in the negative, contending that the same God "from whom even the young lions seek their food, and who giveth to all the beasts, great and small, their meat in due season,"³ has always provided for his animal kingdom in this manner. Thus, Miller declares that the geologic record demonstrates that God gave to the primæval fishes their spines and their stings,—to the primæval reptiles their trenchant teeth and their strong armor of bone,—to the primeval mammals their great tusks and their sharp claws,—that he of old divided all his creatures, as now, into animals of prey and the animals preyed upon,—that from the beginning of things he inseparably established among his non-responsible existences the twin laws of generation and of death,⁴--nay, further . . . let us assert,

¹Miller, *Testimony of the Rocks*, 70. He no doubt has in mind here the group he calls the "anti-geologists," like Penn, Stewart, Lord, Cockburn, and Macfarlane (ibid., 342), which he later singles out for censure (ibid., 348-382). Cf. Mortenson, 435-436.

²Miller, *Testimony of the Rocks*, 70.

³Ibid.

⁴Elsewhere, Miller affirms that "man must be subject to the law of death, with its stern attendants, suffering and sorrow; for the two laws go necessarily together; and so
that in the Divine government the matter of fact always has been done by him who rendereth no account to man of his matters, he had in all ages, and in all places an unchallengeable right to do.¹

Note several elements in this statement. First, the inclusion of such phrases as "primæval," and "of old," again, demonstrate Miller's concession to deep-time. Second, Miller believes that predation and death were divinely ordained "from the beginning" of biological life. Third, it was God, and not transformationism, that created spines, stings, trenchant teeth, strong armor, tusks, and sharp claws. Fourth, the "twin laws of generation and of death"² are also God's intentional and sovereign design. Fifth, predator and prey are referred to as "non-responsible existences." And sixth, God need not justify His ways to man. It is His unchallengeable right to do whatever He pleases.

Later, Miller adopts a poetic mantel, giving what is sometimes referred to as "a possible poem."³ Here he portrays Lucifer as observing the successive unfolding of creation, scene succeeding scene, over the course of "scarce reckoned centuries."⁴ Satan watches "as

long as death reigns, human creatures, in even the best of times will continue to quit this scene of being without professing much satisfaction at what they have found either in it or themselves. It will no doubt be a less miserable world than it is now, when the good come, as there is reason to hope they one day shall, to be a majority; but it will be felt to be an inferior sort of world, and be even fuller than now of wishes and longings for a better" (Miller, _Foot-prints_, 335-336).

¹Miller, _Testimony of the Rocks_, 71.

²Ibid.

³Ibid., 235.

⁴Ibid., 236.
life sprang out of death, and death out of life." Miller paints a vivid scene of nature's incarnadine side when detailing Satan's thoughts wandering amid the tangled mazes of the old carboniferous forest! With what bitter mockeries must he have watched the fierce wars which raged in their sluggish waters, among ravenous creatures horrid with trenchant teeth, barbed sting, and sharp spine, and enveloped in glittering armour of plate and scale.

It must be noted that in the context here, such a description is merely a stepping stone in Miller's overall picture. Is Miller empathizing with Satan who can only impotently watch as God nurtures the "fast ripening" earth, and unveils "higher and yet higher forms of existence"? Regarding these newly emerging forms, one of the more prominent elements of the created order is that God has mandated "that all animals should die." Finally, creation culminates in the reception of its deputed monarch, Adam.

Conclusion

Our investigation has found the following eight distinct theodical strands in Miller. First, Miller makes the seminal assertion of the divine right or prerogative of God. While assessing Johann Goethe's contention that the God of the Old Testament can

1Ibid., 237.
2Ibid.
3Ibid., 238.
4Ibid.
5Ibid., 239.
commit "no wrong." Miller declares that it is this same God "whom we see exhibited in all nature and all providence. This same God is the one from whom the lions seek their food, and who gives to all beasts their meat, and who designed all predatory apparatuses," and established "the twin laws of generation and of death" from the beginning. God has the "unchallengeable right to do" such things.  

Second, Miller asserts the "divine right" of science to tell us what really happened in animal history. Regarding the notion of "no death among the inferior creatures, and no suffering" before the fall, Miller says such "preconceived opinion . . . must yield ultimately to scientific fact." But the traditionalist might respond that the deep-time geological interpretation to which Miller defers is just as much "preconceived opinion," which must yield to Scripture. Nonetheless, Miller's prediction that "the geologist seems destined to exert a marked influence on that of the natural theologian" now seems a vast understatement in light of the acquiescence of mainstream theology to the assured results  

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1Ibid., 69. While chiding Goethe for a potentially irreverent use of the phrase, "God of the Old Testament," it is ironic that Miller does so in a potentially more derogatory way. Goethe sees nature as "the living garment of God, woven by the roaring looms of time," and finds the abattoir of nature's order to be unworthy of traditional notions of Providence. But when Miller cordons off any "reign of violence" and the torturing predatory apparatuses from "the stain of moral guilt" (ibid.), he must by sheer logic affirm that these are worthy of God's omnipotence and omnibenevolence.

2Ibid., 71.

3Ibid., 70.

4Ibid. Miller's whole volume is essentially an apologetic for this singular point, and as such will be assumed rather than detailed at this juncture.

5Ibid., 175.
of geology, from Miller's day through the turn of the millennium.

Third, Miller clearly disavows any causality between sin and animal death. From the "first beginnings of organic vitality," so Miller contends, it was determined by God "that all animals should die."¹ There has never been any other pattern than that "in all departments of being" are "non-responsible"² animals "who could not live but by the death of their neighbours."³ For Miller, it is weak and impious for anyone to argue otherwise.⁴ Apparatuses "formed not only to kill, but also to torture" have no connection with "the stain of moral guilt."⁵ For "untold ages ere man had sinned or suffered, the animal creation exhibited exactly its present state of war."⁶ Thus, sin had no discernable effect on the predatory facet of the natural order, or if so, Miller does not designate where.

In concert with the previous point, fourth, Miller believes the Edenic sentence of death applies only to the human race. Given Miller's day-age hermeneutic, as enumerated earlier, it is not surprising to find him handling the Fall narrative in a similar manner. With no substantial exceptions, most pro-geological schemes of reconciliation adopted by mainstream accommodationists tend toward delimiting or abrogating altogether the effects of the curse. This being done, unlimited prelapsarian suffering, disease, and death

¹Ibid., 238.
²Ibid., 71.
³Ibid., 66.
⁴Ibid., 70.
⁵Ibid., 69.
⁶Ibid., 70.
become admissible in the sub-human realm. The possible objection, that such 'offices' are not attended by pain and agony, is peripheral for the moment, since Miller does hold that pain and torture are part of the equation.¹

A fifth potential theodical facet presents itself in Miller's distinction between "fall" and "Fall." Miller believes humanity, as with all species, is in a state of degeneration. In a chapter with the oxymoronic title, "The Progress of Degradation,"² Miller calls this downward trend "degradation," by which he means the defect, displacement, or redundancy of body parts.³ As such, degradation seems commensurate with what modern biology deems the loss or mutation of genetic information. Miller states that naturalists have learned to recognize among all animals "certain aberrant and mutilated forms,"⁴ by which present biological structures have supposedly retrograded from an originally perfect exemplar. Not only does Miller believe that all creatures have experienced degradation,⁵ but he claims: "This fact of degradation, strangely indicated in geologic history, with reference to all the greater divisions of the animal kingdom, has

¹Cf. ibid, 67. It is disputable whether we can surmise from predatory apparatuses the rather emotive verb "torture," but this point would receive wide reiteration from theistic and non-theistic circles alike. George John Romanes, a former disciple of Darwin, referred to "teeth and talons whetted for slaughter, hooks and suckers moulded for torment—everywhere a reign of terror, hunger, and sickness, with oozing blood and quivering limbs, with gasping breath and eyes of innocence that dimly close in deaths of brutal torture!" (Romanes, A Candid Examination of Theism, 171).

²Miller, Foot-prints, 181-204.

³Ibid., 182, 185.

⁴Ibid., 181.

⁵Ibid.
often appeared to me a surpassingly wonderful one."¹

A related factor in Miller’s notion of degradation is his claim that degradation can be seen in the facial features of non-Caucasians.² He is of the opinion that the "Caucasian type was the type of Adamic man."³ Miller also asserts the likelihood that Christ exemplified "the perfect type of Caucasian man."⁴ Degradation in the human species, according to Miller, begins with "the vagabond Cain."⁵ This progressive deviation away from the archetypal stock can be seen allegedly in a variety of "animalized" features, such as odd cranial configurations,⁶ large jaws, flat noses,⁷ "projecting mouths, with prominent teeth and exposed gums,"⁸ "broad faces, protuberant bellies, ill-formed legs,

¹Ibid., 201.


³Miller, Testimony of the Rocks, 229.

⁴Ibid.

⁵Ibid., 233.

⁶There is no little irony here, given Gillispie’s depiction of Miller’s head as huge, and "out of proportion to the body in a startling way" (Genesis and Geology, 290, n. 64).

⁷Miller, Testimony of the Rocks, 230.

⁸Ibid., 233.
sooty skins, broad noses, thick lips, projecting jaw-bones, and partially webbed fingers."

Other repulsive features to Miller include "pig-like eyes . . . narrow retreating foreheads, slim, feeble limbs, and baboon like faces"; the Fuegians being the most hideous, due to their flat heads, small eyes and small limbs. Even in Britain, Miller continues, "hereditary paupers" may be found, "darkened in mind and embruted in sentiment."

These "more degraded varieties," so Miller declares, are "so palpably not what the Creator originally made"; this is "not man as he came from the hand of the Creator."

How does Miller account for the supposedly grotesque features in nature? Are these the result of an Edenic Fall? While he does make a distinction between "fall" and "Fall," he gives no indication that any effects of the Fall can be discerned in nature which are attributable to the latter as can be inferred from the following. According to Miller, the cause of degradation can be voluntary, forced, or predetermined, but "in all such instances it is man left to the freedom of his own will that is the deteriorator of man." While Miller

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1Ibid., 230.
2Ibid.
3Bugg highlights a similar position in Cuvier, who believes that "the Negroes, [are] the most degraded race among men" (Bigg, Scriptural Geology, 1:223).
5Ibid., 232.
6Ibid., 234.
7Ibid., 228-236, passim.
8Ibid.
9Ibid.
does use such language as "fallen" and "fell," it is clear in context that by "fall," Miller means a natural degradation over the course of untold centuries from an original perfect stock, rather than a degradation catalyzed by an Edenic Fall. While Miller does entertain a "doctrine of the Fall," it is only "in its purely theologic aspect," a doctrine which "must be apprehended by faith." Since the geologist tells us that there was never a golden age, then, according to Miller, the "Fall" becomes a mere tenet of fideism.

The main theodical import of Miller's concept of degradation, therefore, seems to be twofold: First, he sees numerous degradatory strands as woven intentionally into the fabric of the created order by the Creator, which bear no connection with an aboriginal "Fall." Second, Miller offers no explanation for why a good God would not prevent creatures from degradation and dying. But when it comes to human participation in the progress of degradation, Miller claims this is a necessary link in the "chain" of being. His rationale for such theodical expedience is the mere "lack of proportion in the series of being" that we

1Ibid., 228, 231-233, etc.

2If the curse had absolutely no effect on the natural realm, by what manner could "the reality of the Fall," assuming Hedley Brooke is correct, be written legibly in the abortive features of degraded races? (Brooke, "Like Minds: The God of Hugh Miller," 177).

3Miller, Testimony of the Rocks, 234.

4Ibid., 66.

5Neal Ascherson depicts Miller's view of degradation among the lower creatures as a "prefiguration . . . of the Fall of Man in the last age" (Neal Ascherson, quoted in Rosie, 10).

6Thus, after analyzing Miller on degradation, James Paradis is justified in his conclusion that "Miller offers us no explanation for the remarkable and exciting degradation he is describing" (Paradis, 140).
would prevail if "perfect and glorified humanity" were too abruptly connected with "dying irresponsible brutes."\(^1\)

A sixth theodical response is suggested with Miller's bifurcation between the God of the Old Testament\(^2\) and the God of the New Testament.\(^3\) Miller writes that "it is the God of the Old Testament whom we see exhibited in all nature and all providence."\(^4\) In assessing Miller's seeming compartmentalization between the Gods of Old and New Testaments, traditionalists might be curious, with Gillespie, as to whether these beings are "different in moral nature or character."\(^5\) Does this not blur the line between the God of the Old Testament and the Ammonite deity, Moloch?\(^6\) It seems arbitrary that the Old Testament God is so unfeeling,\(^7\) and yet according to Miller, the God of the New Testament, unmerciful, cruel, destructive, and ferocious (Jer 13:14; Deut 7:16; 1 Sam 6:19; 15:2, 3), while the New Testament God is kind, merciful, and good (Jas 5:11; Lam 3:33; 1 Chr 16:34; Ezek 18:32; Pss 25:8; 145:9; 1 Tim 2:4; 1 John 4:16). But this is a false dichotomy, since no logical incompatibility exists between a loving and compassionate God who holds us accountable for rejecting His warnings, mercy, and compassion.

\(^1\) Miller, *Foot-prints*, 327.

\(^2\) Miller, *Testimony of the Rocks*, 69.

\(^3\) Ibid., 188. Non-traditionalists might contend that the Old Testament God is unmerciful, cruel, destructive, and ferocious (Jer 13:14; Deut 7:16; 1 Sam 6:19; 15:2, 3), while the New Testament God is kind, merciful, and good (Jas 5:11; Lam 3:33; 1 Chr 16:34; Ezek 18:32; Pss 25:8; 145:9; 1 Tim 2:4; 1 John 4:16). But this is a false dichotomy, since no logical incompatibility exists between a loving and compassionate God who holds us accountable for rejecting His warnings, mercy, and compassion.

\(^4\) Ibid., 69.


\(^6\) This grisly, pagan god is described by Milton as a "horrid king, besmear'd with blood," who, along with the Moabite god, Chemos, is on the same "opprobrious hill" (*Paradise Lost*, bk. 1:392, 403). Gillespie, and all traditionalists, would like Miller to clarify by what objective moral standard would the God of the Old Testament not be placed on this same hill?

\(^7\) Such an affirmation makes it hard to understand passages which tout God's impartial compassion (e.g., Ps 144:9), or where compassion is required of God's people (e.g., Deut 22:6-7). Cf. also Exod 23:19 and Prov 12:10.
Testament is one who is "caring for all his creatures."\(^1\) Gillespie, Miller's contemporary, is adamant in his rejection of Miller's premise:

> Is it not a lie, then, to assert, or even to countenance any thing which implies, that the God of the Old Testament, so full of love, and mercy, and tender pity, even to the lowest creatures, is on the same level with that Creator discovered by the geologists, who sent, directly from His hands, fishes, reptiles, mammals, to tear each other to pieces, till death closed the scene with race after race in those successions of murderers? Yea, it is a lie.\(^2\)

The stark clarity of Miller's bifurcation of the God of the Old Testament and the God of the New Testament is surpassed only by its grim theological and theodical consequences. For if Miller and his allies are correct,\(^3\) then "Nature may be thought of as vested in her funeral pall,"\(^4\) with suffering and death the seemingly arbitrary choices of the Creator.

A seventh theodical response in Miller mirrors the eighteenth-century optimism which finds solace in the concept of the great chain of being. Miller admits that he cannot avoid the thought that there would be a lack of proportion in the series of being, were the period of perfect and glorified humanity abruptly connected, without the introduction of an intermediate creation of responsible imperfection, with that of the dying irresponsible brute. That scene of things in which God became Man, and

\(^1\)Miller, *Testimony of the Rocks*, 188.


\(^3\)One lesser known accommodationist mentioned by Gillespie is Paton Gloag, representative of many lesser lights who were nonetheless vocal in their particular spheres of influence. Gloag's most telling contribution is found in his work, *The Primeval World: A Treatise on the Relations of Geology to Theology*, chapters 5 and 7, "Existence of Death before Sin," and "Divine Benevolence Illustrated by Geology." Gillespie pictures Gloag's "addiction" to geology, requiring "great sacrifices to be made upon her altar," and necessitating a "remodeling" of the elementary ideas of Christendom; ideas which are sent "to the wall" by Gloag's "parricidal hands" (*The Theology of Geologists*, 44-45).

suffered, seems, as it no doubt is, a necessary link in the chain.\footnote{Miller, \textit{Foot-prints}, 327.}

Arthur Lovejoy contends that there is nothing in the eighteenth-century optimist "creed which logically required him either to blink or to belittle the facts which we ordinarily call evil."\footnote{Lovejoy, \textit{The Great Chain of Being}, 208.} The principle of plentitude, Lovejoy points out, is a theodical mainstay to this optimism, and a continuation of this theodical application of the principle of plentitude lingers on into the next century.\footnote{In addition to Miller, accommodationists and traditionalists frequently refer to the chain-of-being metaphor. See Buckland, \textit{An Inquiry}, vi; Hitchcock, \textit{Religion of Geology}, 91; and Paley, \textit{Natural Theology}, 13. Bugg, \textit{Scriptural Geology}, 1:140; 2:37; and Mellor Brown, \textit{Reflections on Geology}, 26-27. The concept of the great chain of being, as assessed and employed by the Scriptural geologists and early accommodationists would seem to be a fruitful topic for a future dissertation.}

The "essence of the optimist's enterprise," according to Lovejoy, is "to find the evidence of the 'goodness' of the universe not in the paucity but rather in the multiplicity of what to the unphilosophic mind appeared to be evils."\footnote{Lovejoy, \textit{The Great Chain of Being}, 211.} Some in the previous century defend the idea that evil stems from the mere constitution of Nature itself, thus absolving God from guilt. Others took the bolder tact, like William King, to show that all evils are "not only consistent with infinite wisdom, goodness and power, but necessarily resulting from them."\footnote{King, 109-113.} Miller offers no indication that he would disavow King's claim.

A striking eighth theodical strand presents itself in Miller that can be called the principle of evasiveness cloaked by reversing the blame. Regarding the latter portion of this principle, Miller believes, as previously noted, that for "untold ages ere man had
sinned or suffered, the animal creation exhibited exactly its present state of war." To those who see this ubiquitous, deep-time "warfare and suffering" as "unworthy of an all-powerful and all-benevolent Providence, and in effect a libel on his government and character,"¹ Miller cautions that this is a "grave charge," one which he leaves "the objectors to settle with the great Creator himself."² Miller drives home the point that it is not the geologists, but the traditionalists who have put themselves in a position of ultimate authority. Using the following couplet from Pope, Miller implies that it is the traditionalists who

Snatch from his [God's] hand the balance and the rod,
Rejudge his justice, be the God of God.³

Parallel to Abdiel's penetrating question in Paradise Lost, "Shalt thou give law to God?"⁴ Miller's rather blunt inference here is that the traditionalists have usurped God's rightful place and become the arbiters of truth. They are to be blamed for faulting God's character, not the new geologists. Miller then claims that "it is enough for the geologist rightly to interpret the record of creation,—to declare the truth as he finds it, to

¹Miller, Testimony of the Rocks, 70.
²Ibid., 70.
³Miller does not give the poet's name, but it is Alexander Pope (1688-1744). See Pope, An Essay on Man, 6, epistle I, lines 121-122. Published between 1732 and 1734, the thrust of this poem of faith is that amidst life's chaos one can embrace his position on the chain-of-being, despite the fact that in the larger picture man is but a vapor. This familiar theme, that despite life's evils one must still trust God's providence and goodness, can be found in T.S. Eliot, The Wasteland; Johnson, "The Vanity of Human Wishes"; Jonathan Swift, Gulliver's Travels; and Tennyson, "In Memoriam;" et al.
demonstrate from evidence no clear intellect ever yet resisted." The sense one gets here is that Miller sees deep-time geologists as dispassionately dealing with unassailable facts, while traditionalists merely dogmatize.

This perspective suggests that Miller, in light of the allegedly established truths posited by the geological science of his day, seems to think he does not really need to give a theodicy, or at least one that rises above generalities. Biblicists and other objectors, on the other hand, may wish to settle the issue with God Himself, though the Creator is not obligated to render an "account to man of his matter." The point Miller apparently wants to make is: "If God feels no onus to justify the law of death, then why should I?

Miller's eighth theodical principle seems to be evasive, because it leaves deeper theological issues untouched. John Henry concurs, holding that rather than adopting the intellectualist theodicy prevalent in his day, Miller prefers "instead to profess ignorance of the reasons and reasoning of God." In a passing remark, Mortenson points out that one of most conspicuous flaws of some accommodationists of this era is "their overly optimistic handling of the difficult problem of pain, disease, disaster and death in creation. Generally, they either ignored the problem or dealt with it superficially, attributing the evil in a mysterious way to

1Miller, Testimony of the Rocks, 70.

2Ibid.

3Ibid.

divine beneficence." In a recent study, Gregory Elder observes that in the post-Lyellian-Darwinian Zeitgeist it is common to find theologians prevaricate the theodicy issue merely by adopting a stratagem of "obscurity and imprecision," a tactic chiefly characterized by a "retreat into a calculated religious vagueness." Elder described this as a "wait and see what happens" stance, which "was at best a delaying tactic," and "generally failed to address the underlying theological issues." On the one hand, with his ubiquitous references to suffering, torture, and death, Miller is to be commended for recognizing potential problems in the adoption of deep-time geological interpretations. But is mere problem recognition adequate in building a theodicy if one fails to quarry the underlying theological strata?

Whether or not there is agreement on the suggestion of evasion, Miller's theodicy seems to be obscure and imprecise at points. While he does not ignore the problem, he does, as noted, profess ignorance of the ways of God, thus always having as a last

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1Mortenson, 50-51. Modern theodist Charles Birch agrees that "classical theism tends to avoid the subject or leave it as a mystery" (Charles Birch to author, July 4, 1996).

2Theodical areas which Elder suggests were avoided, include "the cruel laws of nature" (17); "genocidal floods, and savage bloodletting" (ibid., 59); "The Darwinian premise of violence" (ibid.); "the brutality of nature" (ibid., 60); "a brutal universe" (ibid., 183); and "an agonized universe" (ibid., 184). In short, according to Elder, many did not come to terms with a God who is alleged to have "willingly slaughtered animals and proto-humans in profusion for countless aeons in order to produce the creatures we see today" (ibid.). Such a God appeared to many "to be more mysterious than mere theology or doctrine would have us believe. And a good deal more dangerous as well" (ibid., 185).

3Ibid., 65.

4Ibid., 62.

5Ibid., 65.

6Ibid., 64.
theodical resort the attribution of evil to the mysterious workings of divine providence which man cannot fathom. While addressing the bearing of geology on theology, Miller seems to do so at the cost of superficially addressing several theological issues, and is perhaps overly optimistic in his theodicy for pain, disease, torture, and death in the created order. Perhaps Miller's structured theodical ambiguity can best be seen in retrospect as at best a delaying tactic.

In concluding this section on Miller, it is of some theodical interest to note that on the evening of December 23, 1856, Miller took his own life.1 Having corrected the final proofs for his summa theologica, The Testimony of the Rocks,2 and as if "in a blazing, if pathetic, gesture of resignation,"3 he barricaded "himself in his study with his treasured books, his fossils, [and] his personal armoury of guns and knives,"4 leveled a pistol at his chest and pulled the trigger, ending his turbulent life.5 One cannot know exactly why

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1In a related vein, according to Hitchcock, Buckland ended his days "in an insane hospital, with no prospect of recovery" (Hitchcock, The Religion of Geology, 34-35, note).

2This was published posthumously along with 32 pages of memorials.

3Shortland, Controversies, 1.

4Ibid., 56. Due to an ecclesial conflict in the Established Church of Scotland, between the Moderates and Evangelicals (later the Free Church), Miller kept a loaded revolver by his side, fearing that "the more rabid Moderates wanted to hire professional thugs to attack and if possible to kill him" (Fenton and Fenton, 196). Once two of Miller's friends jestfully startled him during an evening stroll, only to find themselves staring down the barrel of his cocked revolver (Rosie, 68). Numerous robberies and murders around Edinburgh in 1856 once again prompted Miller to tote a loaded gun. He even set up a mantrap on his porch, convinced that thieves would plunder his personal museum. He also supplemented his armory "with a razor-sharp, broad-bladed sgian, and a Highland Broadsword" (ibid., 80). One night he burst into his wife's room brandishing gun and broadsword, claiming to have heard voices and footsteps (ibid.).

5This is not the place to detail the seamy side of Miller's life, but there is a basis for referring to him as a "darker figure on the Victorian stage" (Shortland, Controversies, 1). Miller's mother dabbled in the occult, opening the door to his own psychic
Miller decided to take his own life, but in light of the numerous conjectures which abound,¹ it does not seem altogether implausible to suggest tentatively that Miller's geologically conditioned theodicy may have been to some degree one contributing factor. At the very least, his theodicy provided no discernable or effective deterrent to his suicide. While his theodicy may boldly imply that this is the best of all possible worlds, his last paroxysm seems to indicate something otherwise.²

**Common Themes Among the Three Accommodationists**

The above analyses have established that there is a readily discernable ideological concord among leading accommodationists, as represented by Buckland, Smith, and Miller. They display philosophical, theological, and exegetical unity on the central rubrics of the experiences. He also had a regard for phrenology, was extremely superstitious, believing in portents, spirits, and omens, and harboured the fear that his mind was deeply and hopelessly diseased, even imagining his brain was being eaten away.

¹Causes of Miller's suicidal state have been the subject of much speculation, with suggestions ranging from everything to somnambulism, digestive disorder, soul-curdling nightmares, hag-riddenness, madness, demonic forces, intellectual tensions, low self-esteem and deep fears of humiliation, domination and effeminacy. Shorthand adds the following possible reasons: bad health [possibly silicosis, contracted during his stonemason days], demonic fantasies, the strains of editing, sexual frustration, repressed homosexuality, tertiary syphilis, the strain of having his beliefs undermined by geological evidence, and the failure of his wife to support him at a crucial juncture in his life, compounded by her unwillingness to follow him "in his abandonment of the literal truth of Genesis" (Michael Shorthand, ed., Hugh Miller's Memoir [Edinburgh: Edinburgh University Press, 1995], 70-74). Also see Roy Porter's chapter, "Miller's Madness," in Shortland, Controversies, 265-286; and ibid., 64, n. 78.

²Reflecting on Miller's suicide, Barber states that it proves "that geology was just as dangerous as laymen had always suspected: if this was the fate of the Christian geologists, people thought, better to shun the science altogether. Many a country parson and diligent mechanic who had taken up the geological hammer under the benign influence of The Old Red Sandstone put it away in dismay when he heard of Miller's end" (Barber, 238).
accommodationist view, though there are differences on secondary matters. What follows is simply a codification of the main themes which are essential in the accommodationists’ theodicy for paleonatural evil. As noted in the previous chapter, this section provides part of the infrastructure for a detailed, comparative analysis between the theodicies of the traditionalists and the accommodationists in chapter 6.

The three accommodationists seem willing to defend the following six tenets. First, like the traditionalists, they affirm the Mosaic authorship, divine inspiration, and infallibility of Gen 1-11, and they deny that geology, when properly interpreted, contravenes the natural sense of the Mosaic narrative.

Second, they affirm the Bible as the final authority in all matters. They make no overt suggestion that the Scripture is authoritative only in matters of faith and practice, but there are hints that the Scripture is not to be taken as a scientific textbook.

Third, while there might be some openness among some accommodationists to some special creation about 6,000 years ago (i.e., of Adam and Eve), earth history and especially the fossil-bearing portions of the fossil record are deep-time phenomena. They affirm that there is enough exegetical latitude in Scripture to accommodate deep time.

Fourth, the accommodationists deny a global Flood, especially one of a penal and catastrophic nature, opting instead for a more localized, more tranquil Flood. The Flood, in their mind, is insufficient to account for most of the fossil-bearing sedimentary rock formations. They further deny the traditionalists’ claim that there is geological evidence which could substantiate a global deluge.

Fifth, these three accommodationists, as the traditionalists, affirm that the created order was initially perfect, though they have a vastly different understanding of what this
means. The accommodationists seem willing to allow that a certain amount of imperfections could have been allowed in the created order by the Creator.

Sixth, all three of these scholars allow the existence of prelapsarian death and paleonatural evil, and do not see these as intrusions into God's original "very good" creation. Unlike the Scriptural geologists, the accommodationists affirm that God's benevolence can be unreservedly proclaimed even if He originally ordained sub-rational suffering, death, extinctions, and all other paleonatural evils irrespective of sin.

In some Evangelical circles the accommodationists are seen as enlightened forerunners who brave the storm by pointing the Church toward a more defensible view on origins. They are known for disagreeing with old literalist perspective because it directly counters the indisputable facts of geology. The analyses of this chapter have discovered and shown that these accommodationists are aware of the theological difficulties and questions regarding the negative impact that a deep-time interpretation of the fossil record can have on God's character and attributes. This last thesis, regarding the particular nature of the theodical uniformity among these three accommodationists, constitutes the second of two basic contributions offered by this dissertation.

Having discovered and analyzed the theodical understandings of the traditionalists and accommodationists, we are now in a position to compare their theodicies and assess their congruity with early Protestant theodicy, to which we turn in the next chapter.
CHAPTER VI

A COMPARISON OF EARLY NINETEENTH-CENTURY BRITISH TRADITIONALIST AND ACCOMMODATIONIST RESPONSES TO PALEONATURAL EVIL

They who ought to have stretched every nerve of their mind to attain a knowledge of The Creator of the world. . . . They ostentatiously boast that they are about to become witnesses to the most remote antiquity, yet, before they reach so high as the times of David, intermix their lucubrations with much turbid feculence.

--John Calvin, *Genesis*

But, in the mean time, what must we do with our Bibles?--for they will never agree with this. The accounts, however pleasing to flesh and blood, are utterly irreconcilable with the scriptural.

--John Wesley, *Wesley's Works*

We must not suppose that the appearance of the world is the same today as it was before sin. Since Origen held this supposition, he resorted to most silly allegories.

--Martin Luther, *Luther's Works*

**Introduction**

In the previous two chapters several dominant theodical themes have been discovered in three early nineteenth-century traditionalists (strict concordists) and three accommodationists (broad concordists). The principle task in this penultimate chapter is to compare and contrast the theodicies of these two groups as they pertain to ten categories which have emerged during the investigations of this study. Each section will compare the views of the traditionalists and accommodationists primarily with the views of Luther, Calvin and Wesley, in an effort to gauge the compatibility of some early nineteenth-century British traditionalist and accommodationist views over against comparable areas in these Reformers. The results will
help to ascertain to what degree, if any, the new geology institutes a shift in the Christian understanding of God's goodness and the meaning of the initial goodness of the created order.

**Ten Fundamental Contrasts Between the Traditionalists and Accommodationists Generated by Different Interpretations of Fossil Remains in the Geologic Column**

Throughout the course of our investigation and comparison of the opinions of representative traditionalists, accommodationists, and Reformers, attention will be focused on two fundamental questions. First, in what manner does the issue under consideration bear on various divine attributes as understood by early Protestants? And, second, to what degree are these classic Protestant perspectives assented to or amended by early nineteenth-century traditionalists and accommodationists? In other words, which school of geological thought tends to more naturally emulate early classic Protestant theodical and theological perspectives? On issues where congruence cannot be clearly delineated, possible inferences will be suggested or the question will merely be left open.

Regarding the views of the Reformers, traditionalists, and accommodationists it is not essential to have each traditionalist, accommodationist, and Reformer address each issue below. At times it will be deemed sufficient to project a group's general position based on a responsible extrapolation from statements from one or two individuals. In addition, since Luther, Calvin, and Wesley do not allow for deep time, paleonatural evil and the principle of species extinction are not found in their writings, and thus it is necessary to substitute the closest functional equivalent; namely prelapsarian natural evil. Since no explicit reference to mass specie extinction is found in the writings of Luther, Calvin, or Wesley (except by the Genesis Flood), attempts to extrapolate must be done cautiously and tentatively to the fairest inference. This being said, it seems that the
Reformers' stance on an issue such as species extinction can be reasonably ascertained based on extrapolation to the best inference. This can be done, perhaps, by examining their views on two natural corollary issues; namely geophysical catastrophes and animal death in general. Nonetheless, wise counsel would suggest that one exercise extreme caution when drawing any inferences not explicitly stated by an author. To the degree that the Reformers give no clues regarding where they might stand on corollary matters, then my interpretations of them must be proportionally more tentative in nature. Having considered the general positions of the Reformers in chapter 2 as an important background to theodicy, this section deals selectively with more specific issues in the Reformers comparable with our representative early nineteenth-century figures. We turn now to the first contrast.

Contrast One--Hermeneutical Methodology, with Principle Reference to the Days of Creation in Gen 1: Are These Natural Days or Undefined Epochs?

We begin by comparing and contrasting the hermeneutical methods of the Reformers, the traditionalists, and accommodationists regarding the length of creation. Turning to the Reformers, it may come as a surprise to discover that Luther, Calvin, and Wesley are enlisted by some contemporary non-traditionalists as enlightened forerunners to higher critical thought.¹ Yet, to portray Luther,² Calvin,³ or Wesley,⁴ as holding to

¹See Ury, "The Search for the Historical Martin Luther: An Inquiry into the Uses and Abuses of Reformation History."

anything other than a position comparable to inerrancy is to border on historical revisionism. Luther states: "The Scriptures have never erred."'¹ Calvin affirms that it is not sufficient "to believe that God is trustworthy, who can neither deceive nor lie, unless you hold to be beyond doubt that whatever proceeds from him is sacred and inviolable truth."² As homo unius libri ("a man of one book"),² and a self-proclaimed "Bible-bigot,"⁴ we should not be surprised at Wesley's insistence that Christians "believe nothing unless it is clearly confirmed by plain passages of Holy Writ," and that they "wholly reject

"The View of the Bible Held by the Church: The Early Church Through Luther," in Inerrancy, ed. Norman Geisler, 357-382; Michael Reu, Luther and the Scriptures (Columbus: Wartburg, 1944); and Wilhelm Walther, Das Erbe der Reformation (Leipzig: A. Duchert, 1918). W. Bodamer has marshalled an impressive list of hundreds of Luther's statements testifying to the reformer's strict view of verbal inspiration ("Luthers Stellung zur Lehre von der Verbalinspiration," Theologische Quartalschrift, 1936: 240ff.).


²Calvin, Institutes, 1:549 (3, II, 6).

³Wesley's Works, 5:3.

⁴Ibid., 3:251.
whatsoever differs therefrom, whatever is not confirmed thereby,” in Scripture. Wesley’s contemporary, Soame Jenyns, believes that the biblical authors could have made mistakes; a position similar to John Pye Smith, who holds that not all matters in Scripture are necessarily being inspired, and hence prone to error. Wesley retorts: "Nay, if there be any mistakes in the Bible, there may as well be a thousand. If there be one falsehood in that book, it did not come from the God of truth.”

One key task left is to establish briefly, from original sources, the positions of Luther, Calvin, and Wesley on the age of the earth and the length of the creation days. Beginning with Wesley, one finds that he expressly desires to show "the natural sense of every part," to help every man to "keep his eye fixed upon the naked Bible." Throughout his entire treatment of the creation narrative Wesley gives no indication of any figurative understanding of the days, always leaning toward the natural sense. He receives by faith that "in six days God made the world," though he admits "that God could have made the world in an instant." According to Wesley, God stretched out the creation week to set a pattern for our work week. Additionally, Wesley believes that the first "sabbath began in the finishing of the work of creation." This is in contrast to some accommodationists who claim that the seventh day of creation never closed, and thus use that day to justify a

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1Ibid., 2:20.
2Ibid., 4:82.
3John Wesley, Wesley’s Notes on the Bible, ed. George Schenhalas (Grand Rapids: Zondervan, 1987), 19.
4Ibid., 24.
5Ibid.
6Ibid., 80.
non-24-hour interpretation for the other other six days.¹

Luther has a dominant commitment to the sensus literalis of the text, and thus he avers that "we know from Moses that the world was not in existence before 6,000 years ago."² Regarding the word "day," Luther wrote that Moses calls a 'spade a spade,' i.e. he implies the terms 'day' and 'evening' without allegory, just as we customarily do. . . . We assert that Moses spoke in the literal sense, not allegorically or figuratively, i.e. that the world, with all its creatures, was created within six days, as the words read. If we do not comprehend the reason for this, let us remain pupils and leave the job of teacher to the Holy Spirit.³

Calvin, like Luther, is a historical maximalist regarding the early chapters of Genesis, and clearly states that he holds to a recent, six-day creation. In expressing concern for those "who maintain that the world was made in moment," he states,

It is too violent a cavil to contend that Moses distributes the work which God perfected at once into six days, for the mere purpose of conveying instruction. Let us rather conclude that God himself took the space of six days, for the purpose of

¹Further, while it is debated sometimes whether Luther, Calvin, and Wesley believe in a recent, rapid creation, contemporary accommodationist, Davis Young, leaves no margin for misunderstanding on this question when he writes that Luther "insisted that the Earth was not yet six thousand years old," and that Calvin "assumed that the world had not yet seen its six thousandth year" (Christianity & the Age of the Earth, 24). "It cannot be denied," he continues, "in spite of frequent interpretations of Genesis 1 that departed from the rigidly literal, that the almost universal view of the Christian world until the eighteenth century was that the Earth was only a few thousand years old. Not until the development of modern scientific investigation of the Earth itself would this view be called into question within the church" (ibid., 25).

²Luther’s Works, 1:3.

³Ibid., 1:3, 6. Conjecture no doubt will arise, upon reading this type of declaration, that had Luther, Calvin, or Wesley been able to travel the terrain with a Hugh Miller, as champions of clear thinking they would be willing to adjust their thinking. Perhaps. But recall that our present historical focus seeks to avoid trafficking in hypothetical scenarios such as these. My central thrust at the moment is merely to present a head-to-head comparison of the perspectives of the traditionalists and the accommodationists pertinent to the main issues surrounding paleonatural evil, with an eye toward judging which group is more in line with early Protestant perspectives.
accommodating his works to the capacity of men.4

Calvin makes it clear that he holds to an age of the earth's history of nearly six thousand years. His following remarks, if not anticipating a coming accommodationism to deep time, certainly apply toward this perspective.

Therein time was first marked so that by a continuing succession of years believers might arrive at the primal source of the human race and all things. This knowledge is especially useful not only to resist the monstrous fables that formerly were in vogue in Egypt and in other regions of the earth, but also that . . . God's eternity may shine forth more clearly, and we may be more rapt in wonder at it. And indeed, that impious scoff ought not to move us: that it is a wonder how it did not enter God's mind sooner to found heaven and earth, but that he idly permitted an immeasurable time to pass away, since he could have made it very many millenniums earlier, albeit the duration of the world, now declining to its ultimate end, has not yet attained six thousand years.2

Calvin adds the following stern warning to these same "impious scoffers":

Into such madness leap those who carp at God's idleness because he did not in accord with their judgement establish the universe innumerable ages before. . . . As if within six thousand years God has not shown evidences enough on which to exercise our minds in earnest meditation. . . . For by this circumstance [six-day creation] we are drawn away from all fictions to the one God who distributed his work into six days that we might not find it irksome to occupy our whole life in contemplating it.3

1Calvin, Genesis, 78.

2Calvin, Institutes, 1:160.

3Ibid., 1:161. Considering these statements of Calvin, it will surprise some that Alister McGrath aligns Calvin with accommodationism. McGrath is able to do this by first describing accommodation as an approach which argues "that revelation takes place in culturally and anthropologically conditioned manners and forms, with the result that it needs to be appropriately interpreted"; in other words, "the opening chapters of Genesis use language and imagery appropriate to the cultural conditions of its original audience; it is not to be taken literally" (McGrath, 9-10). But perhaps McGrath is too gratuitous in labeling Calvin as an accommodationist in this sense, and appears to be using accommodation in another manner. Namely, it seems like McGrath is lauding Calvin as a forerunner who suggested that compatibility (accommodation) can be derived between the findings of science and Scripture if the Church is willing to deliteralize the latter. While Calvin does commend "the study of both astronomy and medicine" (ibid.), it is a false dichotomy to infer that this
His historical maximalist hermeneutic includes convictions that light preceded the sun and stars of the fourth day, and that Adam was literally created from dust and Eve from Adam's rib. Regarding "certain morose professors of the Gospel," Calvin warns that these "audacious scribblers," who "obscure the light" with their "wicked ravings," "turn and twist the Scripture . . . to make of it a nose of wax." Calvin highlights the allegorist, Origen, who "endeavoured to introduce into the Church, the purpose of rendering the doctrine of Scripture ambiguous and destitute of all certainty and firmness." He notes that there are those in his day who feel a need to accommodate to the allegorical method of Origen "because they never found in the world such a place as is described by Moses [i.e., paradisiacal Eden]." Such accommodationists appear to work on the premise that absence of evidence is evidence of absence, and Calvin rebukes them because "they speculate in vain, and to no purpose, by departing from the literal sense." These reflections enable us to move to the traditionalists.

Having previously noted the Reformers' positions, we now turn to the

conflicts with taking Scripture "literally." McGrath, himself an accommodationist in both senses above, commends Calvin for the alleged "major contribution" of eliminating "a significant obstacle to the development of the natural sciences—biblical literalism (ibid., 11). It would be more accurate to claim that Calvin sees the Bible as sufficient, but not exhaustive on details of creation and the natural world. On whether Calvin takes the creation, Fall, and Flood accounts literally, refer back to chapter 2 or see below.

1 Calv in, Genesis, 132-133.
2 Ibid., xxviii.
3 Ibid., xxix, note.
4 Ibid., 114.
5 Ibid.
6 Ibid.
traditionalists regarding hermeneutics and the length of the creation days. The spirit of
ideological, theological, and exegetical solidarity among the traditionalists is most
prominently exhibited in their unity in understanding of certain key passages in Gen 1-11.
We discover that Bugg, Ure, and Young are reluctant to engage in category translation,
tending rather toward a more literal hermeneutic of Gen 1-11. They believe that when
these chapters are responsibly interpreted they present a reliable, fully historical narrative
of how the world was brought into being, and the Creator's subsequent interaction with
His creation. It will become evident throughout this section, with the rarest exception, if
any, that all Scriptural geologists adhere to a face-value hermeneutic.1 Their approach
operates on the premise that if Gen 1-11 does not describe actual historical events, both
the entire hermeneutical enterprise and New Testament soteriology would be sabotaged.

As an introduction to the Scriptural geologists' understanding of the six days of
creation, it is helpful to first consider that they believe the Bible to speak directly to matters
of natural history. Recall Kirby's affirmation of Gaede: "In order to rightly understand the
voice of God in nature, we ought to enter her temple with the Bible in our hand."2

1These literal beliefs include a historical Adam and Eve in an actual garden; an
initially perfect creation implied by "very good" (Gen 1:31); a vegetarian diet of "every
beast of the field" (Gen 1:30); an actual eating of fruit (Gen 3:6) which resulted in a
thoroughly cursed creation (Gen 3:17 f.) and the entrance of human, physical death into
the world through the sin of one man (Rom 5:12); and a literal global and catastrophic
Flood which covered all the high mountains in existence (Gen 7:19).

2Kirby (1759-1850), Anglican clergyman and pioneering entomologist, is
mentioned here due to his prowess as a Bridgewater author, and because of his alignment
with the Scriptural geologists. Scriptural geologists admit the reciprocity of these two
doors, yet leave no doubt which one is their primary source of authority. Kirby believes
that in order to understand God's book of nature, "we ought to enter her temple with the
Bible in our hands." His repeated reference to Matt 22:29 (cf. Kirby, On the Power, xix,
xliv, and xlvii) indicates his intention to literally apply Heinrich Moritz Gaede's axiom:
"C'est, la Bible a la main, que nous devons entrer dans le temple auxuste de la nature,
pour bien comprendre la voix du Créateur" (ibid., opposite side of title page).
As established earlier, Ure emphasizes that the Genesis days are of equal length, each containing an evening and a morning, measured by a rotation of the earth round its axis, indicating that he anticipates several possible objections. Against the potential claim that the first three "days" of creation could not be normal days because the sun was not yet in existence, Ure finds no compelling exegetical reason to suggest that the first three days are any different from the last three, since each is contextually qualified by "an evening and a morning." By specifying six earth rotations of equal length, Ure seems to be making the distinction between sunlight, which *marks* the days, and the earth's rotation, which *makes* the days.\(^1\) Ure's implied definition of the first three uses of "*yom,*" as the periods of light and darkness in regular succession based on the rotation of the earth on its axis, has continued ever since.\(^2\)

George Young unequivocally believes that God "created the world in six days,"\(^3\) but he notes that in recent years it has become a "fashionable opinion among geologists" to attempt "to reconcile" deep time with Genesis "by supposing that the six *days* of the creation are six *indefinite periods,* of great length, corresponding with the eras of the

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\(^1\)Broad concordist, William LaSor, asserts: "To conclude as some do, that the first three 'days' could not have been days of one axial rotation is ridiculous, and is exegetical nonsense" (William LaSor, "Biblical Creationism," *ATJ* [Fall 1987]: 11). Keil and Delitzsch affirm: "If the days of creation are regulated by the recurring interchange of light and darkness, they must be regarded not as periods of time of incalculable duration, of years or thousands of years, but as simple earthly days" (*Commentary on the Old Testament* [Grand Rapids: Eerdmans, 1985], 1:51).

\(^2\)Even if it is argued that mere rotation is not sufficient to establish a day-night cycle, and a light source is in fact necessary, the light source of Gen 1:3 provides such illumination.

\(^3\)Young, *Scriptural Geology*, 37.
different formations." According to Young, this interpretation is "impossible to reconcile," with the Mosaic account. Strictly on exegetical lines, Young recognizes that the first six creation days are linked with 'morning and evening'. Such language cannot "be applied to the formation periods." Being a mature linguist, comfortable with Hebrew, Young is aware "that the terms day, morning, and evening are often in Scripture, as in other writings, used in a metaphorical sense." But accounting for the contextual qualifiers in the text, Young concludes that "it is contrary to the rules of sound criticism, to understand them in this sense, in the simple narrative of the work of creation," without straining violently "the rules of sound criticism."

The Scriptural Geologists' position is too often described facilely as 'anti-geological', 'anti-evolution', or simply 'anti-science.' This is to be expected. But just as superficially, they are portrayed as mindless literalists. But it must be emphasized that the Scriptural geologist's case against accommodationism does not hinge solely on a literal hermeneutic. Cameron's perspective is that the traditionalists' energetic objections do not stem from mere exegetical questions alone, but perhaps more so over concerns of the fate of orthodox Christianity. They realize that capitulation to some scientific theories means abandoning "the traditional structure

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2Ibid.

3Ibid., 342.

4Ibid.

5While traditionalists tend toward literalism, their views do not rest on a crass literalism. Some employ other data to back up a recent creation. For example, Young, Fairholme, and Rhind use polystrate fossil trees; Fairholme uses rapid stalactite/stalagmite formation; Rhind, contra Smith, uses dendrachronology; and Murray employs numismatics.
of Christianity. That is what the debate is really about."6

I have indicated that the traditionalists believe that the biblical authors were consciously and propositionally expressing straightforward history; narrative which were written to be taken at face value. But more than this, the traditionalists see the early chapters of Genesis as communication from a God who uses straightforward, propositional, and verbal modes to convey understanding to the readers of what He did in space and time. In their minds, the denial of the perspicuity of Scripture regarding the six days opens the door to hermeneutical nihilism, and thus the forfeiture of the hard-fought gains of Reformation Christianity established on the cornerstone of a meaningful sola Scriptura.

By contrast, the accommodationists exhibit far more latitude in traveling exegetical paths which their geological consciences deem passable, if not unavoidable. Disencumbered from a literal hermeneutic, they suggest several exegetical paths that Christians can supposedly travel in good conscience. The two most common paths are the gap and day-age hypotheses, both of which Buckland is willing to allow, as noted earlier.

To accommodate deep time to revelation, Buckland sees the necessity of reassessing certain portions of Genesis. In response to that position which is "accustomed to date the origin of the universe, as well as that of the human race, from a era of about six thousand years ago,"2 Buckland lays out what he feels are the only two realistic options which take into account the depth of the geologic strata. First, he contends "that the Days of the Mosaic creation need not be understood to imply the same length of time which is now occupied by a single revolution of the globe; but successive periods, each of great

1Cameron, Evolution and the Authority of the Bible, 48.

2Buckland, Geology and Mineralogy, 1:8.
extent." Buckland also claims that within the use of the Hebrew terms 'āsā (made) and bārā (created) employed in the creation narrative, an indication that creatio ex nihilo is not demanded, but simply implies "a new arrangement of materials that existed before." Thus Buckland permits these views, not seeing any "sound critical, or theological objection, to the interpretation of the word 'day', as meaning a long period."

At the same time, however, Buckland does not see the necessity for such extension "if it can be shown that the time indicated by the phenomena of Geology may be found in the undefined interval, following the announcement of the first verse." This second reconciliatory option is the one Buckland personally favors, drawing upon the authority of Benjamin Silliman, who affirms that Gen 1:1 admits "of any extension backward in time." Silliman is also "disposed to consider the six days of creation as periods of time of indefinite length," yom "not of necessity limited to twenty-four hours."

Between the day-age and gap theory options, Buckland favors the latter, agreeing with the supposition that the word 'beginning' in Gen 1:1 expresses "an undefined period of time . . .

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1Ibid., 17.

2Gen 1:7, 16, and Exod 20:11.

3Buckland, Geology and Mineralogy, 1:32-33.

4Ibid., 1:18. For a refutation of the 'āsā--bārā dichotomy, see Fields, 53-74. Cf. also F.F. Bruce, "And the Earth was Without Form and Void: An Inquiry into the Exact Meaning of Genesis 1:2," JTVI 78 (1946): 21-37.

5Buckland, Geology and Mineralogy, 17-18.


7Buckland, Geology and Mineralogy, 18.
. during which period a long series of operations and revolutions may have been going on; which, as they are wholly unconnected with the history of the human race, are passed over in silence by the sacred historian." Buckland finds "great satisfaction" with this model, since it allows that "millions of millions of years may have occupied the indefinite interval" between the first two verses of Genesis. Given his acceptance of the viability of the gap theory, and the less attractive but nonetheless still pragmatic day-age theory, Buckland sees the biblical record as more than able to accommodate deep time.

To establish a concord between deep time and Genesis, Smith simply opts for a non-literal reading wherever geology so requires. He reserves "the qualities of sanctity and inspiration" only for "the religious and theological element[s] diffused through the Old Testament." Thus, it is not surprising that he sees those Scriptures which deal with "genealogical, topographical, numerical, civil, military, fragments of antiquity" as not necessarily inspired. Contra Buckland, Smith believes it is exegetically untenable to take the creation days as metaphorical, or indicative of an indefinite period of time.

If there were no other reason against this, which I may call device of interpretation, it would appear quite sufficient to require its rejection, that it involves so large an extension in the liberty, or license, of figurative speech. Poetry speaks very allowably of the day of prosperity or of sorrow, the day of a dynasty or of an empire: but the case before us requires a stretch of hyperbole which would be monstrous. A few hundreds, or even thousand, of days turned

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1Ibid., 19.
2Ibid.
3Ibid., 21.
4Ibid.
6James Mellor Brown, 139-142.
into years, would not supply a period sufficiently ample to meet the exigency of geological reasoning; while this way of proceeding, to obtain the object desired, is sacrificing the propriety and certainty of language, and producing a feeling of revolt in the mind of a plain reader of the Bible.\textsuperscript{1}

Smith submits that our interpretation "must rest upon their own intrinsic evidence, in grammatical construction, suitableness to connexion, and agreement with other parts of Scripture."\textsuperscript{2} He believes that "the words of Scripture [should] be interpreted upon the principles of just philology; and we fear not the result."\textsuperscript{3} For traditionalists who are willing to live and die by this hermeneutical sword, it will come as a surprise that Smith sees them as engaging in erroneous interpretation,\textsuperscript{4} while intimating that it is he who applies and submits to a more exacting exegetical rigor.

Smith sees temporal latitude in Gen 1:1, claiming that "WHEN that \textit{beginning} was, when that act was put forth, it was not the design of revelation to inform us. Carry it back as far as we may, there is ETERNITY beyond it: and compared with that eternity, all finite duration sinks into a moment."\textsuperscript{5} Regarding the relation of Gen 1:2 to the previous verse, Smith posits that here we find mere succession, without defining the temporal interval.\textsuperscript{6} He approvingly quotes Dr. Dathe, who believes that after the initial creation of Gen 1:1 "the earth became waste and desolate,"\textsuperscript{7} to which Smith adds that \textit{tohu vabohu [sic]} is used in

\textsuperscript{1}Ibid., 141-142.
\textsuperscript{2}Ibid., 124.
\textsuperscript{3}Ibid., 116.
\textsuperscript{4}Ibid., 52. Cf. 106, 172-173.
\textsuperscript{5}Smith, On the Relation, 185.
\textsuperscript{6}Ibid., 188.
\textsuperscript{7}Ibid.
Scripture "to describe ruined cities."¹ This position necessarily entails a "reorganization" of a previous world, where some portion of Asia was laid waste and flooded, restored and populated as Eden, all within six literal days some six thousand years ago. The inference, of course, is that what is described here is a re-creation out of a former creation.

In addition to his position regarding the length of creation, Smith's most unique hermeneutical contribution is found in his argument for the extent of creation. Is creation a local or global event? In the same manner that scholars suggest that the Genesis Flood could be restricted to a single Mesopotamian basin, could not the creation narrative of Gen 1 refer solely to Eden?² According to Smith this can be accomplished if we take the word "earth" in Gen 1 to be referring only to "the part of our world which God was adapting for the dwelling of man and the animals connected with him."³ Smith is convinced that the honest exegete is not obligated to extend the six days of creation to the entire globe. Rather, "creation" could merely apply to only a portion of its surface.⁴ By entertaining such a phenomenological hermeneutic, Smith truncates creation and the Flood to reflect the finite perspective of the ancient Jewish narrator, reducing both "events" to mere localized convulsions. Thus Smith is able to posit

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¹Ibid., 190.

²This view has been recently revived by Sailhamer, Genesis Unbound. Responses to Sailhammer can be found in James Jordan, Creation in Six Days: A Defense of the Traditional Reading of Genesis One (Moscow, ID: Canon Press, 1999), 131-169; and James Stambaugh, "The Crisis in Biblical Cosmology," paper presented at the Evangelical Theological Society's National Meeting, November 22, 1996, Jackson, MS; see especially Stambaugh's list of framework advocates, 2, note 5. Cf. Grudem, Systematic Theology, 300-304.

³Smith, On the Relation, 189.

⁴Ibid., 189-190.
both deep time and a literal six-day creation.\textsuperscript{3}

Years of digging in the Scottish hills convinced Miller that a literal six-day creation cannot be reasonably maintained. He holds that Moses does not indicate an age to the earth. And although in Miller's perspective geological facts repudiate the older literalist perspective,\textsuperscript{2} he still sees the need to attenuate any apparent conflict between deep-time and Mosaic chronology. Well acquainted with the gap theory's allowance for any deep time between Gen 1:1-2, he does not concur "with forcing the whole gamut of geological time in at the beginning of the biblical text."\textsuperscript{3} Adopting a phenomenological hermeneutic instead, he believes that during six literal days Moses had a "diorama"\textsuperscript{4} revealed to him of "six geologic periods";\textsuperscript{5} i.e., the Creator's work days "rose in VISION before the inspired historian."\textsuperscript{6} Thus, having established that Miller adopts an hermeneutic of category translation, we are in a position to draw some comparisons between the traditionalists, accommodationists, and Reformers.

Having compared and contrasted the basic positions of the Reformers, and the traditionalists and accommodationists on the creation days, it is possible now to assess briefly

\textsuperscript{1}Victor Hamilton seems to suggest something very close to this, when he states: "A literary reading of Gen. 1 still permits the retention of 'day' as a solar day of 24 hours. But it understands 'day' not as a chronological account of how many hours God invested in his creating project, but as an analogy of God's creative activity" (\textit{The Book of Genesis: Chapters 1-17} [Grand Rapids: Eerdmans, 1990], 55-56). Cf. Charles Hummel, "Interpreting Genesis One," \textit{JASA} 38 (1986): 175-185.

\textsuperscript{2}Miller, \textit{Foot-prints}, 293.

\textsuperscript{3}Livingstone, 12.

\textsuperscript{4}Miller, \textit{Testimony of the Rocks}, 164.

\textsuperscript{5}See, ibid., 144-174.

\textsuperscript{6}Ibid., 195.
the positions held by the traditionalists and by the accommodationists with the Reformers. As noted earlier, the traditionalists take Gen 1 at face value, contending that there is no conflict between nature and a plain reading of Genesis provided that both are properly interpreted. Given the literal six-day creation perspective of Luther and Calvin, it seems the fairest inference to see the traditionalists as carrying on in the tradition of the Reformers. The accommodationists, in contrast, see the literalism of the traditionalists as too constricting, and in light of the latest geological theories feel free to follow the dictates of their geological consciences. In their attempt to untie the Gordian knot between geology and Genesis, they subject Gen 1-11 to a variety of category translations. While these attempts at harmonization may have gained credibility in some circles, such peace comes at the price of sacrificing affiliation with the Reformers' hermeneutic of analogia fidei and scriptural perspicuity. In superimposing an extrabiblical authority over Scripture and rejecting the Reformers' six-day interpretation in favor of mere geological theory, the stage is set for further accommodations of Scripture to the findings of science. Now we turn to the second contrast.

Contrast Two—the Genesis Flood: Global and Catastrophic or Local and Tranquil?

Comparing the Edenic curse with the Flood, Luther sees the latter as "the greater curse

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2I.e., the gap, day-age, "diorama" and other models which downplay a global Flood.


4There is a third option, of course, whether the Flood is even historical. But since all nine men in this study accept a time-space Flood, I have limited myself to questions of the Flood's extent and impact, leaving questions of its potential ahistoricity for future research.
... which utterly ruined Paradise and the entire human race."¹ Thus the original curse was exacerbated by the Flood, and any "good trees were all ruined and destroyed, the sands were heaped up, and harmful herbs and animals were increased."² Luther holds "that the entire earth had been laid waste by the Deluge, and every living thing on earth, with the exception of a few human beings, had been destroyed."³ To the question of Eden's locale, he states that, on account of sin, it was "totally destroyed and swept from the earth by the Flood, [and] left not a trace or vestige of its original state remaining, which can now be discovered. . . . The awful Deluge . . . destroyed all things."⁴ Regarding the potency of the Flood, and its post-diluvial remnants, Luther states that he does not "entertain the least doubt that all those wonders of nature, which are from time to time discovered, are the effects and relics of that same awful visitation, the Deluge." Here he sees fossil fishes, and the recontouring of such sites as the Mediterranean Sea Red Sea, the Gulf of Persia, and other large bays as relic effects of the terrible Flood.⁵ He also is convinced that had man remained obedient, "the rainbow would not have come into existence."⁶ Contemplating local floods, he asks: "If today rivers overflow with such great damage to men, cattle, and fields, what would be the result of a worldwide flood?"⁷

¹Luther's Works, 1:90.
²Ibid., 205.
³Ibid., 206.
⁴Luther, Luther on the Creation, 1:164.
⁵Ibid., 165.
⁶Luther's Works, 1:77. Allusion is made here to the tradition which believes that prior to the Fall there was no rain.
⁷Ibid., 90.
Calvin believes that the intent of the Flood was to destroy the world.1 He accepts the details of Gen 7-9 as describing historical details and events.2 The onslaught of the waters comes "in an irruption so violent, and in a shock so severe,"3 and the result is "that the whole world was immersed in the waters,"4 the creatures adorning the earth are swept away,5 and the "whole human race" receives its just dessert.6 Additionally, he writes that "God certainly determined that he would never more destroy the world by a deluge,"7 logically ruling out a local flood. This brief appraisal of Calvin on the Flood, coupled with his conviction to take the events in the early chapters of Genesis as literal history, is sufficient to conclude that the early nineteenth-century accommodationists cannot find a natural ally in Calvin.

Shifting to Wesley, we find that even though he believes that the curse affects every thread in the fabric of the created order, he still contends that after the Fall, and "before the flood," the earth "retained much of it primeval beauty and original fruitfulness."8 When writing that prior to the deluge "the globe was not rent and torn as it is now,"9 the clear inference is that the Flood effects a tearing of nature’s fabric equal to, if

1Calvin, *Genesis*, 264, 270, 283.
2Ibid., 264-311.
3Ibid., 272.
4Ibid.
5Ibid., 284.
6Ibid.
7Ibid., 283.
8Wesley’s *Works*, 6:56.
9Ibid.
not greater than, the fissures of Eden.

We turn now to Bugg, Ure, and Young regarding the issue of the extent of the Flood. Bugg states that "THE BIBLE is given to teach us that there has been one Creation, and one Deluge, attached to our globe, and no more." Bugg believes that taking into account the cataclysmic force of the Flood is enough to overthrow deep-time geology, and it also "indirectly affords us a key by which to unlock all the difficulties of the most important phenomena of the fossil strata, at which modern Geologists stumble." After quoting Gen 7:24-8:5, 13, 14, Bugg simply concludes that "such is the account of Noah's flood; of its extent--its effects--and its continuance." This suggests an unusual flood. According to Bugg, "Moses is very exact and particular in stating whence the waters arose--the periods of the advance and decrease--and the time which they remained upon the earth." He relays his hope that his reader will be affected, as he was, "when he first contemplated the scriptural character of this dread transaction," that "he will literally tremble when he meditates on this awful catastrophe."

Andrew Ure advances the thesis that the Flood was sent because of universal sin. He dedicates over one third of his book specifically to the Flood, and is willing to defend auxiliary entities such as the absence of rain and rainbows before the Flood. In response to tranquil or local flood theories, Ure makes reference that "St. Peter's emphatic term,

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1Bugg, Scriptural Geology, 2:52.
2Ibid., 1:xii.
3Ibid., 1:163.
5Ibid., 1:170.
6Ure, New System, 599-602.
anuXexo (perished), could never be spoken of a transient inundation.\textsuperscript{1} The discoveries of bony relics in the north, of animals from warmer climates,\textsuperscript{2} "become unimpeachable witnesses to the Divine inspiration of Moses, when he relates the destruction of the earth, along with its guilty inhabitants."\textsuperscript{3}

As a preemptive apologetic to those decrying the Flood as somehow immoral on God's part, Ure states that here God has reared "with one hand a monument to all ages of the punishment of incorrigible violence and impiety."\textsuperscript{4} Not surprisingly, the broad concordists attenuate the sin-death causal nexus in relation to the Noachian deluge, since they already set a precedent by severing the same nexus in Gen 3. For traditionalists, the Fall and the Flood result in massive death, and are incoherent when uncoupled from sin. For Ure, to affirm that such mass-mortality is natural, or even the preference of Divine Providence, is to blunt the gravamen of God's wrath and judgment on sin.

Young shares the conviction that history is characterized by two massive transmutations: the Fall and the Flood. Concerning the latter, he writes that earth's "strata have been deposited by water," and "through some powerful agency, they have suffered great changes."\textsuperscript{5} Instead of conceding the high antiquity of the formation system, Young asks "why may we not rather suppose, that a great proportion of them [strata] . . . might be formed at the

\textsuperscript{1}Ibid., 598.
\textsuperscript{2}Cf. ibid., 491, 598.
\textsuperscript{3}Ibid., 598.
\textsuperscript{4}Ibid., 596.
\textsuperscript{5}Young and Bird, \textit{Geological Survey}, 340.
era of the deluge?"\(^{6}\) In response to the view advocating a tranquil Flood which left no
geological trace, Young believes this view has not "carefully considered the words used by
Moses in describing the Noachian deluge."\(^{2}\) Young claims that "the strongest scriptural
objection" to the deep time system is "that it leaves no room for the deluge, that great
catastrophe so distinctly recorded in sacred history."\(^{3}\) Whether the pre-adamite theorists posit
a "quiet effusion of waters over the earth," or "reduce it to a mere local inundation," either
idea "is utterly impossible to reconcile with the sacred volume."\(^{4}\) The expansive terminology
and terms of destruction are enough to deter Young from the "quiet effusion" perspective.\(^{5}\)

An essential uniformity exists among accommodationists on the extent and force of
the Flood in terms of a localized and/or tranquil Flood. Early in his career Buckland holds
to a plain reading of Genesis, and thus a strict diluvial geology. But by the 1830s he shifts
to a less literal stance, holding the biblical Flood to be merely "the last of many geological
revolutions that have been produced by violent irruptions of water, rather than the
comparatively tranquil inundation described in the Inspired Narrative."\(^{6}\) He sees the rise
and fall of the waters as "gradual, and of short duration," producing "relatively little change
on the surface of the country they overflowed."\(^{7}\) So, in his mind, the only geological

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\(^{1}\) Ibid., 343.
\(^{2}\) Ibid.
\(^{3}\) Young, *Scriptural Geology*, 42.
\(^{4}\) Ibid.
\(^{5}\) Ibid., 43 ff.
\(^{6}\) Buckland, *Geology and Mineralogy*, 95.
\(^{7}\) Ibid.
revolution described in Scripture is tranquil, leaving no trace of, while numerous preceding
catastrophes, on which the Scripture is silent, are responsible for the geologic column
perhaps ten miles thick in places.¹

Such diluvial reductionism prompts Buckland's contemporary, James Mellor
Brown, to critique Buckland's handling of the Flood narrative as "extremely cursory," and
disproportionate to the import accorded the event by Scripture.² Even worse, he
continues, is that Buckland's only two brief allusions to the Flood seem "calculated to
disparage" its impact and extent.³ Buckland's disparagement of a global Flood is evident
when he writes that the mosaicists' position is "irreconcilable with the enormous thickness
and almost infinite subdivisions of these strata, and with the numerous and regular
succession which they contain of the remains of animals and vegetables."⁴ Buckland,
therefore, holds to a brief, relatively tranquil Flood, which cannot begin to account for the
enormously thick geologic column and its organic remains.

In arguing against what he calls a "strictly universal deluge,"⁵ Smith feels that the
undeniable inference to be drawn from empirical observation is that "the geological
evidence is adverse to the admission of a deluge simultaneous and universal for every part
of the earth's surface."⁶ Take for example the amount of water needed to immerse the

¹Ibid., 37-38.
²James Mellor Brown, 29.
³Ibid.
⁴Buckland, Geology and Mineralogy, 16.
⁶Ibid., 102. Cf. Smith's summarized case against a global Flood (ibid., 200-213).
entire planet. Smith contends that it would take nine times the current ocean volume to accomplish this task. "Whence was this water derived," he inquires, "and how was it disposed of . . . ?" Additionally, he also does not think that the ark could hold all the world's species, and refers to the "astonishing ignorance" of "well-intentioned calculators," who suppose that all that was necessary were "three or four hundred species at most."2

It is Smith's contention that if the Church can tolerate the notion of a localized deluge in an isolated Mesopotamian basin, it can also extend this principle to the six days of creation, restricting the 144 creation hours to a small parcel of land called Eden. By entertaining such a phenomenological hermeneutic, both events can be truncated to reflect the limited perspective of the ancient Jewish narrator.3 Thus, the Flood is reduced to mere local paroxysm.4

Hugh Miller politely demurs from literalists such as John Kitto and William Hamilton, and touts the precedent of accommodationists such as Matthew Poole, Bishop Stillingfleet, Smith, Hitchcock, and Chalmers, who all suggest various hermeneutical options to accommodate Genesis to deep time.5 Having abandoned the most natural reading of Genesis, Miller opts for a phenomenalistic hermeneutic to localize the Genesis Flood,6 suggesting that the biblical author is here employing a metonymy (i.e. the description of a part as if it were the whole. Miller writes:

The question is, whether we are to regard the passages in which [Moses] describes

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1Ibid., 107.

2Ibid., 109. See John Woodmorappe, Noah's Ark: A Feasibility Study (Santee, CA: Institute for Creation Research, 1996), for a recent response to these types of objections.

3See Millhauser, Just Before Darwin, 48 f.

4Smith, On the Relation, 139 f; 189-193.

5Miller, Testimony of the Rocks, 262 ff.

6For the full picture of Miller's view of the Flood, see ibid., 243-318.
the Flood as universal as belonging to the very numerous metonymic texts of Scripture in which a part—sometimes a not very large part—is described as the whole, or to regard them as strictly literal and severely literal.\(^1\)

Miller offers a local-Flood model which hinges upon several unnatural hypotheses. He envisions that east of modern Ararat 100,000 square-miles sank an average of 400 feet every day for forty days, creating a gigantic 16,000-foot saucer-like depression into which the area waters rushed in to fill.\(^2\) After some time the waters abated without leaving any discernable geological vestiges. Taking these theses for granted, he posits the last hypothesis that this partial Flood "was sufficient to destroy the [human] race in an early age."\(^3\) Such a scenario does not seem to be regarded by Miller "as by any means an incredible event."\(^4\) Though the genesis of this model stems from Miller's desire to accommodate the Noachian Flood to modern geology, he still feels compelled to maintain some vestige of a spatio-temporal Flood which covered all the highest mountains in a Mesopotamian basin and destroyed all humanity.\(^5\)

Thus, while the accommodationists know the Bible will not allow them to completely dispense with the Flood, they tend to downplay Mosaic inferences on a global and cataclysmic Flood, and are content with a local or tranquil Flood. This means they do not allow for the Flood to have enough geological weight to account for any part of the fossil-bearing sedimentary rock formations.

In view of the analysis of the Reformers, and the traditionalists and

\(^1\)Ibid., 308-309.
\(^2\)Ibid., 317.
\(^3\)Ibid.
\(^4\)Ibid.
\(^5\)Ibid., 314-315.
accommodationists, presented above, I now briefly assess the position of the traditionalists and accommodationists with the Reformers on these points. I have established the consonance of the accommodationists regarding the extent and effects of the Flood. While disagreeing on some exegetical and geographical details, they agree that the Flood is neither global nor catastrophic. The rapport among the traditionalists on the extent and effects of the Genesis Flood closely parallels their concord on the effects and extent of the Edenic curse. Their view comports well with that of the Reformers who also see the Flood as having destroyed the entire human race, and as having ruined any remnant of Paradise. Though Luther, Calvin, Wesley, Bugg, Young, and Ure do not describe all events with equal detail, the fairest inference from their writings is that they would affirm all the details in Gen 6-9 as plain historical facts, specifically affirming that the Flood is a naked singularity, penal in nature, global in extent, and catastrophic enough to significantly alter the contours of earth, and extirpate all humans and land-dwelling, air-breathing animals, except for those aboard the ark. These six thinkers are in league that whatever primeval beauty the post-fallen natural order retained was destroyed by the Flood. By contrast, Buckland, Smith, and Miller tend to argue that all things continue as they have from the beginning of creation.

Having compared and contrasted the traditionalists and accommodationists against the hermeneutical method of Luther, Calvin, and Wesley with regard to the length of creation and the extent of the Flood, we now move to the issue of the origin of natural evil. To establish a broad foundational basis for comparing the convictions of the traditionalists, accommodationists, and Reformers, the discussion of the first two contrasts above required somewhat extensive treatment. As we shift to the remaining eight issues, however, the approach will be more that of a head-to-head, intermingling exchange, including assessments of how the issue at hand bears on the character of the Creator.
Contrast Three--Characterizing the Pre-Adamic Economy of Nature:
What Is Meant by Calling the Created Order Very Good?

In view of the fact that God looks over all His finished creation and declares it to be "very good," Bugg characterizes Gen 1:31 as a "simple, majestic, and God-like narrative," which conveys "a peculiar, and beautiful emphasis." In his estimation, any motif supposing "that animals have arisen by time and acquirements, from animalcules and monads, to quadrupeds and men," is demonstrated by this verse alone to be "erroneous in fact." By itself, then, this verse nullifies any notion that "the human race commenced its career in a state of barbarism," from which it has "been gradually improving" ever since. Augmenting that portion of the verse which states, "EVERY thing that he HAD MADE," Bugg sees this as a propositional affirmation that "every thing was in its perfection before him, which the Lord God had made. There could then have been no prior revolutions and destructions of the works of God. They were all here, and all good."  

Andrew Ure sees the deep-time axiom that from the beginning God "created a chaos," a "pristine reign of elemental strife and confusion" as "inconsistent with the

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1Bugg, Scriptural Geology, 1:143.

2Ibid., 1:144.

3Ibid., 2:315.

4Ibid.

5Ibid., 1:143.

6Ibid.

7Ure, New System, 12.
Government of Omnipotence."⁸ According to Ure, the "very good" creation had "lost none of its original brightness" prior to the Fall,² but due to Eden's curse all creation was ruined; all its original brightness was extinguished.³ This loss of luster, Ure believes, meant that the "the ground of the antediluvian was cursed on account of Adam's transgression,"⁴ and "the fertile fields of Eden were forfeited."⁵ This concurs with Wesley's contention that God made the world "unspeakably better than it is at present."

The unfallen world was "without any blemish, yea, without any defect. [God] made no corruption, no destruction, in the inanimate creation. He made no death in the animal creation; neither its harbingers,—sin and pain."⁶

The accommodationists could hardly disagree more with this last statement, promoting instead the view that our planet has undergone numerous violent perturbations. Miller sees geology as having unlocked the history, and therefore creation, of our planet, shedding light on "God's doings . . . for myriads of ages"⁷ before creating man. Smith finds it hard to believe that otherwise reasonable men would deny that our planet has endured "vast physical revolutions . . . each of which may have required a thousand

¹Ibid.
²Ibid., 86.
³Ibid., 471, 474.
⁴Ibid., 471.
⁵Ibid., 473.
⁶Wesley's Works, 6:213
⁷Miller, Old Red Sandstone, 288.
Buckland’s estimation finds portions of the geologic column to “be at least ten miles” thick, and indicative of a “long series of changes and revolutions.” He sees our world as built on the wreckage of previous worlds, contending that the Genesis Flood is merely “the last of many geological revolutions,” a revolution that is “comparatively tranquil.” Far from detracting from God, Buckland sees that these “violent Perturbations” constitute proofs of design. The “aboriginal constitution” and terraqueous economy of our globe evidence “wise foresight, and benevolent intention, and infinite power . . . proofs of the most exalted attributes of the Creator.” Buckland believes “the original groundwork of [God's] Creation” includes long periods of time, separated by vast intervals. Early on it is established that different races of vegetables and animals would perish, making room for succeeding “systems of organization,” which in turn are destined to extinction and “entomb[ment] within the bowels of the Earth.”

1Smith, *On the Relation*, 219-220.

2Buckland, *Geology and Mineralogy*, 38.

3Ibid., 42.


5Buckland, *Geology and Mineralogy*, 95.

6Ibid., 555.

7Ibid., 539.

8Ibid., 580.

9Ibid., 571. Cf. 578.

10Ibid., 581.

11Ibid., 583.
this Buckland perceives abundant "evidence of Method and Design," finding no "alarm" in numerous, prelapsarian, "successive systems of animal and vegetable life," but resting assured that these are "proof of the existence and agency of . . . [an] all-wise and all-powerful Creator." In his applause for Hitchcock, Buckland sees deep-time serial extinction as furnishing "us with some of the grandest conceptions of the Divine Attributes and Plans to be found in the whole circle of human knowledge." In fact, when the geologist contemplates "the petrified organic remains of former conditions of our Planet," he "deciphers documents of the Wisdom in which the world was created." Buckland notes that while some are alarmed at "the physical history of our globe, in which some have seen only Waste, Disorder, and Confusion," the proper interpretation, aided by the book of geology, is to see instead, "endless examples of Economy, and Order, and Design."

In strong apposition to this view, Calvin holds that "all the evils of the present life, which experience proves to be innumerable," like "inclemency of the air, frost, thunders, unseasonable rains, drought, hail, and whatever is disorderly," result from the agency of sin. For Calvin, nothing was more certain than that at present all things are in a state of

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1Ibid., 581.
2Ibid., 586.
3Ibid., 587, note.
4Ibid.
5Ibid., 595.
6Calvin, Genesis, 177.
disorder due to sin, without which the world would otherwise be an angelic harmony.\footnote{Calvin, \textit{Institutes}, 1:71, 163, 246; \textit{Genesis}, 173-178.}

Wesley also sees sin as disordering and depraving the works of this world.\footnote{Wesley's \textit{Works}, 6:206.} Luther believes sin disfigured the earth.\footnote{Luther's \textit{Works}, 1:78.} Now if the "disorder" that Buckland refers to is different from the cosmic disordering that Luther, Calvin, and Wesley intimate, accommodationists who wish to be considered within the boundaries of Reformation orthodoxy must offer some clarification as to what they mean by the terms order and disorder. Further, Calvin's meaning of "harmony" differs quite substantially from Buckland's "order" since Calvin believes this harmony was lost through sin. The accommodationist model will not allow for any Miltonic notion of "angelic harmony," and merely holds the brute belief that numerous organic remains in the fossil record indicate harmony of a much different order.

Addressing those entities "which are corruptions which originate from sin," Calvin states that "the earth will not be the same as it was before."\footnote{Calvin, \textit{Genesis}, 174.} He notes that the prophets foretell that one day this prior "golden age will return in which perfect happiness existed, before the fall of man and the shock and ruin of the world which followed it."\footnote{Calvin, \textit{Isaiah}, 1:383.} In contrast, Miller claims that "the Palæontologist finds no trace in nature of that golden age of the world of which the poets delighted to sing,"\footnote{Miller, \textit{Testimony of the Rocks}, 66.} and which Calvin clearly embraces. Miller believes that hard facts cancel out any possibility of an age where "all creatures lived together in
unbroken peace, and war and bloodshed were unknown."¹ Young holds that this accommodational denial of a golden age detracts "from the honours of the Almighty"² for the simple reason that it reflects negatively on the original very good creation. Considering the formation system's deep-time serial "destruction and renovation,"³ and recounting that all creation is described by God as "very good,"⁴ Young asks the following question: "With what propriety could these words have been used, if the work of some of the preceding days had been destroyed, before the sixth day began?"⁵ The poignancy of this question will intensify orders of magnitude in the wake of the numerous concentration Lagerstätten to be exhumed before the turn of the millennium.

Wesley is so convinced that Gen 1:31 refers to perfect goodness, that he is not willing to entertain any badness in the sub-rational realm prior to human sin. For Wesley, there was no "evil of any kind"⁶ prior to sin. He believes that due to human rebellion every creature was "subjected to vanity, to sorrow, to pain of every kind, to all manner of evils."⁷ Wesley thinks that prior to sin, "the paradisiacal earth afforded a sufficiency of food for all its inhabitants"; none were created to "prey upon the other"; "reptiles of every kind were

¹Ibid.
²Young and Bird, Geological Survey, 341.
³Young, Scriptural Geology, 76.
⁴Miller and Bird, Geological Survey, 342.
⁵Ibid.
⁶Wesley's Works, 6:243.
⁷Ibid., 245.
equally harmless"; all "creatures breathed . . . the benevolence of their Creator."\(^8\)

To the important question, "Why is there pain in the world?" Wesley answers, "Because there is sin: Had there been no sin, there would have been no pain."\(^2\) He believes that before the Fall mankind was not liable to death or pain.\(^3\) He even characterizes fatigue, wrinkles, and bad weather as post-lapsarian intrusions. The original creation was very good, but

how far is this from being the present case! In what a condition is the whole lower world!--to say nothing of inanimate nature, wherein all the elements seem to be out of course, and by turns to fight against man. Since man rebelled . . . in what a state is all animated nature!\(^4\)

Consider the basis for Luther’s conviction that prior to the Fall "absolutely nothing in the entire creation would have been either troublesome or harmful for man." The beginnings of such a contention stem from his view that Gen 1:31 states plainly: "Everything that was created by God was ‘good.’ And yet how troublesome they are!!\(^5\) On account of sin, the earth is compelled to endure a curse."\(^6\) Calvin also clearly believes that "the whole order of nature was subverted" due to the causation of humanity's first sin.\(^7\) Adam "consigned his race to ruin by his rebellion when he perverted the whole order of nature."\(^8\)

\(^1\)Ibid., 212-213.
\(^2\)Ibid., 215.
\(^3\)Ibid., 209.
\(^4\)Ibid., 245.
\(^5\)Luther’s Works, 1:77.
\(^6\)Ibid., 204.
\(^7\)Calvin, Genesis, 177, 285.
\(^8\)Calvin, Institutes, 1:246.
Regarding harmful creatures, Luther teaches that they were not in existence prior to
the Fall, "but were brought into being later on out of the cursed earth as a punishment for sin,
to afflict us and to compel us to call upon God." Calvin believes that animals were originally
submissive, but became savage and threatening, and are "liable to vanity, not willingly, but
through our fault." According to Calvin, these represent a corruption and a degeneration
from the original creation, and are more truly of God as an avenger. Wesley asserts that
there was a time when animals did not attempt "to devour, or in anywise hurt, one another.
All were peaceful and quiet," exhibiting "a kind of benevolence to each other." What a
contrast this is with Miller's contention that for "untold ages ere man had sinned or suffered,
the animal creation exhibited exactly its present state of war." Wesley would respond that
only a shadow of the original very good creation can now "be found in any part of the brute
creation." Whereas Wesley grieves over the "savage fierceness" and "unrelenting cruelty . . .
invariably observed in thousands of creatures," emblematic in his mind of the withdrawal of
divine goodness, accommodationists actually see these as indications of divine goodness.

What of the goodness in the plant world? Regarding husbandry, Luther teaches

1Luther's Works, 1:54.
2Calvin, Genesis, 105.
3Ibid.
4Ibid., 104.
5Wesley's Works, 4:212.
6Ibid., 245.
7Miller, Testimony of the Rocks, 70.
8Wesley's Works, 6:246.
that had there been no Fall, "the earth would have produced all things, unsown and
uncultivated." Before the Fall, the earth "would gladly produce the best products, but is
prevented by the curse." Since the Fall, the earth "does not bring forth the good things it
would have produced if man had not fallen." All "harmful plants . . . such as darnel, wild
oats, weeds, nettles, thorns, thistles," as well as "poisons, the injurious vermin, and
whatever else there is of this kind . . . were brought in through sin." Before the Fall, "no
part of the earth was barren and inferior, but all of it was amazingly fertile and
productive." Yet this golden age was not to last, for creation's goodness was contingent
upon the purity and innocence of Adam and Eve. Now, husbandry was to be plagued by
weeds and the like, not to mention "the almost endless troubles from the sky, the harmful
animals, and similar things, all of which increase . . . sorrow and hardship."

Calvin holds that due to sin-generated ataxias the earth's fertility was diminished
and such things as briars and thorns came into being. His following statement leaves no
doubt where he stands on the origin of botanical evils, if you will, when he affirms that
because of sin,

the earth will not be the same as it was before, producing perfect fruits; for he
declares that the earth would degenerate from its fertility, and bring forth briars

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2 Ibid., 205.
3 Ibid., 204.
4 Ibid.
5 Ibid., 205.
6 Ibid.
and noxious plants. Therefore, we may know, that whatsoever unwholesome things may be produced, are not natural fruits of the earth, but are corruptions which originate from sin.\(^1\)

According to Wesley, before sin "there were no weeds, no useless plants, none that encumbered the ground; much less were there any poisonous ones, tending to hurt any creature; but everything was salutary."\(^2\) Addressing changes in nature, Bugg believes it "was not natural to the earth to bear 'thorns and thistles': It was not natural to animals to eat one another."\(^3\) Such are degradations from an original state. The cause of this is due to their "connexion with the human race." The cause was a moral one--man departed from his allegiance to his Maker--and from that period, the whole world degenerated.\(^4\)

The accommodationists take exception to the theodical nuance noted above. Buckland concedes that the curse partially implicates the inanimate creation, but quickly emphasizes that "no mention whatsoever is made of any beast, excepting the serpent."\(^5\) Smith agrees with the affirmation of an anonymous author,\(^6\) who admits to previously entertaining "the idea of death having passed generally upon the whole creation, at the fall of man."\(^7\) But being made aware "of the discoveries of geologists," this author was led to reexamine "the

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\(^1\)Ibid., 174.

\(^2\)Wesley's Works, 6:211.


\(^4\)Ibid., 222.


\(^7\)Smith, *The Relation*, 252.
Having accepted that "death was in the world previous to the fall of Adam," and in agreement with the anonymous writer, Smith is aware that such a belief "seems at first, to a Christian mind, to destroy the idea of death as a penal consequence of sin." But Smith has found a way to circumvent this problem. He simply contends that "God has written the lesson of responsibility . . . through the whole empire of nature." These "are not arbitrary inflictions, but grow out of the necessary constitutions which the All-wise Sovereign has fixed for the good order of his universe."

Having sketched the general contours of the early nineteenth-century strict and broad concordist perspectives regarding the ontological status of the original creation, we have discovered a pronounced point of disagreement between these two schools. Traditionalists and accommodationists both suggest that the pre-Adamic natural order is characterized by goodness, but as already alluded to numerous times in previous chapters, each group gathers something very different from this adjective. Traditionalists usually employ their locus classicus, Gen 1:31, as decisive in their theodicy. They take his proclamation of the finished creation's very goodness as a divine affidavit which is intended to propositionally convey something about both God's creation and His character. The traditionalists see entities such as predation, suffering, disease, death, extinction, or any natural evil as unintended and intrusive to the original created order. Such natural evils are, so they contend, incompatible with how an all-loving, all-powerful God would be expected to create, and are inconsistent with a straightforward reading of 

1Ibid.

2Ibid., 227.

3Ibid.
Scripture, which seem to suggest that sin had a profoundly negative impact on the natural realm. The traditionalists' view, then, is much closer to, if not almost exactly parallel with, the Reformers' view of the goodness of the finished creation and that the Fall sent all of creation off on a trajectory that was anything but very good.

By contrast, accommodationists understand that predation, suffering, disease, death, species eradication, and all natural evils are divinely woven into the fabric of creation, and do not taint divine goodness. These evils are not catalyzed by human disobedience, and thus they are non-intrusive to the created order. Accommodationists are fairly uniform in their perspective that the initial creation is relatively perfect, yet open to a progression toward perfection. Deep time was necessary for God's handiwork to gradually improve. Most, like Buckland, would hold with little variation that the earth was made out of the wreck and ruins of a more ancient world or worlds. The accommodationists are clear, emphatic, and unified on the issue of death and suffering (or what this study has called paleonatural evil), and contend that sub-rational death does not have moral roots. In other words, sin had little effect, if any, on the natural realm, but rather, the brunt of the curse comes in the form of spiritual death, since mankind was always originally designed to experience physical death. Since, in their view, natural evil is unassailably verified by deep-time geological data and compatible with a responsible handling of divine Writ, then any level is amenable with an omni-benevolent and omnipotent God. How accommodationists view the historicity, extent, and effects of Gen 3 are integral questions which are virtually determinative on where they will come out on various subsequent theodical questions.

The accommodationists, however, hold to a more uniformitarian view of earth history, differing quite markedly from the three Reformers. They accord minimal, if any, transformation of the natural order due to the Fall. At worst, Adam and Eve's lapse brought
spiritual death on themselves, but there is no indication in Buckland, Smith, or Miller that they see the curse as radically altering the natural order; certainly nothing near the position of Luther, Calvin, and Wesley who suggest that lightenings, storms, floods, and earthquakes are due to sin. The bottom theodical line in the Reformers' assessment of the excessive natural evil which permeates the present order is articulated well by Wesley, who believes any theodicy to be deficient that does not remember that "in the beginning it was not so";1 "evil did not exist at all in the original nature of things."2

Contrast Four--Taking Measure of the Edenic Curse:
Does Nature Bear Any Penal Scars?

A central bone of contention between the traditionalists and accommodationists is that the former posit a cause behind nature's alleged degeneration from an original perfection; and this cause is a moral one. Not only is man degraded from his original perfection, but "all nature with him."3 The position of one of the Reformers is useful in opening the discussion of this point. According to Luther, there is a radical discontinuity between the pre-Fall world and the post-lapsarian one, and "the whole world degenerates and grows worse every day" as a result of man's sin.4 In stark antithesis, according to Bugg, the accommodationists do "not recognize moral causes as having any concern in the physical changes of the globe."5 An error of "vast importance," one "bad in divinity,"

1Wesley's Works, 1:212.

2Ibid., 214.

3Bugg, Scriptural Geology, 1:152.

4Works, 1:209.

5Bugg, Scriptural Geology, 2:315.
according to Bugg, pertains to decoupling natural evils from any moral causation. Bugg recognizes that the deep-time geology "erases any connexion of offence [sic], with the suffering beings."¹ Bugg states that modern geology "never recognises moral evil as the cause of natural catastrophes."² Traditionalists, on the other hand, are convinced that "moral causes have produced [these] changes," and "that natural evil never precedes moral evil; and that sin is the author of pain, as well as of death."³

Ure sees the earth's Lagerstätten as more emblematic of a fallen world than an originally created order. To suggest, as "Natural Theism" does,⁴ that God originally created the world on such a "precarious an abode . . . plunging indiscriminately every tribe and family of his sentient offspring in mortal agony and death," is to impeach God's wisdom and goodness.⁵ But Ure submits that if we allow that these sepulchers to show the world to be "the victim of sin,"⁶ then perhaps it "will not have perished in vain, if its mighty ruins serve to rouse its living observers from their slumberous existence," and lead them to think seriously on the "origin and end of terrestrial things."⁷ A non-penal interpretation of the origin of the geologic column is unthinkable for Ure. The centerpiece of his theodicy for the world's Lagerstätten is a penal, universal cataclysm.

¹Ibid., 40.
²Ibid., 317.
³Ibid.
⁴Ibid., 505.
⁵Ibid.
⁶Ure, New System, 473.
⁷Ibid., liii-liv.

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All natural evils encased in the geologic record are seen as God's just response to sin. Taking umbrage with this, Miller acknowledges that some predatory apparatuses seem "formed not only to kill, but also to torture," but continues that these structures are altogether at variance with the preconceived opinions of those who hold that until man appeared in creation, and darkened its sympathetic face with the stain of moral guilt, the reign of violence and outrage did not begin, and that there was no death among the inferior creatures, and no suffering.

Here, Miller goes beyond mere predation and death, believing that this "reign of violence and outrage" was designed to include suffering and torture. Note that for Miller geology has conclusively demonstrated that there is no connection between human moral failings, and sub-rational suffering and death. For "untold ages ere man had sinned or suffered, the animal creation exhibited exactly its present state of war." Thus he seems content that predatory apparatuses which cut, pierce, torture, and kill are divinely ordained components of the paleonatural order, bearing no lapsarian imprint.

Without heeding the spirit of accommodation that was sweeping across England, Young holds that "it was man's disobedience that brought death into the world, with all our woe," which by inference includes all natural evils. Young affirms that our globe "is widely different than its original state," and attests that earth history is characterized by two massive transmutations: the Fall and the Flood. To Young, the deep-time formation

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2 Ibid., 69-70.
3 Ibid., 70.
4 Young, *Scriptural Geology*, 41-42.
6 Ibid., 340-344.
system, with its prelapsarian suffering, death, and destruction in the sub-human realm, "seems scarcely consistent with the wisdom" of God and seems untenable scripturally.¹ According to deep-time geology, "death had reigned and triumphed on the globe, in the destruction of numerous races of creatures, thousands of years before man existed."² If Scripture teaches that sin ushered death into the world, then death had no part of the original created order, and thus extinctions and habitat-destroying geophysical phenomena are post-lapsarian intrusions. Young's main theodical charge against deep-time serial catastrophism is that it subtracts "from the honours of the Almighty."³ He wonders how a believer could defend deep-time death and catastrophe as non-intrusive and non-penal concomitants, "antecedent to the introduction of sin, and even to the creation of man."⁴ In Young's estimation, sin is to blame for all natural evil. And in this regard, he is in league with Calvin, and all the key Reformers, who teach that Adam "consigned his race to ruin by his rebellion when he perverted the whole order of nature in heaven and on earth."⁵ Concerning this, Young says:

\[\text{Truly, I confess, that if the earth had not been cursed on account of the sin of man, the whole--as it had been blessed from the beginning--would have remained the fairest scene both of fruitfulness and of delight; that it would have been, in short, not dissimilar to Paradise, when compared with that scene of deformity which we now behold.}^{6}\]

For Calvin, no facet of creation escaped the effect of Adam's Fall; the previous

¹Young, *Scriptural Geology*, 41.
²Ibid., 41-42.
⁴Ibid., 342.
⁵Calvin, *Institutes*, 1:246.
⁶Calvin, *Genesis*, 114.
golden age of "delight" is now deformed, and all creation groans for a restoration to the previous state. By contrast, in his sermon on the extent of the Edenic sentence of death, which goes right to the heart of the origin of natural evil in the sub-human realm, Buckland expresses concern over "the unfounded nature of an opinion entertained by many persons, that death was inflicted on the entire animal creation, as a penal dispensation consequent upon the sin of the parents of the human race." Buckland sees the necessity of drawing a dichotomy between pre-Fall sub-rational mortality and God's goodness. He holds that our present world, though "crowded with evidences of [pre-Fall] Death" and extinction, and the death of brutes "is in no way connected with the moral misconduct of the human race." This clearly means that the curse predominately affected humanity. Its "pains and penalties . . . appear strictly and exclusively limited to the human race." Buckland contends that there is no scriptural warrant "that death was inflicted on the entire animal creation, as a penal dispensation."

3Ibid., 12.
4Ibid. These tenets are fairly uniform among accommodationists. For example, compare Hitchcock's affirmation that the geologic record is "fraught with terrific evils" (The Religion of Geology, 217), and "teaches us that myriads of animals lived and died before the creation of man," and "that violent and painful death was in the world before the fall of man" (ibid., 274).
5Buckland, *An Inquiry,* 15.
6Ibid., v; 11. Buckland, it will be recalled from the last chapter, does offer some exegetical justification for his theses. Hitchcock also registers a faint exegetical rationale in the following statement: "Geology shows that the same mixed system of suffering and enjoyment, of liability to painful accident and inevitable death, has always prevailed as they now do. The Bible, too, intimates that death and other evils preceded man. Of what use was
Buckland demurs from the view that sub-rational death stems from sin. Buckland holds that such a view is without "foundation in Scripture," and is clearly "inconsistent with many phenomena of the world around us," primarily Death . . . [and] extinct species.” This "dispensation of death," for Buckland, has been a "covenant from the beginning," applying to "all organic beings upon earth, man himself has no exemption." Thus, he is convinced that the death which permeates the "brute creation . . . is in no way connected with the moral misconduct of the human race," indicating that he sees paleonatural, sub-rational pain, and death as included in the affidavit that creation was very good.

Luther’s perspective is diametrically opposed to Buckland, holding that even "harmful worms and vermin . . . and troublesome and harmful creatures were brought into being later on out of the cursed earth as a punishment for sin, to afflict us and to compel us to call upon God." Moreover, Luther sees such entities as "fire, caterpillars, flies, fleas, and bedbugs" as messengers which "preach to us concerning sin and God’s wrath, since the threatening of death if no example of it existed among animals? . . . It was made so from the beginning, because it would ultimately become a world of sin, and sin and death are inseparable" (Hitchcock and Hitchcock, 391-392).

1Buckland, An Inquiry, 11.
2Ibid.
3Ibid., 17.
5Ibid., 25.
6Ibid., 12.
7Luther’s Works, 1:54.
8Ibid., 208.
they did not exist before sin or at least were not harmful or troublesome.1 Pernicious insects, also, sprang forth from an earth cursed because of sin.2 According to Luther, without the Fall, "absolutely nothing in the entire creation would have been either troublesome or harmful for man. For the text states plainly: 'Everything that was created by God was good'. And yet how troublesome they are!"3 The "uncorrupted creation" knew none of these.4 For Luther, while Adam was in a state of innocence, all creatures coexisted in peaceful and delightful harmony. Thus the world was then in an "unimpaired"5 state of innocence and perfection, a golden age which had "neither thorns of thistles, neither serpents nor toads; and if there were any, they were neither venomous nor vicious."6

Contrast Five--The Beginnings of Geophysical Revolutions:
Stemming from Sin or Divinely Intended?

Even in view of the Reformers' position regarding the age of the earth, and their view of the original pristine creation, it should be asked whether they might allow for the prelapsarian violent upheavals later to be demanded by deep-time serial catastrophists. The Reformers' thoughts are pre-geological, of course, and we must tread tentatively here. Yet, it must be restated that a major thrust of this chapter is to draw the fairest inference on whether, and for what reasons, the traditionalists or the accommodationists are more

1Ibid.
2Ibid., 72.
3Ibid., 77.
4Ibid., 77.
5Ibid., 78.
6Ibid., 77.
faithful to Reformation thinking on issues of earth history and the effects of the Fall.

Regarding severe weather and seismic activity, Luther believes that prior to sin there were no "frosts, lightning bolts, injurious dews, storms, overflowing rivers, settling of the ground, [and] earthquakes."\(^1\) It would thus seem unlikely that Luther would allow for deep-time serial catastrophe, if frost, dew, lightning, and earthquakes were not part of the original created order.

Calvin also attributes meteorological entities like the "inclemency of the air, frost, thunders, unseasonable rains, drought, hail, and whatever is disorderly,"\(^2\) to the agency of human sin. It would be most unnatural to portray Calvin as seeing such phenomena (mild in comparison to broad concordism's deep-time serial catastrophism) as unallowable within the sphere of initial creation, while allowing for the extinction-generating serial catastrophism to be posited by early nineteenth-century accommodationists. Recall his conviction that sin initiated creaturely brutality, whereby the stronger "seize and rend and devour with dreadful violence the weaker animals."\(^3\) It would seem extremely difficult to maintain this conviction along with the no-less-cruel devourings, dreadful violence, and loss of species due to deep-time catastrophism. This is not to say that Calvin would not allow for this, but only that this would be very far from a natural reading of his words.

Wesley joins Luther and Calvin in attributing a severe geophysical and meteorological paradigm shift to the Fall. Prior to the Edenic lapse, according to Wesley, there were no "impetuous currents of air; no tempestuous winds; no furious hail; no torrents

\(^{1}\)Ibid., 1:206

\(^{2}\)Calvin, *Genesis*, 177.

of rain; no rolling thunders, or forky lightnings, "1 even lunar tides exercised no "hurtful, no unwholesome influence on any living creature."2 Instead there was a "perennial spring . . . perpetually smiling over the whole surface of the earth."3 Wesley describes the pre-fallen earth as in "no way deformed by rough or ragged rocks; it did not shock the view with horrid precipices, huge chasms, or dreary caverns with deep, impassable morasses, or deserts of barren sand."4 Wesley also holds that prior to sin no agitations were within the bowels of the globe, nor violent convulsions, concussions of the earth, earthquakes, eruptions of fire, volcanoes, burning mountains, putrid lakes, turbid or stagnating waters, frightful meteors, unwholesome vapours, poisonous exhalations, tempests, violent winters, sultry summers, extremes either of heat or cold, or soil burned up by the solar heat.5

In addition, recall Wesley's conviction that the original earth had no predation, every creature being harmless, with none "that destroyed or molested another," with "all the creatures" breathing "the benevolence of their Creator."6 How could this perspective allow for mass destruction of creatures inside or outside the garden? Taking Wesley at face value, and coupling this statement with his view of the extremely serene meteorological and geophysical milieu of the early earth, it is reasonable to assume that he would absolutely condemn the upcoming concordist view that depicts the very good Creation as having been

1Wesley's Works, 4:210 f.
2Ibid.
3Ibid.
4Ibid., 207.
5Wesley's Works, 6:208-209.
6Ibid., 212-213.
divinely ordained to endure catastrophe of any stripe through deep time.

Bugg, as noted earlier, is "perfectly at a loss to see upon what ground of reason or argument Christian professors can adopt so extraordinary a notion" as new creations, primarily because "these destructions and new Creations," of logical necessity, would have to be "all a part of one and the same design."\(^1\) This deep-time method involves continual upheavals, and in Bugg's mind appears "directly contrary to every thing we know of God."\(^2\)

As we noted in chapter 4, Ure is opposed to any view of earth history that is characterized by "successive developments and catastrophes."\(^3\) Any view which carries within it latent ideas of chaos, confusion, and "a long series of material transmutations," be it geophysical or biological, for Ure, seems "inconsistent with the Government of Omnipotence."\(^4\) To Ure, the wisdom of God is impeached by the serial catastrophist perspective, since it promotes a Creator "constructing a world on foundations so infirm."\(^5\)

Young disagrees with the formation system's view of cyclic "destruction and renovation."\(^6\) Aside from any scientific objections he might offer, he states: "How this view . . . can be reconciled with the scripture narrative, it is very difficult to conceive." Since the accommodationists' perspective, in Young's estimation, "leaves no room for the deluge, that great catastrophe so distinctly recorded in sacred history," their model "is

\(^1\)Bugg, *Scriptural Geology*, 1:277.

\(^2\)Ibid., 2:279.

\(^3\)Ure, *New System*, xxi.

\(^4\)Ibid., 12.

\(^5\)Ibid., 505.

\(^6\)Young, *Scriptural Geology*, 76.
utterly impossible to reconcile with the sacred volume."¹ The Scripture is clear enough for Young, that he believes the catastrophes belonging to the formation system could not be "antecedent to the introduction of sin, and even to the creation of man."² Further, to the degree that any geophysical paroxysm could be considered a natural evil, the following words of Young would apply: "according to scripture, it was man's disobedience that brought death into the world, with all our woe."³

Compared to the Reformers and traditionalists, the broad concordists take a contrasting position, attributing such natural phenomena as "fire, hail, snow and vapours, wind and storm"⁴ to "the Will of the same Creator" who created the world.⁵ In addressing the "violent and disturbing forces"⁶ which permeate the inorganic realm, Buckland believes such geophysical disturbances to be divinely designed for the benefit of the "Vegetable and Animal kingdoms, especially to the condition of man."⁷ He notes that these upheavals are paralleled by "myriads of petrified Remains," which in his mind prove the deep-time extinction of many "species of Animals and vegetables."⁸

Hardly a clearer example of panglossian theodicy could be found than in Smith's

¹Ibid., 42.
²Young and Bird, Geological Survey, 342.
³Young, Scriptural Geology, 41-42.
⁴Buckland, An Inquiry, 9.
⁵Ibid.
⁶Buckland, Geology and Mineralogy, vii.
⁷Ibid.
⁸Ibid., viii.
assessment of early nineteenth-century volcanic eruptions. Beginning on April 13, 1815, the East Javanese island of Sumbawa was to fall victim to volcanic devastation. Smith, following data from Lyell's Principles and T.S. Raffles's History of Java, recounts that due to this event "great tracks of land were buried under the lava," and "violent whirlwinds carried up men, horses, cattle, and whatever else came within their influence." The toll in human life was tremendous. In two minor districts only six out of 12,000 survived. In the same locale seven years later, rain and the scalding mud from the Galongoon eruption killed 4,000. In response to these tragedies, Smith describes them as representative of "the instruments of change [which have been] incessantly at work, in modifying and altering the surface of the planet which the adorable Creator has appointed for our dwelling-place, in this incipient state of being." Smith believes, however, that these "destructive outbursts," these agents of death through deep time, can take place "at any hour." It would be most helpful to non-accommodationists to hear specifically from Smith what is gained in compartmentalizing the modification of the globe's surface from the high cost in life to attain such modification. He gives no tangible reason as to why so much death is necessary.

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1 Smith, On the Relation, 230.
3 Smith, On the Relation, 230.
4 Referring to an Icelandic eruption of Skáptar Jokul, which eradicated a fifth of the population, Smith describes this paroxysm as one of "terrible magnificence." He also notes a Peruvian earthquake in 1789 which exacted a toll of 45,000 lives (ibid., 229).
5 Ibid., 230.
6 Ibid., 228.
7 Ibid.
to make an inhabitable abode, or in what capacity thousands of humans being swept away
by scalding mud would entertain the notion of an adorable Creator.

Contrast Six--The Reason for Fossil-Lagerstätten and Mass-Faunal
Extinctions: Due to a Global Aquatic Bouleversment
of Creation or to Providential Design?

As established earlier, both traditionalists and accommodationists can agree that
the fossil record is a stupendous record of death. But what reasons do they supply for the
mass-faunal extinctions? Do they represent original intentionality on the Creator's behalf,
or are they indicative of something else? To find answers, we must turn to the adherents
themselves, beginning with the traditionalists.

According to Young, accommodationists believe the earth has experienced "a long
succession of creations and destructions . . . each garnished with its peculiar race of animals
and vegetables," destined "to grow, to flourish, and to be destroyed."\(^1\) He sees this idea of
successive creations and multiple destructions as definitive of their formation system. In
response to the transformist notion that some were drawing from the increasing complexity of
the organic remains as one transverses the fossil record from bottom to top, Young merely
retorts: "as if the Creator's skill had improved by practice."\(^2\) Ure believes that the extinction
of some creatures came "by a sudden cause, by that same great catastrophe which destroyed
all the species of the same epoch."\(^3\) When considering the myriads of such creatures which
have "sunk," "perished," been "overthrown," and "become extinct before the existence of

\(^1\)Young, *Scriptural Geology*, 6.

\(^2\)Ibid., 9.

\(^3\)Ure, *New System*, 526.
man,"⁴ Bugg not only states that one "can discover no wisdom here,"⁵ but also asks,

Where is the 'benevolence', not to say justice of all this? Not a creature capable of offending its Creator. Nevertheless we find 'whole genera' and whole nations of animals perishing in succession; and this numerous times repeated, as if their 'Author . . . were in sport, forming and destroying worlds again and again'!!³

Bugg sees God's moral perfection as "lost if not destroyed in the detail[s] of geological revolutions," where

the whole mass of destruction and misery is gratuitous, uncalled for, and useless!! . . . How many millions of animals perished on these naked rocks before vegetables sprung up, we know nothing. But this we do know, that no man living can see either wisdom or benevolence in such a process.⁴

By contrast, Buckland, Smith, and Miller hold that innumerable fossil remains have been disclosed by geological investigation which, in the opinion of Buckland, "tend to prove, that our Planet has been occupied in times preceding the Creation of the Human Race, by extinct species of Animals and vegetables."⁵

The fact that a large proportion of these remains belong to extinct genera, and almost all of them to extinct species, that lived and multiplied and died on or near the spots where they are now found, shows that the strata in which they occur were deposited slowly and gradually, during long periods of time, and at widely distant intervals. These extinct animals and vegetables could therefore have formed no part of the creation with which we are immediately connected.⁶

This means, as Buckland notes, that our extensive plains and mountains are "great charnel-houses of preceding generations, in which the petrified exuviae of extinct races of

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¹Bugg, Scriptural Geology, 2:44.
²Ibid.
³Ibid.
⁴Ibid., 45-46.
⁵Buckland, Geology and Mineralogy, 1:viii.
⁶Ibid., 16-17.
animals and vegetables are piled into stupendous monuments of the operations of life and death, during almost immeasurable periods of past time."\textsuperscript{1} Thus, evidences of death and extinction which crowd our present world have no penal connection.\textsuperscript{2}

Having proposed that death is necessary to organic life, Smith extends this to include species, which after existing for vast periods eventually ceased to exist.\textsuperscript{3} This view believes, therefore, that a good God has set up an economy whereby countless \textit{genera}, whether by catastrophic geophysical upheavals or some other natural manner, are episodically and permanently extinguished. Smith articulates this important accommodationist point when noting that due, to mighty cycles of revolutions and the accompanying temperature changes and stratigraphical upheavals, "whole \textit{genera} live no more";\textsuperscript{4} which echoes Tennyson's view that "thousand types are gone." Thus, just as accommodationists construe animal death as necessary to the economy of nature, so also extinction, the corollary of death, can somehow be viewed as necessary to the greater good in the deep-time economy of nature.

Let us compare briefly the traditionalists and accommodationists with the Reformers on the functional equivalent of mass extinction. While the Reformers did not know of a geological column, there was some awareness of what would later be called fossils. Being the son of a miner, Luther could be reviewing information derived from his youthful days, as noted earlier, when he refers to "the metallic mines which are now explored," in which are "found large logs of wood, hardened into stone; and in masses of

\textsuperscript{1}Ibid., 1:112-113.

\textsuperscript{2}Ibid., 12-13.

\textsuperscript{3}Smith, \textit{The Relation}, 242.

\textsuperscript{4}Ibid.
stone themselves are perceived various forms of fishes and other animals."¹ He deems
these remains to have been deposited in the aftermath of the Flood.

Wesley knew of fossils, once accompanying friends to a Museum and witnessing
two huge apartments full of fossils. Like many in his day, however, he does not grasp the
significance of fossils, holding to the common idea that they were not of organic origin.²

Luther, Calvin, and Wesley exhibit no awareness of mass fossil graveyards, but it is
unlikely that they would have seen such as positive evidence of the Creator’s absolute
goodness, rather than as further indicators of a ruined creation.

We have established that the broad concordists see mass-death assemblages as the by-
products of deep time and are divinely intended. By contrast, however, strict concordists
posit that these bone beds represent a sin-fractured creation, intensified by a subsequent
undoing of creation in the form of a cataclysmic Flood. Although the Reformers do not
have access to geologic record, and its contents, the fairest inference from their statements
on the origin of death in particular, and of all natural evil in general, suggests that they
share more solidarity with the traditionalists than the accommodationists.

Contrast Seven--The Origin of Physical Maladies, Diseases,
and Parasites: Are These the Fruit of Original,
Human Sin or Built into Nature?

Earlier in this chapter, it was demonstrated that traditionalists believe that nature
bears penal scarring, whereas the accommodationists hold that such scarring is marginal if
anything. Regarding the origin of evil, Young writes that it may

¹Luther, Luther on the Creation, 1:165.
²Wesley’s Works, 4:217.
be observed, that, according to scripture, it was man's disobedience that brought
death into the world, with all our woe; but, according to this geological system,
death had reigned and triumphed on the globe, in the destruction of numerous
races of creatures, thousands of years before man existed.¹

This statement shows that Young feels that prelapsarian suffering, death, and species
extinction within the sub-human order cast aspersion on ominibenvolence as classically
understood. Moreover, two central traditionalists' theodical elements are suggested in each of
these statements. First, the source of all the world's ailments is clearly penal. Each natural
evil is the bitter fruit of disobedience, and did not antecede sin. Elsewhere, Young contends
that if death, destruction, and extinction are extended a non-penal interpretation, as proposed
by the formation system, by attributing these woes to God, one ends up "detracting from the
honours of the Almighty."²

Second, the impact of original sin extends beyond mere death. In attributing "all
our woe" to the Fall, including the deaths normally ascribed as catastrophe-generated
mass extinctions³ of the formation system, it is clear that Young sees sin as having
affected the entirety of nature. He reflects the traditionalists' view that Scripture serves as
the final authority upon which a theodicy for paleonatural evil rests.

The approach of Bugg, Ure, and Young mirrors that of Luther, Calvin, and Wesley

¹Young, Scriptural Geology, 41-42; cf. Young and Bird, 342.

²Young and Bird, Geological Survey, 342.

³Regarding the "long succession of creations and destructions," which allegedly
correspond "with the successive formations of stratified rocks," Young cannot agree with this
accommodationist picture of "a multitude of primeval worlds, each garnished with its peculiar
race of animals and vegetables, each subsisting for thousands of years, but at length
overwhelmed, to make way for a new race, destined in its turn to grow, to flourish, and to be
destroyed" (ibid., 6). Here the initial brushstrokes are applied for the coming Tennysonian
portrait of the irreversible demise of countless types that are immured within the iron hills.
in unambiguously taking Scripture as their primary point of departure. When it speaks clearly on the time, manner, and Fall of creation, as well as the Flood, the traditionalist conscience is obligated to take it as absolute authority. Wesley also believes this is a sin-cursed planet, and that every creature was "subjected to vanity, to sorrow, to pain of every kind, to all manner of evils," due to human rebellion.\(^1\) Prior to sin, in his opinion, there was no "evil of any kind."\(^2\) The traditionalists are clear regarding the question. The highest authority in Wesley's theodicy is clearly holy writ. In relation to "the present state of things,"\(^3\) Wesley asks:

If the Creator and Father of every living thing is rich in mercy towards all . . . how comes it to pass, that such a complication of evils oppresses, yea, overwhelms them? How is it that misery of all kinds overspreads the face of the earth? This is a question which has puzzled the wisest . . . in all ages: and it cannot be answered without having recourse to the oracles of God.\(^4\)

In other words, the only sure theodicy for life's miseries comes from assessing God's Word on the matter.\(^5\) Clearly Wesley put forth the Fall as inaugurating a fallen order which is entirely converse to the prelapsarian one. Here Wesley specifically has in mind the divine description of the finished creation as "very good," which for him was decisive. But though God's

\(^1\)Wesley's Works, 6:245

\(^2\)Ibid., 243.

\(^3\)Ibid., 241-242.

\(^4\)Ibid., 242.

\(^5\)While Wesley did not use the word theodicy (although he was aware of Leibniz), it is clear that he believes that the answer for pain, suffering, and death, even in the animal realm, can be found in a face-value reading of the Genesis account; i.e. an interpretation which does not interpret so much as accept the words in Genesis as verbal, perspicacious propositions in the same manner that the original author and recipients would have most likely intended and derived from these passages.
creation, animate and inanimate, was originally perfect in every way, Wesley laments how far is this from being the present case! In what a condition is the whole lower world!—to say nothing of inanimate nature, wherein all the elements seem to be out of course, and by turns to fight against man. Since man rebelled . . . in what a state is all animated nature!\(^1\)

The reader will recall that Luther holds that, prior to sin, mankind "was free from sin, death, and every curse."\(^2\) Like Wesley, Luther thinks Adam would have not been subject to a single prelapsarian wrinkle on his forehead.\(^3\) Luther makes reference to hundreds of diseases (apoplexy, epilepsy, leprosy, etc.) that did not exist in the first world. The entrance of all such "endless evils," for Luther, points to "the enormity of original sin."\(^4\) Calvin believes there is no "other primary cause of diseases" than sin.\(^5\) This perversion of the whole order of nature by Adam's sin went "through all regions of the world," carrying "the most filthy plagues, blindness, impotence, impurity, vanity and injustice . . . miseries."\(^6\)

The accommodationist concedes that the curse might have had an ontological effect, but qualifies this by affirming that its "pains and penalties . . . appear strictly and exclusively limited to the human race,"\(^7\) implying that all diseases, parasites, and natural evils in the

\(^1\)Wesley's Works, 6:245.
\(^2\)Luther's Works, 1:89.
\(^3\)Ibid., 1:92. Cf. Wesley's Works, 6:221.
\(^4\)Luther's Works, 1:71.
\(^5\)Calvin, Genesis, 177.
\(^6\)Calvin, Institutes, 1:246.
\(^7\)Buckland, An Inquiry, 15.
subrational order are designed intentionally by God to govern His very good creation. Thus, the Creator, and not man, is responsible for all the woes of nature. The Reformers would not accept any such picture of the original creation, or this accommodational idea of God as the cause of disease. Again, the Reformers’ position seems to comport more naturally with the views of the traditionalists than with the accommodationists.

Contrast Eight—The Origin of Predation and Suffering: The Result of Sin or the Will of God?

For the traditionalists, carnivory is cited occasionally as not occupying a part of the original creation. Strict concordists believe the original charter granted to "all the animals" was that they subsist only on "vegetable food." Thus, for Bugg, if carnivory existed from the beginning, this would mean that violent death must have been common in the creation from the very beginning. But the Scripture represents 'death as entering into the world by sin':--Had lions and tigers, &c. been as voracious from the first as they are now the earth must have been in danger of being depopulated; And Adam himself would not have been safe from destruction.

According to Bugg, such a destructive picture could hardly be inferred from Scripture alone, for this would be "the grossest insult to the wisdom and goodness of God." But this is not an option given Bugg’s understanding that "Scripture represents 'death as entering into the world by sin.'" Likewise, to regard the human race as originally being

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1Gen 1:29-30.


3Ibid., 147.

4Ibid. By way of contrast, Thomas Aquinas contends that there was no causal connection between man’s fall and the entrance of savagery and predation into the animal
in a state of barbarism flatly contradicts the *imago dei* of Gen 1:27.¹

By contrast, and replying to the idea that a pre-Fall natural order could be supported exclusively on a vegetarian diet, Smith asserts that this can be dismissed by contemplating one’s next sip of water, since,

> every leaf or root or fruit which they feed upon, and in every drop of water which they drink, they put to death myriads of living creatures, whose bodies are as ‘curiously and wonderfully made’ as our own . . . and enjoyed their mode and period of existence as really and effectively under the bountiful care of Him ‘who is good to all, and whose tender mercies are over all his works’, as the stately elephant, the majestic horse, or man, the earthly lord of all.²

Smith believes that carnivory, "in a thousand instances, is the immediate cause of inestimable benefits to man."³ Clearly then, for Smith, carnivory and its attendant suffering and death have always been part of God’s original design, and have no connection to the Fall. Deep-time geological theory seems to be just as authoratative for Smith, as Scripture, if not more so.

Luther believes that prior to sin Adam was intended to be vegetarian,⁴ and seems to imply that without the Fall there would be no carnivory and "beasts would have remained

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¹Bugg, *Scriptural Geology*, 145.


³Ibid.

⁴Luther, *Luther’s Works*, 210 (but compare ibid., 71).
obedient."¹ Traditionalists would concur, claiming that a face-value reading of Genesis does not allow for meat eating until after the Flood.² Regarding animals, Wesley asks: "What was the original state of the brute creatures, when they were first created?"³ In the context of mentioning whales, reptiles, and insects, Wesley asserts that "none of these then attempted to devour, or in anywise hurt, one another. All were peaceful and quiet,"⁴ exhibiting "a kind of benevolence to each other."⁵ Wesley holds that prior to sin there is no predation of any type, even in the insect realm. Regarding predation, he is convinced that the "very foundations" of creaturely natures are presently "out of course; turned upside down."⁶ Creaturely benevolence has given way to "savage fierceness" and "unrelenting cruelty . . . invariably observed in thousands of creatures."⁷ Now we have

⁷8.

²Accommodationist C.W. Goodwin writes: "When we compare the verses Gen. i. 29, 30 with Gen. ix. 3 . . . it is difficult not to come to the conclusion that in the earliest view taken of creation, men and animals were supposed to have been, in their original condition, not carnivorous. It is needless to say that this has been for the most part the construction put upon the words of the Mosaic writer, until a clear perception of the creative design which destined the tiger and lion for flesh-eaters, and latterly the geological proof of flesh-eating monsters having existed among the pre-adamite inhabitants of the globe, rendered it necessary to ignore this meaning" ("On the Mosaic Cosmogony," in Essays and Reviews, ed. Frederick Temple, 222).

³Wesley's Works, 6:244.

⁴Ibid.

⁵Ibid., 245.

⁶Ibid., 246.

⁷Ibid.
animals which tear the flesh, suck blood, and crush bones; quite a contrast from the original paradisiacal earth which "afforded a sufficiency of food for all its inhabitants; so that none of them had any need or temptation to prey upon the other." 

According to Wesley, even outward appearances of many creatures are not as originally created. Creatures that initially had a "beauty which was stamped upon them when they came first out of the hands of their Creator," now had a horrid disposition, shocking to behold. They are "not only terrible and grisly to look upon, but deformed" to a high degree. These ugly features are augmented with pain "from a thousand causes," including innumerable diseases, and every other form of natural evil. For Wesley, human sin did not just bring death into the sub-human nature order, "but all its train of preparatory evils; pain, and ten thousand sufferings," including any "irregular passions and unlovely tempers" which perforate "this season of vanity." 

Calvin believed that some animals, which were originally submissive, became savage and threatening. He quotes Paul in his defense, that such became "liable to vanity, not willingly, but through our fault." Such subjection to futility represents a corruption

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1Ibid.
2Ibid., 212-213.
3Ibid., 247.
4Ibid.
5Ibid.
6Calvin, Genesis, 105.
and a degeneration (*atraegía*) from the original creation.\(^7\) All these, says Calvin, are rather corruptions of it than any part of its proper furniture. For ever since man declined from his high original [*sic*], it became necessary that the world should gradually degenerate from its nature. We must come to this conclusion respecting the existence of fleas, caterpillars, and other noxious insects . . . [which proceed] from the sin of man than from the hand of God. Truly these things were created by God, but by God as an avenger.\(^2\)

Related to the issue of predation, Calvin asks: "Whence comes the cruelty of brutes, which prompts the stronger to seize and rend and devour with dreadful violence the weaker animals?"\(^3\) It is his contention that if "the stain of sin had not polluted the world, no animal would have been addicted to prey on blood, but the fruits of the earth would have sufficed for all, according to the method which God had appointed (Gen 1:30)."\(^4\) It seems clear that Calvin would label nature's extreme carnivory as one result of Adamic sin.

The above comparative discussion yields two initial conclusions. First, the Reformers and traditionalists see predation and suffering as denotative of a Fall; not part of God's original plan. Second, the accommodationists do not regard predation and suffering as sin-induced intrusions into a perfect natural order, but rather as divinely intended prior to creation.

**Contrast Nine--The Origin of Animal Death: Intrusive to the Initial Creation or Built into the System?**

Luther concedes that animals could become feeble and die before the Fall, and sees their death as ordained indeed by God but not regarded by Him as punishment, and

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\(^1\)Ibid.

\(^2\)Ibid., 104.

\(^3\)Calvin, *Isaiah*, 1:383.

\(^4\)Ibid., 384. Cf. also 4:405-406.
because "it seemed good to God that they should die."¹ But the type of animal death
Luther is principally referring to here seems to be more of the type due to old age, or
"temporal casualty," rather than carnivory. There is no indication in Luther that he allows
for prelapsarian predation or that he is willing to recast God as ordaining a method of
creation involving serial extinction. On the contrary, he states that any carnivorous
disposition of wolves, lions, and bears, or any venomous or vicious proclivity would have
had no part in the original "unimpaired," "uncorrupted creation." While Adam was in a
state of innocence, all creatures coexisted in peaceful and delightful harmony.² Such a
picture differs radically from the crimson picture painted by deep-time geology.

Ure's theodicy, however, does not allow such mortal agony and death as part of the
original creation, instead positing a moral cause for these natural evils. The original creation,
"replete with beauty and enjoyment,"³ was instantly "transformed by its Creator's mandate or
permission into a waste of waters."⁴ Ure asks the reader to employ the aid of Moses, who lifts
"up the dark veil"⁵ on this primeval scene, revealing the pestilence brought on by the sins of
Adam and Cain, "which is almost universally spread among their progeny." Moses also
shows "too clearly, how justice outraged, and mercy spurned, inevitably called forth the final

¹Luther's Works, 13:94.
²Ibid., 1:77-78, 94.
³Ure, New System, 505.
⁴Ibid.
⁵Ibid.
lustration of the deluge.”6 While deep-time models offer no compelling moral justification for the apparently capricious process whereby countless sentient beings are plunged indiscriminately in mortal agony and death, traditionalist begins by taking Genesis at face value. Their heuristic key to decipher geology’s vast ruins and bone-packed mausoleums2 begins with a literal Fall and a penal “universal cataclysm.”3 Many enigmas can be resolved, and Divine justice preserved, by adopting a plain reading of Moses’ on the Fall and the Flood.

In contrast, Buckland sees mortal agony and death as part of the original creation, denying any penal connection with natural evils. He maintains that carnivores are present long prior to the Fall, seeing God’s appointment “of death by the agency of carnivora” as a “dispensation of benevolence . . . [to abridge] the misery of disease, and accidental injuries, and lingering decay.”4 He freely admits that all creation seemingly depicts a “scene of protracted misery,”5 and a “mass of daily suffering,”6 brought on by the office of carnivory, which even appears “calculated to increase the amount of animal pain.”7 Yet, convinced of God’s goodness and the validity of the deep-time interpretation of the geological column, he must defend this Creator’s goodness no matter how loudly the rocks cry out.

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1Ibid., 506.
2Ibid., 129.
3Ibid., 349-350, bk. 3 passim.
4Buckland, Geology and Mineralogy, 1:133.
5Ibid., 130.
6Ibid., 131.
7Ibid.
Smith acknowledges that deep-time, sub-human pain and death appear to be "a difficulty of great moment,"¹ but, like Buckland, he sees death as necessary, stating that every thing that has life, vegetable and animal, is formed upon a plan which renders death necessary, or something equivalent to death. . . . The processes of nutrition, assimilation, growth, exhaustion, and reparation, hold on their irresistible course, to decay and dissolution; in another word, to death.²

In the same fashion, Miller holds that ours is a "universe of death,"³ and like Smith, believes that "ever since animal life began upon our planet, there existed, in all departments of being, carnivorous classes, who could not live but by the death of their neighbours."⁴ He holds that in the early chapters of life carnivorous classes exist which could survive only at the expense of others. These predators, in Miller's eye, seem designed not merely for "destruction, but also of torture,"⁵ equipped "like the butcher with his axe and knife, and angler with his hook and spear."⁶

Being convinced that prelapsarian flies were secure from predation,⁷ a fortiori Wesley would not see prelapsarian human death as a viable theological option. He was very clear that it was by a "wilful act of disobedience" in the garden that Adam's body began to die.⁸

¹Smith, On the Relation, 65.
²Ibid., 66.
³Miller, Testimony of the Rocks, 104.
⁴Ibid.
⁵Ibid.
⁶Ibid., 66.
⁷Wesley's Works, 6:213.
⁸Ibid., 67; 272.
Prior to this the human body was "not liable to death or pain."\(^1\) By original sin Adam became "mortal as to his body."\(^2\)

Almost as if in explicit anticipation of the coming wave of accommodationism, and the suggestion that natural evils were always intended by God, Wesley asserts that such "cavils" are

grounded upon an entire mistake; namely, that the world is now in the same state it was at the beginning. And upon this supposition they plausibly build abundance [sic] of objections. But all these objections fall to the ground, when we observe, this supposition cannot be admitted. The world, at the beginning, was in a totally different state from that wherein we find it now. Object, therefore, whatever you please to the present state, either of the animate or inanimate creation, whether in general, or with regard to any particular instance; and the answer is ready:--These are not now as they were in the beginning.\(^3\)

Few statements, if any, in the writings of Luther, Calvin, or any later traditionalists, would disagree or detract from these points. Other theological differences aside, there is a strong agreement among the traditionalists that the present estate of the world, including both the animate and inanimate realms, is radically different from its previous estate of perfection.

According to Luther, "the death of humans is a genuine disaster."\(^4\) Mankind was originally created "to live forever. . . . He was not created for death. In his case death was ordained as a punishment for sin."\(^5\) As if to prevent any possible misunderstanding here, Luther underscores these statements by affirming that,

\(^1\)Ibid., 209.
\(^2\)Ibid., 9:417.
\(^3\)Ibid., 6:213.
\(^4\)Luther's Works, 13:94.
\(^5\)Ibid.
if Adam had not eaten of the forbidden tree, he would have remained immortal. But because he sinned through disobedience, he succumbs to death like the animals which are subject to him. Originally death was not part of his nature. He dies because he provoked God's wrath. Death is, in his case, the inevitable and deserved consequence of his sin and disobedience.¹

Thus, in this idyllic state Adam "was free from sin, death, and every curse."² And just as man was affected "on account of sin, the world, too, has begun to be different; that is, the fall of man was followed by the depravation and the curse of the creation."³ This once perfect earth now mirrors the curse; "it does not bring forth the good things it would have produced if man had not fallen."⁴ These "endless evils" all point to "the enormity of original sin."⁵

In the context of a discussion on original sin, Calvin states that "sin and death crept in through Adam."⁶ Prior to sin "there was no defect" in Adam's body; "he was wholly free from death."⁷ However, Calvin apparently does not believe Adam would have stayed indefinitely in his present condition, even if he had not sinned, stating that if man had not fallen, his "earthly life truly would have been temporal," and he would merely pass "into heaven without

¹Ibid.
²Ibid., 1:89.
³Ibid., 77-78.
⁴Ibid., 204.
⁵Ibid., 71.
⁶Calvin, Institutes, 1:248.
⁷Calvin, Genesis, 127.
death, and without injury." He "would have passed to a better life, had he remained upright; but there would have been no separation of the soul from the body, no corruption, no kind of destruction, and in short, no violent change." Here Calvin could be seen as agreeing with Smith who holds that, prior to the Fall, man was not exempt "from the law of progress towards dissolution." Had there been no transgression, Adam "and his posterity would, after faithfully sustaining an individual probation, have passed through a change without dying, and have been exalted to a more perfect state of existence."

In summary, the theodicies of Luther, Calvin, and Wesley regarding the origin of animal death stand in direct contrast to the deep-time proclivities of the early nineteenth-century British accommodationists, and seem to accord more naturally with the traditionalists. However, there is some general agreement among the three groups regarding the lack of human death as we know it existing prior to the Fall. Nonetheless, concord on this element must not overshadow the broad array of dissimilarities in other areas. The perspective and authority of the classic Reformers regarding the early chapters of Genesis are to be reckoned with, especially their emphasis on the historicity and drastic effects of the Fall. Thus, the traditionalists would seem to be in league with the Reformers on this point. The suggestion that Luther, Calvin, or Wesley had an accommodationistic spirit is contrary to all that is known about these thinkers.

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1Ibid.
2Ibid., 180.
3Smith, On the Relation, 199.
4Ibid.
Contrast Ten--The Evolving Face of God: Contrasts Between Traditionalists and Accommodationists on the Bearing of Paleonatural Evil on God's Character

The discussions of previous contrasts prepare the way for the comparison of how the principle perspectives regarding paleonatural evil impact classic perspectives on God's wisdom and goodness. We turn first to the traditionalists.

George Bugg, the leading spokesman for Scriptural geology, attempts to show "how extensively the word of God is affected by [deep-time] Geological Theory." In one of his most acute critiques of what the new geology entails, Bugg writes that "when compared with the Scriptures, the modern Geological Theory makes everything unwise, unkind, and perhaps unjust. It finds no original Creation;--And it cannot prove a first Creation, from wise design," and thus ends up charging God foolishly. Bugg believes that "the time and manner of creation professed by modern Geological Theory," despite its assertions to the contrary, does not reveal "wise foresight and benevolent intention," nor exhibit "proofs of the most exalted attributes of the Creator." Bugg challenges them to not only demonstrate "that there is wisdom and goodness manifested in the formation of the strata," but also "in their Theory of [the origin of] that formation."  

Several theodical factors can be gleaned from these assertions. Note one key idea: "In the deep-time model where is the original creation?" It seems this model tenders no more temporal specificity than Hutton's "no vestige of a beginning,--no prospect of an end." Here

1Bugg, Scriptural Geology, 1:107-108.

2Ibid., 2:47-48.

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we encounter the issue of time profligacy, which Bugg raises explicitly when stating that "primitive rocks remaining thousands of years alone is unwise, because useless." In the accommodational system the rocks cry out, of having been "violently torn up and projected into turrets and pinnacles, undergoing numerous convulsions and catastrophes, while they were alone, and before the existence of any living being." Bugg asks: "Where is the wisdom of this!!" Directly bearing on God's character, Bugg sees the new geology as laying the Creator open to the charge of unwisdom, malevolence, and possible injustice. In other words, Bugg wonders what purpose is served in designing all creation to endure deep time before God creates man in His image if this was His primary agenda. Following Bugg's line of questioning, it could be asked why the Creator would waste deep time, and utilize secondary

1 The notion of "time profligacy" was first suggested to me by Marvin Bolt, Ph.D., Notre Dame, regarding the apparent wasted time in cosmic history from the vantage point of the standard evolutionary time frame. Issues of profligacy might apply in other areas. For example, Calvin addresses space profligacy, when stating that some "deem it absurd that many ages should have passed away without any world at all, they may as well acknowledge it to be a proof of the great corruption of their own nature, that, in comparison with the boundless waste which remains empty, the heaven and earth occupy but a small space" (Calvin, Genesis, 62). Cf. Buckland's assertion that those "who contend that the glory of the Almighty God manifested in his works, cannot be limited to the short period of six or seven thousand years, are not aware that the same objection may be made to the longest period which can possibly be conceived by the mind of man... Though we should suppose the corporeal universe to have been created six million or six hundred millions of years ago, a caviller might still say, and with equal reason, that the glory of Almighty God manifested in His works cannot be so limited" (Geology and Mineralogy, 1:29). One would perhaps be justified in seeing a parallel here to the apparent wastefulness of "junk DNA," with the supposition that only a sparse percentage carries out any known function. See Linda K. Walkup, "Junk DNA: Evolutionary Discards or God's Tools," CENTJ 14, no. 2 (2000): 18-30; and John Woodmorappe, "Are Pseudogenes 'Shared Mistakes' Between Primate Genomes?" CENTJ 14, no. 3 (2000): 55-71.

2 Bugg, Scriptural Geology, 2:47.

3 Ibid., 44.

4 Ibid.
geological processes, destruction of habitats, serial extinctions, all at such an apparently high
cost to sentient creation, before forming Adam in His image.

Bugg sees accommodationism as projecting a Creator who, despite His arbitrary
dashing of deep-time rocks or seemingly indiscriminate serial catastrophism, is also willing to
allow for a wanton destruction of specie habitats. Such a view, in Bugg's mind, designates
either "a want of wisdom" on the part of the Creator, a "failure in the attempt," or lack of
power to execute a wise design. Each charge is foolish if held to the account of the Creator
described in the Genesis record.

Further, with Bugg's use of the words "wise design," he seems to suggests that mere
design is not becoming of the biblical Creator. In other words, some might posit that even if
this were not the best of all possible created worlds, one could still assert that there are
nonetheless earmarks of design in nature, even though these designs might not be very good.1

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1Coming at this issue from a moderately accommodationist angle, contemporary
philosopher William Dembski wants to separate wise, intelligent, design from questions
of optimality. He argues that "no real designer attempts optimality in the sense of
attaining perfect design. Indeed there is no such thing as perfect design" (Intelligent
Design: The Bridge Between Science & Theology [Downers Grove, IL: InterVarsity,
1999], 261). While Dembski later acknowledges that this "is a fallen world," and asks,
"Did it start out evil?" nowhere does he suggests that the initial unfallen created order was
optimally designed (ibid., 151, 161-164). Dembski notes that British natural theologians'
early emphasis on a benevolent designer "failed properly to appreciate the brutality and
suffering found in nature" (ibid., 286., n. 38). See also Robert Merrihew Adams, The
Virtue of Faith, and Other Essays in Philosophical Theology (New York: Oxford
University Press, 1987), 51-64. Adams contends that the Judeo-Christian tradition "need
not maintain that [this] is the best of all possible worlds, or the best world that God could
have made" (ibid., 51); the "creator's choice of a less excellent world need not be
regarded as manifesting a defect of character" (ibid., 62). T.V. Morris argues that even
though evolution seems to be "a tale of the grossest inefficiency on a colossal cosmic
scale" this inefficiency need not be seen as impugning God's perfections (76-78). The
reason is that "efficiency is always relative to a goal or set of intentions" and need not be
seen as a necessary entity in the Creator's toolkit (ibid., 77).
There is not, however, the slightest hint in any of the Scriptural geologists that questions of divine design could be separated from questions of optimality, efficiency, or goodness.¹

Note carefully Bugg's reiteration of the Scriptural geologists' theme that there is no disagreement between the strict and broad concordists regarding the "facts" of the geologic column, but only "the time and manner of these formations." Looking at the column, traditionalists see recent relics of God's powerful indictment against sin, both from the Fall and the Flood, which in different respects undid the created order. In contrast, accommodationists look at the same facts and posit a sluggish deep-time accrual, and that geology everywhere reflects wise foresight and benevolent intention, while disavowing any significant impact by either the Fall or the Flood. But Bugg harbors serious doubts that the theistic adherents of this interpretive schema can interpret the fossil record as demonstrating the goodness of unfallen creation, and thus a good Creator. The essence of the debate for Bugg, then, is not merely the character of Scripture, but "the character of the Author."²

Thus, Bugg is curious to know exactly how divine kindness and justice are to be ciphered in the shadow of deep-time, prelapsarian, serial cataclysms, each of which engulfs

¹This is an area where intelligent design theorists, past and present, part company with classic Reformation theodicy for natural evil. To illustrate that intelligent design is not to be confused with optimal design, Dembski uses the analogy of a torture chamber. He writes: "A torture chamber replete with implements of torture is designed, and the evil of its designer does nothing to undercut the torture chamber's design. The existence of design is distinct from the morality, aesthetics, goodness, optimality or perfection of design" (Dembski, 262-263). This is a most ironic analogy to choose, for many non-theists, like David Hull, do in fact portray the natural order as a torture chamber of sorts, and use this prism to imply an indifferent, almost diabolical God; certainly not the God of classic Protestantism, or one "to whom anyone would be inclined to pray" (Hull, "The God of the Galápagos," 486). Similar responses are sure to adhere to Dembski's torture chamber designer--a designer which is more likely to evoke dread and terror than adoration and worship.

²Bugg, Scriptural Geology, 2:42.
whole races? Bugg infers that we are being asked to believe "the most extravagant thing which the imagination could invent," namely, that a good Creator's creative process involves "thousands of ages' passing over!--Animals destroyed, and animals created!--Whole races ingulphed [sic] that others nearly like them might succeed." These rocks are "'overturned in a thousand ways', and most of the animal existences buried in their ruins"; myriads of creatures which have "sunk," "perished," been "overthrown" and "become extinct before the existence of man." Bugg, discovering no wisdom in these "shattered morsels," asks,

Where is the benevolence,' not to say justice of all this? Not a creature capable of offending its Creator. Nevertheless we find 'whole genera' and whole nations of animals perishing in succession; and this numerous times repeated, as if their 'Author . . . were in sport, forming and destroying worlds again and again'!!

To Bugg, this "whole mass of destruction and misery is gratuitous," and seems so "uncalled for, and useless." To claim that "millions of animals perished on these naked rocks before vegetables sprung up" does not exactly engender thoughts of "wisdom or benevolence in such a process." The onus, as implied by Bugg, is on accommodationists to show how their deep-

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1Ibid., 2:37.
2Ibid., 36-37.
3Ibid.
4Ibid.
5Ibid.
6Ibid., 45.
7Ibid., 44.
8Ibid., 45-46.
time model is not detrimental to God's wisdom and goodness. Bugg believes, however, that it impoverishes both, since God is rendered as a destroyer of one habitat after another. Thus, Bugg has uncovered a major theodical problem in the accommodationists' model—each earth revolution in the deep-time system involves also the destruction of former inhabitants.¹ This veteran Scriptural geologist concludes that only those who are "shackled by the prejudices" of the new school would ever think of deeming the modern geological system either wise or benevolent.² In fact, Bugg sees nothing as "more decisive of the error of this Geology than its failure to exhibit wisdom and benevolence."³

Assessing the deeper implications of the "vicissitudes of decay and renovation" inherent a deep-time framework, Ure inquires whether our terraqueous globe gradually acquired "its actual form and constitution from the antagonist powers of waste and reconsolidation tending towards their present equilibrium, during infinite ages?"⁴ All models in this genre allow for the evolving earth, after an indefinite period, to eventually become an abode for living beings. But what makes this a "very strange proposition," according to Ure, is that this abode of living beings is chiefly characterized as a

¹Ibid., 1: 60, 64, 86, 131, 142; 2:68.
²Ibid.
³Ibid.
⁴Ure, *New System*, xxix.
⁵Ibid., xxiii.
⁶Ibid., xxvi.
"precarious existence," involving "progress of waste," and "fortuitous explosions," which result in a "finished spheroid, unfit for every useful purpose." Such vicissitudes are "universally fatal to organic motion and life," beings incapable of "resisting the steady pace of destruction."

Ure clearly infers that a deity of deep-time serial catastrophism is "clumsy," if not imbecilic. In claiming that God could not instantly crystalize the granite nucleus of the earth, and deposit the shelving layers of gneiss and mica-slate over it, Ure wonders if broad concordists are not merely approximating "Creative might to the standard of human imbecility . . . ascribing to Deity, capacities and dispositions similar to those of his own foolish or malignant heart." According to Ure, if we reduce God to our level we are no different from the idolatrous savages who create a malignant-hearted despot in their own image. Thus Ure sees that when the implications of the deep-time hypothesis are worked out, the character of God is negatively impacted.

In one of Ure's more acute critiques, he highlights several other portentous effects levied against the character of God by the deep-time serial catastrophist school. He writes:

Such a dismal ruin of all organic beings, such a derangement of the fair frame of

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1Ibid., xxvii.
2Ibid.
3Ibid.
4Ibid., xxiii, xxvii.
5Ibid., 8.
6Ibid.
7Ibid.
nature seem to be irreconcilable difficulties in Natural Theism. For is not the wisdom of God impeached in constructing a world on foundations so infirm; his prescience in peopling so precarious an abode, with countless myriads of exquisite mechanisms; and his goodness in plunging indiscriminately every tribe and family of his sentient offspring in mortal agony and death?¹

Clearly, then, for Ure, the deep-time system which advocates a sentient creation that endures vast and aimless suffering and mass death is derogatory of God's wisdom, foreknowledge, and goodness. In rejecting Moses' words regarding God's just outrage against sin, Ure believes one adopts a moral outlook seemingly incongruent with any meaningful system of ethics. According to Ure, the Creator suddenly, instantly transformed a beautiful creation into a "waste of waters." The Lagerstätten perforating the geologic column are misinterpreted unless seen as derivative of sin, and emblematic of a fallen world. For Ure these primeval cemeteries show the world to be "the victim of sin,"² adding that perhaps all will not be lost if geology's "mighty ruins serve to rouse its living observers from their slumberous existence," and lead them to think seriously on the "origin and end of terrestrial things."³ Any natural evils immured in the fossil record should be seen as God's just response to sin, and the believer can hardly look at this record of death without profound emotion. In exhuming from their earthy beds . . . the relics of that primeval world, we seem to evoke spirits of darkness, crime, and perdition; we fell transported along with them to the judgment-seat of the Eternal, and hear the voice of many waters coming to execute the sentence of just condemnation, on an "earth corrupt and filled with violence."⁴

A non-penal geologic column opens the door to defiling divine justice. One must begin with

¹Ibid., 505.
²Ibid.
³Ibid., liii-liv.
⁴Ibid., 505.
a sober look at the Genesis accounts of the Fall and the Flood to rightly interpret the rocks.

Regarding the issue of time profligacy, also raised by Bugg\(^1\) and Ure,\(^2\) Young is persuaded that to deepen time beyond a univocal reading of the Mosaic creation narrative, "to an indefinite length [of time], looks like detracting from the honours of the Almighty."\(^3\) Thus, deep time, for Young, dishonors God's character.

Young offers the following bases for how the paleo-temporal perspective potentially effaces divine goodness and wisdom. In his day, there is the intimation by some "modern geologists, that to restrict the age of our planet to five of six thousand years, is to limit the displays of the Creator's glory." They see "a much better exhibition of [God's] riches" is afforded in assigning "millions of ages to our globe."\(^4\) Young replies that it is presumptuous to adjudicate "what was the most fit period for creating the world; or what length of time was most proper for displaying the wonders of [God's] power, wisdom, and goodness."\(^5\) God's "time must always be the best," and undoubtedly "he created our globe at the best time; and in framing and furnishing it, he took the best method for promoting his glory, and the good of his creatures."\(^6\) The accommodationists insinuate that deeper time was necessary to manifest [God's] greatness, savours of ignorance, as much as of presumption. He created the world in six days; shall we affirm that the work would have been more magnificent if performed in six years? Nay, rather, the facility and speed with which it was completed, demonstrate more strikingly the wonders of his

\(^1\)Bugg, *Scriptural Geology*, 2:47.


\(^3\)Young and Bird, *Geological Survey*, 341.

\(^4\)Ibid., 36.

\(^5\)Ibid.

\(^6\)Ibid., 37.
power and skill. . . . The amount of his glory, as exhibited in his creatures, is not a question of time. . . . At whatever time these curious fossil animals lived, we see an exhibition of infinite wisdom, in the mechanism of their bodies, and their adaptation to the purposes of life and enjoyment.1

On the last sentence, no accommodationist would register disagreement. Young is merely trying to establish that their affirmation that "we are afforded a much better exhibition of God's riches by assigning millions of ages to our globe," appears to be a faulty position.

Apropos to the impact of deep time on divine wisdom, Young sees a seeming inconsistency with deep time and God's wisdom: If earth history is primarily characterized by successive creations, why would God not place rational beings to enjoy each beautiful scene, and praise Him? Young states that all God's "works, indeed, praise him, independently of man; but there is a rational praise, which man alone can render on earth; and it is unreasonable to suppose that, during so long a period, no provision should be made for an object so important."2

Thus, in Young's view, the existence of successive, deep-time, beautiful creations, with no venue for rational appreciation and praise, seems unwise of God. Compared with Bugg and Ure, on this point Young is more precise in his philosophical rationale for why mere temporal protraction is unwise of the Creator.3 For a very different perspective, we shift our focus to the accommodationists.

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1Ibid.

2Ibid., 41.

3Isolating just the issue of time, it is safe to say that Bugg, Ure, and Young would agree that the best case for recent creation comes from Scripture. Further, it must be emphasized again that the traditionalists' reservation about deep time is not over deep time itself, but rather on what takes place within deep time. As such their argumentation would be strengthened by making the following distinction: While deep time seems _prima facie_ discordant with how God might be expected to create, it is the entities which parallel the deep-time thesis (i.e. deep-time death, extinction, and serial catastrophism, etc.) that are potentially detrimental to divine goodness.
In sharp contrast to the traditionalists, Buckland, while acknowledging that a face-value reading of the book of nature may lead to viewing it as a "scene of perpetual warfare, and incessant carnage,"¹ he insists that such a description does not denigrate God's glory. We have noted in chapter 5 that Buckland employs a utilitarian angle in his theodicy, whereby the existence of carnivores increases the aggregate of animal enjoyment while diminishing unnecessary pain.² This view, in Buckland's judgment, resolves "each apparent case of individual evil," when it is seen as subservient "to universal good."³ Buckland's Creator, then, is satisfied merely with a greater aggregate amount of pleasure among His creatures. Natural evils, no matter how intense, numerous and universal, are just necessary byproducts of creation, and are allowable in a good Creator's creation as long as they are superseded by a greater aggregate amount of good.

Where a traditionalist sees the suffering involved in carnivory as derogatory to God's goodness, Buckland extracts a very different picture of God's character. He grants that it was the God-given office of carnivores "to effect the destruction of life,"⁴ and thus finds theodical comfort in writing of "the law of universal mortality [as] being the established condition, on

¹Buckland, *Geology and Mineralogy*, 1:131. Buckland refers to "the book of nature" (ibid., 128), suggesting that he holds to the so-called "dual revelation" theory.

²Buckland notes that though some creatures' lives are cut "short, it is usually a period of uninterrupted gratification; whilst the momentary pain of sudden and unexpected death is an evil infinitely small, in comparison with the enjoyments of which it is the termination" (ibid., 131). Buckland and the accommodationists are not clear at all on how to appropriate surd evil into their paradigm, or how exactly, say, prolonged bouts with cancer in a tyrannosaur, millions of years before the advent of mankind, would augment God's goodness.

³Ibid., 131-132.

⁴Ibid., 130.
which it has pleased the Creator to give . . . to every creature on earth." Caution should be exercised when analyzing this statement, but it must be asked whether "pleased" in this context connotes pleasure and/or gratification on the Creator's part, or something more on the order of God merely choosing or preferring to create this way.²

The contrast with how the traditionalists and accommodationists use the term "pleased," or its cognates, might point to a fundamental dichotomy embedded in their respective theodicies. To highlight this contrast, note Bugg's employment of the term.

The Almighty contemplated his new creation. Infinite wisdom surveyed its parts, properties and tendencies. And infinite purity and goodness approved the whole. Then every part of it was pleasing to God. Every part of it was what he wished it to be. Then no part of God's creation had any propensity to discontent or rebellion. Whatever was the will of the Lord, was the will of the creature. Whatever he ordered would be cheerfully performed, and whatever he granted would be gratefully received.³

The particular nuance Bugg intends by using the term "pleasing" is that God takes joy in His creation and creatures. Bugg finds it inconceivable that God would take pleasure in predation, suffering, sickness, extinction, and the like, much less call it very good.

Buckland sees some anatomies of deep-time creatures as clearly equipped with organs designed "for the purpose of capturing and killing their prey," and he allows that some forms of predation seem "calculated to increase the amount of animal pain." Later, Hugh Miller

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¹Ibid.

²Recall Russell's query as to why theology would defend a Creator who prefers to reach His goal by tortuous process instead of de novo creation (Religion and Science, 79-80).

³Buckland, Geology and Mineralogy, 1:144.

⁴Ibid., 129.

⁵Ibid.
highlights certain apparatuses which appear "formed not only to kill, but also to torture." But despite what at first blush might seem "inconsistent with the dispensations of a creation founded in benevolence," having embraced the postulates of deep time and a good Creator, Buckland and Miller have to advance the idea that being predated upon is a divine "dispensation of kindness to make the end of life to each individual as easy as possible."2 Whereas traditionalists would say this amounts to calling evil good,3 and sullies God's character, according to Buckland these "dispensations of sudden destruction"4 are actually to be expected of a good God, since this speedily relieves the feeble from suffering. In contrast to the traditionalist position that initially all creatures are created herbivorous, Buckland maintains that carnivores are present long prior to the Fall. God's appointment, then, "of death by the agency of carnivora" is a "dispensation of benevolence . . . [to abridge] the misery of disease, and accidental injuries, and lingering decay."5 Thus, while "we deprecate the sudden termination of our mortal life," Buckland contends, the termination of inferior, unfit and sickly animals "is obviously the most desirable."6 Buckland believes were it not for this salutary check, each species would soon multiply to an extent, exceeding in fatal degree their supply of food, and the whole class of herbivora would ever be so nearly on the verge of starvation, that multitudes would daily be consigned to

1Miller, Testimony of the Rocks, 67, 69.

2Buckland, Geology and Mineralogy, 1:129.

3Cf. Isa 5:20.

4Buckland, Geology and Mineralogy, 1:131.

5Ibid., 133.

6Ibid., 130.
lingering and painful death by famine."

Thus, the "evils [of predation] are superseded by the establishment of a controlling Power in the carnivora." Carnivores are the "police of nature," which provide a "restraint upon excessive increase of numbers." So, in addition to God having set up a utilitarian mode of existence, He has also ordained a Malthusian-like model where nature red in tooth and claw is the lesser of two evils, since it checks overpopulation, which left uncurbed would allegedly bring on more pain and suffering.

The Buckland theodicy also appeals to "the providential contemplation of the Creator" in allowing the numerous "violent Perturbations" which riddle Earth history. These disturbances, "long antecedent to the creation of our species," are necessary to prepare the way for "the last, and most perfect creatures" which God was to place on the earth. In other words, any level of aboriginal, life-extinguishing geophysical perturbations becomes permissible if they can merely be seen as essential groundwork to

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1Ibid., 132. Traditionalists, of course, would not see "inferior, unfit and sickly" creatures as part of a *very good* creation.

2Ibid.

3Ibid., 133.

4To be consistent, accommodationists cannot see humanity as built to last, but as meant from the beginning of creation to taste of death, since they too would also eventually exhaust the world's food supply. Smith writes that if man had not fallen, "he and each of his posterity would, after faithfully sustaining an individual probation, have passed through a change without dying, and have been exalted to a more perfect state of existence" (Smith, *On the Relation*, 197).

5Buckland, *Geology and Mineralogy*, 555.

6Ibid.
render our planet "a fit and convenient habitation for Mankind."\(^7\) The deep-time system points to "an intelligent Agent,"\(^2\) evidencing "skill and power"\(^3\) and "Method and Design"\(^4\) in planning "such an infinity of future uses under future systems, in the original groundworks of his Creation."\(^5\) Thus, Buckland can close by saying that while some are alarmed at "the physical history of our globe, in which some have seen only Waste, Disorder, and Confusion," he sees "endless examples of Economy, and Order, and Design."\(^6\) Buckland's theodicy, then, allows for unlimited geophysical perturbations, carnivory, and paleonatural evil. To an outsider looking in, such might negatively impact God's character, but to Buckland any and all natural evils can be recast as both necessary and reflective of divine goodness. Nature's scheme of revolutions and destructions, which "have occupied immense periods of time," according to Buckland, "enlarges" our conception of God.\(^7\)

Smith is aware of the traditionalist position that "before our first parents fell from innocence and happiness, death and its harbingers had no place in the inferior animal creation."\(^8\) He aligns their theodicy with the following Miltonian description:

\(^{1}\)Ibid., 581.

\(^{2}\)Ibid., 580.

\(^{3}\)Ibid.

\(^{4}\)Ibid., 581.

\(^{5}\)Ibid.

\(^{6}\)Ibid., 595.

\(^{7}\)Ibid., 387.

\(^{8}\)Smith, On the Relation, 197.
Of man's first disobedience, and the fruit
O that forbidden tree, whose mortal taste
Brought DEATH into the world, with all our woe;
Sing, heavenly muse.¹

Smith believes that the illumination which geology affords reflects the undeniable hard data of the natural history of sentient tribes, and renders any such Miltonian golden age out of the question.²

As noted earlier Smith sees the exhortation to "Be fruitful and multiply"³ as indirectly implying that death is a divinely ordained necessity. The succession of individuals suggested by the fossil record necessarily implies death of previous beings.⁴ Like Buckland, Smith employs the overpopulation argument, believing that if creatures were allowed to increase and multiply without the departure of the preceding generation, they would, at no immense distance of time, go beyond the provision of nutritive support, and the limits of appropriate habitation: the land, the air, and the waters, would be filled; food would fail, and death with aggravated suffering would be the infallible consequence. This terrible consummation would the more speedily ensue, as, by the supposition made, the only means of nutrition would lie in vegetable matter.⁵

Thus, death is given to hold animal populations in check, and is seen as an omnibenevolent gesture by the Creator to diminish the aggravated suffering which a diminished food supply would eventually bring.

Contemplating skeletal remains in the Oolite and Lias series, Smith cannot help

¹Ibid., 66, quoting the first four lines of Paradise Lost.
²Ibid.
³Gen 1:22.
⁴Smith, On the Relation, 197.
⁵Ibid., 198.
but notice that they possessed apparatuses conducive to carnivory, like trenchant teeth, and stomach cavities containing "chewed bits of bone, fish-scales, and other remains of animal food." Such data conclusively demonstrate for Smith, given the assumption that these remains have been encoffined through deep time, that death has always been the "will of the All-wise Creator" from eternity past; it is even a blessing given to "minister" to "the whole extent of animal tribes." The current predatory chain is congruent with that which the Creator first made, according to Smith. He acknowledges that death is in the forethought of the Creator, and that "all organized matter . . . is formed [i.e., created] upon a plan which renders death necessary."

Note the use of telic language, for example, when Smith refers to that majority of the animal creation which is "formed, in every part of its anatomy, internal and external, for living upon animal food." Such carnivorous design "of the larger part of animal species presents demonstration that they were created to live upon food," and it is justifiable "in a thousand instances" because they are the "immediate cause of inestimable benefits to man." From the infusoria all the way up the chain of being, all creation is "under the bountiful care of Him who is good to all, and whose tender mercies are over all his works", as the stately elephant, the majestic horse, or

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1Ibid., 68.
2Ibid.
3Ibid.
4Ibid., 66.
5Ibid., 67.
6Ibid., 199.
7Ibid.
man, the earthly lord of all."\(^1\) Clearly then, for Smith, carnivory and death are seen as intentional and good on the Creator's part, and not stemming from the Fall.

In addition, it seems that whenever geology might reveal imposing scenarios "distressing" to our faith, or apparently "at variance with the declarations of Holy Scripture,"\(^2\) followers of Smith would join him in "relying on the glorious perfections of God,"\(^3\) and saying that His judgments are "'past finding out'!"\(^4\)

Miller conveys that in his day it was being "weakly and impiously urged" that the "economy of warfare and suffering,—of warring and of being warred upon, would be . . . unworthy of an all-powerful and all-benevolent Providence, and in effect a libel on his government and character."\(^5\) But Miller has a penchant for turning an apparent liability into an asset, being able to commend this economy of prelapsarian warfare and suffering as commensurate with an all-wise, all-good God. In Miller's mind, geology has decisively buried the traditional understanding of a death-free golden age created by an order-loving God where pain and suffering were not seen until the advent of sin. Geology has proved beyond a shadow of a reasonable doubt that long before man arrives, daunting brush strokes of pain, torture, death, and extinction dominate the canvas of the natural order.

But since Miller believes in an omnipotent and omnibenevolent God, any dysteleology or

\(^1\)Ibid., 66-67.

\(^2\)Ibid., 220.

\(^3\)Ibid., 241.

\(^4\)Ibid., 242.

\(^5\)Miller, *Testimony of the Rocks*, 70.
natural evil by definition cannot be a blight on divine character. He contends instead that the same God, "from whom even the young lions seek their food, and who giveth to all the beasts, great and small, their meat in due season," has always provided for his animal kingdom in this manner. Thus, Miller declares that the geologic record demonstrates that God gave

fishes their spines and their stings,— to the primæval reptiles their trenchant teeth and their strong armor of bone,—to the primeval mammals their great tusks and their sharp claws,— that he of old divided all his creatures, as now, into animals of prey and the animals preyed upon,—that from the beginning of things he inseparably established among his non-responsible existences the twin laws of generation and of death,—nay, further . . . let us assert, that in the Divine government the matter of fact always has been done by him who rendereth no account to man of his matters, he had in all ages, and in all places an unchallengeable right to do.

Thus, Miller holds that all predatory apparatuses, many conducive to extreme torture, such as sharp spines, barbed stings, trenchant teeth, strong armor, tusks, sharp claws, were ordained from the "first beginnings of organic vitality." Along with the "twin laws of generation and of death," these are not due to sin, but intentionally designed and expressive of the Creator's unchallengeable right to do whatever He wishes, including the determination "that all animals should die." According to some accommodationists, even man was not created to last in his immediate sphere. No matter in what manner God chooses to create, and no matter how much disease, pain, torture, death, and extinction are involved, such

1Ibid.
2Ibid.
3Ibid., 71.
4Ibid., 238.
5Ibid.
6Ibid.
can be merely swept under the carpet of omnibenevolence. Miller believes "that in the
Divine government the matter of fact always determines the question of right."1 As such,
Miller essentially affirms that God can do "no wrong."2 and thus seems to defend Pope's
view that "whatever is, is right."3 Thus, aside from brute fideism, the confidence level in
divine goodness, which Miller adjudicates from geological interpretation, cannot rise
above the level of "cosmic Toryism."4

Miller's portrayal of God in this instance, as indicated above, fits with his
suggested cleavage between the God of the Old and New Testaments.5 Miller writes that
"it is the God of the Old Testament whom we see exhibited in all nature and all
providence."6 This compartmentalization implies that the Old Testament God is callous,
while the God of the New Testament is "caring for all his creatures."7 Assessing the
theological cost of such a divorce, Gillespie states:

Is it not a lie, then, to assert, or even to countenance any thing which implies, that
the God of the Old Testament, so full of love, and mercy, and tender pity, even to
the lowest creatures, is on the same level with that Creator discovered by the
geologists, who sent, directly from His hands, fishes, reptiles, mammals, to tear
each other to pieces, till death closed the scene with race after race in those
successions of murderers? Yea, it is a lie.8

1Ibid., 71.
2Ibid., 69.
3Pope, epistle I, line 294.
4Wolley, Eighteenth Century Background, 43 f.
5Miller, Testimony of the Rocks, 69, 188.
6Ibid., 69.
7Ibid., 188.
While such words cannot be cavalierly glossed back into the thoughts of Bugg, Ure and Young, given their complementary assertions to the same issue, it seems they would find more to agree with in Gillespie's affirmation than not.

Having compared and contrasted the respective theodical perspectives of the traditionalists, accommodationists, and Reformers on ten interrelated issues of paleonatural evil, we now turn to the conclusion of this investigation.
CHAPTER VII

CONCLUSION

There is to-day . . . a very notable distaste for carrying any argument to its extremity, and yet it is a fact that if an argument will not bear extension to its extremest limit there must be a flaw in the original premises, in the accuracy and logic of the reasoning, or in both.

--Bernard Acworth,
*This Progress: The Tragedy of Evolution*

Men will no more stop half-way in an argument because you wish them, than a rolling stone will check itself at your bidding when half way down the hill.

--James Mellor Brown,
*Reflections on Geology*

When a theologian accepts evolution as the process used by the creator, he must be willing to go all the way with it.

--Kirtley F. Mather,
*Science Ponders Religion*

Introduction

This investigation of Bugg, Ure, Young, Buckland, Smith, and Miller indicates that confessional beliefs regarding the meaning of creation's original goodness, the origin of natural evil, and the extent of the Fall and the Flood, and the interpretation of the new geology, result in contrasting characterizations of God's character. By researching early nineteenth-century British responses to paleonatural evil, this study has discovered the kind of Creator these traditionalists and accommodationists worship. This pursuit has uncovered several areas of contrasts between the traditionalists and accommodationists which merit summarization.
Summary of Findings

Although both groups share some common ideological ground, we find little *esprit de corps* between them, understandably, due to rather severe differences in several areas. These areas of contrast are characterized as follows.

Time Frame for Creation

A prominent disparity between traditionalists and accommodationists emerges in their hermeneutical method; principally on the length of creation and the meaning of days. As shown in chapters 4-6, the traditionalists view the days of creation to be literal, while the accommodationists do not. The mandate to seek and adhere to Scripture's plain meaning readily delineates the traditionalists from the accommodationists. To avoid ambiguity, traditionalists variously describe the six creation days as real, working, successive, contiguous, natural days, each involving an earth rotation. Uniformly holding to the rapidity of creation, the traditionalists further make it a point to teach that creation took place about 6,000 years ago.

Regarding the creation days, Smith is the exception among accommodationists, because he regards the creation days as literal, but opts for a modified gap theory. However, Buckland does not feel comfortable enough with the day-age theory as a first exegetical option, but does not eliminate it completely. He also opts for a gap theory as his chosen mode of reconciling deep time with the Creation narrative. Miller, by contrast, finds no consolation in any gap theory, and adopts the diorama model, suggesting that God gave Moses a great air-drawn vision of the six divine work days which correspond to six successive geologic periods.
Luther, Calvin, and Wesley all hold to the recency and rapidity of creation. While it is true that they did not have access to the geological datum of the nineteenth century, the fairest extrapolation from their writings offers no indication of them having any hermeneutical proclivity to accommodate any portion of Scripture to some extra-biblical criterion. In this regard, then, as a whole, the traditionalists' hermeneutical handling of the time frame of creation, in contradistinction to the accommodationists' method, bears a more natural congruence with the three select Reformers. Along with the traditionalists, the Reformers generally hold to an Ussherian-like time frame, whereby all creation was rapidly brought into being about 6,000 years ago. The accommodationists, on the other hand, seem to have oriented their entire worldview and exegetical method around the undeniable Archimedean point of deep time.

The Extent of the Genesis Flood

The second area of contrast presents itself in how the traditionalists and accommodationists interpret the Genesis Flood: Was it global and catastrophic or local and tranquil? The range of scriptural terminology and terms of destruction in the Genesis narrative (mabbûl, and with later emphatic New Testament terms, such as αἰωνίω) are sufficient for the traditionalists to repudiate exegetically any notion of the Flood being a mere tranquil effusion. Their face-value hermeneutic finds the Bible referencing only two massive transmutations—the Fall and the Flood—both having a penal connection issuing in catastrophic and global results. They believe that the mass-mortality depicted in the fossil record is indicative of divine judgment, rather than an attestation of God's method of creation. This understanding means that they think the geologic column was formed relatively rapidly, not throughout deep time, and reflects God's wrath.
While the accommodationists’ view of the Flood is not quite as uniform as with the traditionalists, they are in unison that this deluge was historical, but agree that it was neither global or catastrophic. As such, it left no significant geological trace in the fossil-bearing sedimentary rock formations. The accommodationists all agree that the Flood was preceded by numerous, deep-time geophysical catastrophes which slowly formed the geologic column. Neither Buckland, Smith, or Miller are ready to entertain the Flood as ahistorical, but their position serves as an isthmus toward the coming acceptance of such a position in accommodational quarters.

We have noted earlier that all three select Reformers hold to a literal, catastrophic deluge. Luther sees it as destroying all things, and Calvin sees it as immersing and destroying the whole world. Even though Wesley does not write too much on the effects and extent of the Flood, this may be a tribute to the idea that he would have thought it incredulous that any churchman would ever doubt the clarity of Scripture on the matter. When writing that prior to the deluge "the globe was not rent and torn as it is now," Wesley clearly understands the Flood as tearing the entire globe. The hermeneutical perspectives of these traditionalists on the time frame of creation and the extent of the Genesis Flood essentially lock them into a pattern for their understanding of the rest of Scripture. The same holds for the accommodationists.

Thus, in light of the respective positions of the traditionalists and accommodationists highlighted above, once again it seems the traditionalists are more in line with the Reformational convictions regarding the principle of hermeneutical

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1See Luther, *Luther on the Creation*, 1:164.

2*Wesley’s Works*, 6:56.
perspicuity. The accommodationists, however, practice a form of category translation which is completely foreign to the Reformers.

The Manner in Which Nature's Prelapsarian Economy was Very Good

A third area of discord between the traditionalists and accommodationists is found in how each group understands the pre-adamic economy of nature and the divine affidavit that the finished creation was very good. The traditionalists hold that prior to the Fall, all creation was absolutely perfect (i.e., very good), and stood in no need of any level of unfolding or improvement. This very goodness meant that prior to the Fall, as Bugg believes, all creation was in a state of perfection before God, and there would "have been no prior revolutions and destructions" of His works.¹

The accommodationists could hardly hold to a more inverted thesis than this. They hold that before the Fall, the perfection, or goodness, of creation was a relative one, meaning that all created things perfectly fulfilled their intended purpose, and in fact constitutive of evidence for not only design, but benevolent design.

The Reformers leave little doubt how they understood creation's original goodness. Wesley believes the created order was "unspeakably better than it is at present."² For him this meant that before the Fall creation was without any blemish, defect, corruption, destruction, sin, and pain in the inanimate creation. Calvin apparently believes in a "very good" golden age, which he describes as a time of "angelic harmony," which characterized every order of creation, and which would have remained, had it not been for the corrupting power of sin.

¹Bugg, *Scriptural Geology*, 1:143.

Luther assesses Genesis 1:29-31 to mean that the Creator gave man an environment in which nothing was "lacking for leading his life in the easiest possible manner."\(^1\) This good creation included a vegetarian diet and "the utmost freedom from fear," but unfortunately, "all these good things have, for the most part, been lost through sin."\(^2\) In comparison with the traditionalists and accommodationists, therefore, it again seems that the former possess far more affinity with the Reformers on the meaning of Gen 1:31.

**Whether the Post-lapsarian Economy of Nature Bears Penal Scars**

Given the contrasting positions of the traditionalists and accommodationists on what creation's original goodness means, a fourth area of difference is further implied; namely whether the natural order bears lapsarian scars. For the traditionalists there existed nothing prior to the Fall that could be construed as tumultuous in the realms of meteorology, geology, or biology--meaning that neither geophysical catastrophism nor death or pain in the animal creation yet existed. Sin, however, introduced all woes, including everything from thorns to volcanoes; from disease to predation; from wrinkles to death. Earmarks of the Fall permeate the entire created order.

Accommodationists hold just the opposite thesis, instead seeing those entities which traditionalists see as the direct result of the Fall as providentially woven into the original tapestry of creation. Thus, geophysical revolutions are seen as necessary and preparatory stages for mankind. Any loss of life along the way, even if deemed in some manner as negative, is the unavoidable cost to secure a greater good. Therefore, prior to the advent of

\(^1\text{Luther's Works, 1:72.}\)

\(^2\text{Ibid., 73.}\)
humanity, earth history is best portrayed by violent, deep-time serial catastrophism, paralleled by suffering, death, and extinction in the animal creation; all of which are intended by God. To the accommodationists, any idea of a golden age is sheer sentimentalism.

Generally, the Reformers attribute all natural evils to the Fall, and believe that they are brought on by a lapse in human obedience. Prior to the Fall no type of evil existed, and all creatures lived together in peace. According to Calvin, "There would certainly have been no discord among the creatures of God, if they had remained in their first and original condition."¹ Luther holds that it would be an abomination for man "to kill a little bird for food."² He also sees the savagery of wolves, lions, and bears, and the perniciousness of insects as dispositions having been acquired due to the curse.³ Wesley believes that creation, "at the beginning, was in a totally different state from that wherein we find it now."⁴ Thus the Reformers and traditionalists both exhibit a Miltonian-like element in their theodicy, which for them stems from a natural reading of Scripture. They also believe that some day the paradise lost to sin will be once again be restored to its perfect estate. The accommodationists believe neither in any ἀτάκτικα-free creation, nor that sin substantially corrupted the created order, and as such would not find affinity with the Reformers on these important points.

The Cause of Deep-Time Serial Catastrophism

Whether the beginnings of geophysical revolutions stem from sin or are divinely intended presents a fifth area of contrast. Given the traditionalists' commitment to sin

¹Calvin, Isaiah, 1:383.
²Ibid., 2:134.
³Luther's Works, 1:72.
⁴Wesley's Works, 6:213.
initiating natural evils, and also to their view that the Flood is this planet's lone global catastrophe, they unequivocally hold that no geophysical convulsions or upheavals were present before sin, and there was only one global catastrophe thereafter. The traditionalist model "admits of no revolutions among the secondary strata,"¹ and sees the Flood as responsible for the majority of the geologic column.

The accommodationists, on the other hand, hold that the Genesis Flood is merely the last in a vast series of catastrophes, extending far back into deep time. While none of the accommodationists see any of these catastrophes as entirely global, these upheavals are responsible for the deposition we now refer to as the geologic column, and most of these caused, or had the potential to cause, the mass extinction and death of whole species. No accommodationist gives any indication that he sees sin either ushering in or causing any significant increase in geophysical revolutions. These are part of God's intended very good created order. Buckland even claims that natural phenomena such as fire, hail, and snow can be attributed to "the Will of the same Creator" who created the world.²

The three central Reformers of this study disagree with this last sentiment. Luther believed prior to sin that there was no "settling of the ground" or "earthquakes."³ Calvin sees sin as subverting and perverting the whole order of nature; all things would have remained in a state of order and comfort for mankind except for the Fall. Wesley, in complete agreement, sees a future time of restoration to pre-Fall conditions, where once again there will be no "jarring or destructive principles like earthquakes, horrid rocks, [or]

¹Bugg, Scriptural Geology, 1:55.
²Buckland, An Inquiry, 9.
³Luther's Works, 1:206.
frightful precipices.”\(^1\) Thus, by way of direct comparison, the traditionalists’ position mirrors that of the Reformers. But in allowing all manner of geophysical revolution prior to sin, the accommodationists’ view contravenes the intent and tenor of the Reformers on the tranquility of the original created order and the impact of original sin.

The Cause of Lagerstätten and Mass-Faunal Extinctions

The sixth contrast, while closely related to the fifth, focuses specifically on the issue of whether the world’s fossil-lagerstätten and mass-faunal extinctions are better explained by a single, divinely intended global aquatic bouleversment of creation, or whether they are originally intended by the Creator, and thus devoid of penal connection. All things considered, the hermeneutical convictions of Bugg, Ure, and Young preclude them from accepting the deep-time serial catastrophism which characterizes the formation system of the accommodationists. It is clear, if not redundant, at this point, that the traditionalists see death as intrusive to creation, a single aquatic catastrophe as responsible for the geologic column and lagerstätten, and mass-faunal extinctions as either post-Fall or post-diluvial phenomena.

Regarding the natural order, the accommodationists see no substantial geophysical difference between the natural order before and after Adam. All things remain, as it were, as they were from the beginning. Their hermeneutical latitude, both scripturally and geologically, allows them to see our planet as having endured numerous catastrophes, and most becoming great charnel houses of the death and extinction for whole species of animals and plants.

It is true that the Reformers give no explicit indication of being aware of mass-faunal extinctions. But it would seem equally clear that given their explicit affirmations

\(^1\)Wesley’s Works, 6:293 f.
on the entrance of death, the cause of natural evils, and seeing the Flood as a naked
singularity, they would not feel comfortable with deep-time serial catastrophism and its
implications. If such an extrapolation has warrant, then it is clearly the traditionalists,
again, who would seem to be most in keeping with Reformation heritage, and it is the
accommodationists who have shifted away from classic understandings of the Fall, Flood,
and by the implication, in part, of mass faunal-extinctions.

The Cause of Physical Maladies,
Diseases, and Parasites

The cause of all physical maladies, diseases, and parasites presents a seventh
sphere of contrast between our two phalanxes, and essentially asks whether these are the
fruit of original human sin or were they built into nature's economy from the beginning.
Young's thinking on this is fairly representative of the traditionalists, who would applaud
his understanding that the Scripture teaches that sin "brought death into the world, with
all our woe."\(^1\) This is in contrast to the accommodationist model, which allows that all
such "woes" have reigned on our globe long before man's arrival. Young clearly believes
that "the misery and destruction of the creatures are represented as the bitter fruits of
man's transgression," and would thus be inclined to label as unscriptural the perspective
of the formation system which suggests that these woes not only antecede the advent of
sin, but precede man's arrival by deep time.\(^2\) Regarding numerous "personal pests,"\(^3\)

\(^1\)Young, *Scriptural Geology*, 41-42.


\(^3\)Kirby, 1:12.
which infest and attack humans "internally, and sometimes fatally," Kirby believes such were created with a view to man's punishment. To his question, "Can we believe that man, in his pristine state . . . could be the receptacle and the prey of these unclean and disgusting creatures?" accommodationism would answer in the affirmative.

Some accommodational beliefs on this matter overlap with the traditionalist motif. For example, Buckland does believe that the curse did affect humanity. But what he means by this is that the curse primarily affected humanity, and its "pains and penalties . . . appear strictly and exclusively limited to the human race." This means that the diseases and parasites with which the subrational order are imbued are present as intended concomitants, chosen by God to be part of the ordinary processes which He set up to govern His very good creation. God is responsible, then, for subrational disease, suffering and death. I have found no explicit statements in the writings of Buckland, Smith, or Miller which would challenge this conclusion.

Wesley contends that every creature was "subjected to vanity, to sorrow, to pain of every kind, to all manner of evils," due to human sin, prior to which there existed no "evil of any kind." Luther makes frequent allusion to the fact that diseases have their primordial cause in original sin. Calvin also sees the "primary cause of diseases" to be sin.

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1Ibid., 13.
2Ibid., 13, 17.
3Ibid., 13.
4Ibid., 15.
5Wesley’s Works, 6:245
6Ibid., 243.
7Calvin, Genesis, 177.
perverted every quarter of creation, freighting in "the most filthy plagues, blindness, impotence, impurity, vanity and injustice . . . miseries."\(^1\) on her train.

Here, as with the previous six categories of discontinuity between the traditionalists and accommodationists, we once again find a threefold pattern: (1) the traditionalists see such ailments (diseases, parasites, etc.) as due to sin, and indicative that the original very good created order has been lost; (2) the accommodationists, by contrast, see such entities as part of the original, very good created order; and (3) the Reformers' position is demonstrated to be clearly more congruent with the traditionalists' perspective than that of the accommodationists.

The Origin of Predation and Suffering

An eighth category of contrast between the traditionalists and accommodationists is found in their views on the origin of predation and suffering. The traditionalists contend, along with Ure, that the prelapsarian animal kingdom subsisted exclusively on a herbaceous diet,\(^2\) which would mean that the original created order was a predation-free environment. Bugg believes the Creator originally "granted to all the animals, only vegetable food."\(^3\) and that animals have degenerated from their original condition into their present carnivorous state. To suggest otherwise, in his opinion, is "the grossest insult to the wisdom and goodness of God."\(^4\)

Buckland believes carnivores long antedate mankind. He adumbrates that the purpose of carnivores is "to effect the destruction of life,"\(^5\) and has enough theodical

\(^1\)Calvin, *Institutes*, 1:246.


\(^3\)Bugg, *Scriptural Geology*, 1:146.

\(^4\)Ibid., 1:147.

\(^5\)Buckland, *Geology and Mineralogy*, 130.
courage to refer to the "law of universal mortality [as] being the established condition, on
which it has pleased the Creator to give . . . to every creature on earth."\(^1\) Similarly, it will
be remembered that Miller's conviction is that those current predatory apparatuses which
cut, pierce, torture, and kill are of divine intention and have always been components of
the natural order. Smith finds the suggestion incredible that animals were not always as
carnivorous before Adam as they are now. He supports his fellow accommodationists,
claiming that carnivory, "in a thousand instances, is the immediate cause of inestimable
benefits to man,"\(^2\) and it is his unwavering opinion that carnivory and death have always
been intended by the Creator, and thus cannot be the result of the Fall.

We have seen that Luther, Calvin, and Wesley all find carnivory to be the result of the
Fall,\(^3\) a position also espoused by the traditionalists. None of the accommodationists see any
connection with predation and the Fall. Thus, on this issue we find once again that the
traditionalists and Reformers are in general harmony on the cause of predation. The
accommodationists, however, adopt a much different trajectory, assured that just as with the
Copernican revolution, the new geology not only justifies, but mandates this enlightened shift.

The Cause of Human and Animal Death

Closely mirroring the previous category, a ninth discontinuity between the
traditionalists and accommodationists is found on the issue of whether human death and
animal death are intrusive to a previous death-free creation, or are instead built into the
system from the very beginning. It is a fundamental plank in the traditionalists' canon that

\(^1\)Ibid.


\(^3\)Cf. *Luther's Works*, 1:78, 210; *Wesley's Works*, 6:244-246; and Calvin, *Genesis*, 104.
death is intrusive to an originally death-free creation and has a penal cause. Along with Bugg, traditionalists see all death as part of a fuller degeneration from an original perfection: "man has degenerated and all nature with him, from their original perfection; and the tendency of his nature is to grow worse and worse."1

The accommodationists, as we have noted, see death as a natural part of nature. Accordingly, they believe there can be no rational doubt that death was intended from the very beginning at all levels in the animal kingdom. The fossil record will allow no other inference. On the matter of origin of human death there exists very slight differences of opinion among the accommodationists themselves, and much concord with the traditionalists as a whole. The pertinent writings of these six men would all seem to clearly imply that they take Rom 5:12 to indicate that human death entered due to Adam's sin. The primary difference is that traditionalists believe that had man never sinned, humanity would have never tasted physical death. Accommodationists believe that all things were designed to die.

The Reformers essentially hold to the same platform on the cause of animal death, and are in strict unison on the origin of carnivory. Referring to sin's "horrible curse," Calvin sees that "all the harmless creatures from earth to heaven have suffered punishment for our sins."2 Wesley believes that if there had been no Fall, then there would have been no death (at least due to predation) even at the insect level. It is true that Luther allows for animal death prior to the Fall, but he submits that this would be due to old age, or "temporal casualty," rather than predation.

1Bugg, Scriptural Geology, 1:152.

2Calvin, Commentary upon the Epistle of Saint Paul to the Romans, trans. Christopher Rosdell and ed. Henry Beveridge (Edinburgh: Calvin Translation Society, 1844), 218.
This category, thus, presents an area where a limited unity exists among the traditionalists, accommodationists, and Reformers. Namely, they find general unison on the origin of human death. However, on the issues of paleonatural evil and violent animal death, wide disparity reasserts itself. The traditionalists and the Reformers see deep-time animal death, whether by predation or serial catastrophism, as incompatible with the Genesis. But the accommodationists see no incompatibility between deep-time "Nature red in tooth and claw" and the opening chapters of Genesis.

The Bearing of Paleonatural Evil on God's Character

All nine of the above contrasts set the stage for the tenth contrast: the bearing of paleonatural evil on God's character, or what will be called here "the face of God." It seems appropriate to assume that Christians can reasonably presume, as articulated by Stanley Rice, that "the Creator wanted to express His personality in the creation in part so that we, the rationale of His creatures, could learn about Him."1 Nineteenth-century traditionalists and accommodationists both affirm this, holding that the natural world as initially established displays God's power, wisdom, and benevolence. But to say that the present creation is in its present state due to sin, as the traditionalists claim, as opposed to the present creation being the exact way an all-loving, all-powerful God intended it to be from His first creative command, is to portray two radically different views of the Creator's goodness.

For Bugg, Ure, and Young, it is not theologically possible to interpret the travail of nature red in tooth and claw, in which a thousand types are gone, as being the best of

1Rice, "On the Problem of Apparent Evil in the Natural World," 150.
all possible designs that one would expect from the the type of God revealed by a natural reading of Scripture, and as embraced by Luther, Calvin, and Wesley. How, the traditionalists ask, could an omnibenevolent and omnipotent being, with every creative option at His disposal, design and employ as His preferred method of choice, serial catastrophe, pain, grief, disease, death, and every other paleonatural evil in an apparently profligate, if not pernicious, manner, to bring about and maintain the economy of sentient creation? Such a God, to the tradionalists, seems patently counter to the caring Creator of Scripture. For this reason the traditionalists vigorously defend the Flood as historical. Their defense of a space-time Fall (with its main corollary being the advent of death through sin) is rendered a coherent system not merely because of their literal hermeneutic, but because they believe that a global Flood preserves the goodness of God.

In contrast, and as demonstrated above, Buckland, Smith, and Miller make varied theodical attempts to exonerate their God from the dark side of paleonatural evil. Their theodicy on several flanks differs profoundly from that of the traditionalists. Aside from having a very different view of both the goodness of God and His finished creation, they do not seem to be troubled by the vast amount of paleonatural death, nor preoccupied with discerning any tangible effects of the curse. This accommodationist approach to the issue of paleonatural evil seemingly has to allow for endless sub-rational suffering, death, and mass extinction. Any level of paleonatural evil can be effortlessly grafted into the

1Chapter 5, passim.
Christian's view of the original "very good" created order.\textsuperscript{2}

According to William Shea, there are some theists who will exculpate God "even if he multiplied the world's pain a billionfold."\textsuperscript{2} This dissertation finds that this same potential for endless concession applies to Buckland, Smith, and Miller. No matter what level of natural evil their interpretations of the fossil record shows, present or future, it can be accommodated with claims of the goodness of God and His creation.

**Conclusions**

Given the findings summarized above, the dissertation offers the following conclusions.

**Paleonatural Evil: A Recognized Phenomenon in the Early Nineteenth Century**

Primarily due to new geological findings and their interpretations, the dissertation has discovered that several early nineteenth-century British Protestant theologians and Christian geologists indeed recognize the problem of paleonatural evil. This is evident in the works of the six key figures selected for comparison in this dissertation. Bugg, Young, and Ure respond to the issue much differently than Buckland, Smith, and Miller do, but all see it as an issue worthy enough to address in their writings.

\textsuperscript{1}In addition to the several discoveries of this dissertation, one other finding bears passing mention. It seems to the present writer that some modern day accommodationists, such as Ted Peters and Philip Clayton, are much more sensitive to the problem of paleonatural evil and do not treat it quite as cavalierly as others (Hugh Ross et al.) who have adopted a even more crimson view of earth history than Buckland, Smith and Miller.

The Responses to Paleonatural Evil
Fall into Two Basic Groupings

Reaction to the problem of paleonatural evil by Bugg, Young, and Ure, differs markedly from that of Buckland, Smith, and Miller. Their collective responses can be codified under two headings, namely, that of traditionalism and accommodationism. Traditionalists and accommodationists of the early nineteenth century essentially mirror the positions of the fiat creationists (strict concordists; young-earth advocates) and progressive creationists (broad concordists; deep-time proponents) of the late twentieth century. The fundamental cleavage of opinion between these two parties on theodical issues provides little hope for rapprochement.

The Traditionalists Assess Paleonatural Evil as
Inconsistent with a Plain Reading of Scripture

Traditionalists and accommodationists both attempt to reconcile Scripture and geology. Yet the accommodationists are comparatively more at ease than the traditionalists in reinterpreting, if not deliteralizing, the Bible to be in harmony with conventional geological theory. The traditionalists, however, take the exact opposite position, practicing the hermeneutic of retrieval. They mirror the hermeneutical approach of the Reformers, preferring as a general rule the plainest reading of Scripture, and thus accepting Gen 1-11 as propositional history. As such, they exhibit no discernable practice of category translation as do the broad concordists. Upon encountering apparent conflicts with geology and Scripture, they prefer to suggest some plausible reinterpretations of geology which do not sacrifice a natural reading of the creation, Fall, and Flood accounts. The traditionalists see paleonatural evil as problematic for any brand of broad concordism and suggest either taking the Scripture at face value or forgoing the biblical data altogether.
The Accommodationists Assess Paleonatural Evil as Consistent with Their Understanding of Scripture

While recognizing paleonatural evil as an issue needing appraisal, the accommodationists do not see it as detrimental to God's goodness or His creative method. They are able to forge any number of theological, hermeneutical, or philosophical constructs amenable to the deep-time mass mortality suggested by the neo-geological interpretation of the fossil record in the geologic column.

The Theodical Trajectory of the Traditionalists Appears Congruent with Early Classic Protestant Theodicy

The traditionalist theodical trajectory appears to be more congruent with the early classic Protestant understandings of God's beneficence as revealed through His method of creation. One main area of congruence is with the origin of death, which the traditionalists and Reformers see as intrusive to the natural order.¹ Both the traditionalists and the Reformers see the vast preponderance of the world's natural evils as stemming from original sin. Even were these two groups to be demonstrated as palpably wrong on such matters, there would seem to be no ground to dispute that they essentially embrace and defend the same general theodical rubrics.

¹Even making allowance for prelapsarian sub-rational mortality, as Luther did, it would have been inconceivable to Luther that such would have been a main ingredient of divine creative method. In addition, considering Luther's view of recent creation, any moral repugnance toward prelapsarian suffering and death in his model is minuscule in comparison with the deep-time mortality in the extinctions, disease-ridden natural order, and unbridled carnivory ordained by the God of accommodationism.
The Theodical Trajectory of the Accommodationists Appears Incongruent with Early Classic Protestant Theodicy

In direct contrast to the traditionalists, the accommodationist theodical trajectory appears to be much less compatible with early Protestant perspectives. Broad concordists see pain, suffering, and death as essential, non-intrusive agents in the Creator's method. They do not see natural evils as stemming from original sin, and thus seem forced to explore and defend theodical options which the Reformers would have considered untenable. Though minor areas of congruency between the accommodationists and the Reformers should be highlighted wherever such exist, these should not be used to obscure the fact that these two groups represent starkly divergent schools of thought on the issues of the origin (and perhaps definition) of natural evils (death in particular), and the goodness of creation and the Creator.

Contrasting Perspectives of Divine Creative Method Reveal an Evolving Face of God

Finally, the contrasting philosophies of divine creative method given above provide conceptual and historical perspectives by which to trace the evolving face of God; i.e., to detect a changing understanding of His beneficence from the period of the Reformation to the early nineteenth century. The study has discovered that the traditionalists detect major theodical difficulties with paleonatural evil and loudly register their concerns. The historico-theological assessment of the early nineteenth century carried out in this dissertation has detected a shift in how God's goodness is understood before and after the hypothesis of paleonatural evil. With little exception, the early Reformers, traditionalists, and accommodationists all think knowledge of God's goodness can in some fashion be derived from the study of nature. But among these thinkers there...
exists a wide range of understanding on exactly how God's goodness is discerned from the total picture of nature. The metaphor of "God's face" would seem to be appropriate to differentiate between the good God of the traditionalists and the good God of the accommodationists. Traditionalists picture a good God, whose "face" is inviting, and which reflects tender compassion, risk-taking love, and protective grace. The visage of the accommodationists' God, while surely capable of mirroring these attributes, has another range of expressions which do not naturally illicit a sense of paternal comfort.

In the wake of the new geology, the accommodationists constructed a theodicy more along an Irenaean-Leibnizean line. As a result they were perhaps overly optimistic in their "handling of the difficult problem of pain, disease, disaster and death in creation. Generally, they either ignored the problem or dealt with it superficially, attributing the evil in a mysterious way to divine beneficence." They are left to see paleonatural evil as the blessed condition of divine creative method, not the result of sin. The Reformers and traditionalists, on the other hand, portrayed a caring Creator who lovingly set up the pain-free natural order in such a manner as to reflect His own very good nature. Though privy to the same hard data as the accommodationists, the traditionalists insisted on holding to a more Augustinian-Miltonian theodical approach. They passionately registered their concern that the new (and in their mind, false) geology catalyzed novel and false views of God, and believed that the Church was being asked to accept completely unbiblical ideas about both earth history and God's nature.

We have thus discovered that paleonatural evil is a phenomenon recognized and

1Mortenson, 50-51.
responded to by traditionalists and accommodationists in the early nineteenth century. The traditionalists assess paleonatural evil to be inconsistent with the perspicuity of Genesis, and their theodical trajectory seems fully congruent with early Protestant theodicies. The accommodationists also assess paleonatural evil as consistent with their understanding of Genesis, but they usually exercise some type of category translation to make deep-time serial catastrophism, suffering, death, and extinction fit with special revelation. As such, their theodicy seems incongruent with early Protestant theodicy. The dipolar theodicies of the traditionalists and accommodationists, which stem from their respective understanding of God's creative method, reveal an evolving face of an omnibenevolent Creator. The traditionalists view God as a loving and caring Creator, who delights in every aspect of His perfect creation, and whose creation was perfect in every sense of the word, and was death free. The accommodationists' view of God is also of a loving and caring Creator; but these attributes seem to be held in spite of their understanding of a Creator who utilizes deep-time serial catastrophism, pain, suffering, death, and extinction, not because of them. These seven discoveries, based on the previous ten contrasts, together constitute the original contribution of this dissertation.

In sum, the historical background and other analyses presented in this dissertation support the general conclusion that the early nineteenth-century scientific interpretation of the fossiliferous geologic column initiated a reassessment of the classic understanding of divine attributes, even if this recalibration was ever so slight at first. Here, a potential dangerous precedent was set, because by Lyell's era only a fraction of the world's
Lagerstätten had been quarried. But with the disentombment of additional Lagerstätten, the ledger of natural evils would escalate considerably. Thus, this study establishes that in the wake of the new geology's testimony to paleonatural evil, three early nineteenth-century accommodationist thinkers are willing to subject divine attributes to modifications. This study finds that for the accommodationists no discovery by the new geology negatively impacts the character of God; nothing counts against His wisdom, and any level of natural evil can be made in some manner to magnify His goodness and glory. This is the dilemma of the accommodationist. If the new geology's "textbook" is reflective of reality, as opposed to mere interpretation, then the face of the Creator is very different from His contenance as perceived by Luther, Calvin, Wesley, Bugg, Ure, and Young. The new geology-generated view of God's face and the benevolization of paleonatural evil indicate a shift away from traditional understandings of God's omnibenevolence and the goodness of the original creation.

By contrast, the three traditionalists labored hard to show that the interpretations of the new geology are not consistent with, and are in fact derogatory to, the classic understanding of the character and attributes of God. These contrasting perspectives would set the agendas for much post-Darwinian theological discussion on the issue of paleonatural evil.

1 As noted earlier, Cuvier was disquieted by "the sight of a spectacle so imposing, so terrible as that of the wreck of animal life," which formed "almost the entire soil on which we tread" (Georges Cuvier, Rapport sur le progrès des sciences naturelles [Paris: L'Imprimerie Imperiale, 1810], p. 179, quoted in Buckland, Geology and Mineralogy, 113). The new geology was showing Cuvier's statement to be anything but mere hyperbole.
EPILOGUE

REFLECTIONS REGARDING THE IMPACT OF THE FINDINGS
OF THIS DISSERTATION UPON EVANGELICAL
THEODICY AND THE FACE OF GOD

I removed the shroud to uncover the tiny stone skull of a Karroo protomammal.
. . . Inscrutable and long dead, the tiny head stared blankly at me. "What killed
you?" I wondered for the thousandth time, and again had no answer.

--Peter Ward, The End of Evolution

The outcome of any serious research can only be to make two questions grow
where only one grew before.

--Thorstein Veblen, Evolution of the Scientific Point of View

One keeps forgetting to go right down to the foundations. One does not put
the question marks deep down enough.

--Ludwig Wittgenstein, Culture and Value

During the writing of this dissertation I have had a few dinosaur bone fragments and
fossil trilobites staring blankly at me daily from atop my computer monitor. Sober and near
constant reflection over the past several years on just what countless remains like these could
imply have served as personal reminders of the potential gravamen of what is at stake in
Evangelicalism’s interpretation of paleo-organic content in the geologic column. Particularly,
what are the theodical repurcussions if one assigns or denies any punitive status to the
fossiliferous portions of the geological column? What is the effect on the face of God?
Traditionalism's Deity:
The God of the Garden

In this dissertation we have discovered that the theodicies of Luther, Calvin and Wesley, with minor exceptions, are clearly homogeneous in holding that sin wrecked creation and initiated all natural evils. Luther believes that everything from thorns to earthquakes, from injurious dews to floods, from pernicious insects to carnivores and all harmful creatures, etc., are not part of the original creation, but are sent as punishment for sin and thus are penal indications of a corrupted earth which now should compell us to call upon God. Calvin, likewise, believes that Adamic sin subverted every pocket of nature, resulting in briars, noxious plants and insects, all diseases, carnivory, inclement weather, or anything disorderly. Wesley believes that prior to sin creation was pain-free and predation-free, and there would be no impetuous air currents, tempestuous winds; furious hail, torrents of rain, rolling thunders, forkly lightnings, weeds, any poisonous or useless plants, and that Adam and his progeny would not have even been prone to wrinkles.

Luther, Calvin, and Wesley see Adamic sin as corrupting every niche of an originally perfect creation. Their confessional statements regarding God's declaration that all He had created was "very good" indicate that they understand that to take pleasure in His handiwork would mean that no evil of any type, moral or physical, existed before the Fall.

Accommodationism's God of the Lagerstätten: A Strict Concordist Assessment, ith Potential Implications for Evangelical Theology

The general position of the Reformers, outlined in previous sections, seems representative of the Christian Church at large up until geology's deep temporalization of earth history. E.L. Mascall holds this to be so.
It was until recent years almost universally held that all the evils, both moral and physical, which afflict this earth are in some way or another derived from the first act by which a bodily creature endowed with reason deliberately set itself against what it knew to be the will of God.¹

But by the early nineteenth century, interpretations of the geologic record begin suggesting an earth history which jeopardized this consensual conviction. These new interpretations have the deep-time rocks crying out a harsh picture of all manner of decay, struggle, pain, destruction of the weak by predation, death, catastrophic mass extinctions, and every stripe of physical evil. When hearing from the new geology that there is no significant causal nexus between natural evils and a "first act" of sin, these cries should be all the more cacophonous. Yet accommodational models not only translate these into essential furniture of the original "very good" beginning, but also claim that they are pointers to omnibenevolence.

These sentiments are echoed in contemporary accommodationism. George Murphy, for example, while acknowledging paleonatural pain and death as problematic, believes that the interlocked problems of the origins of evil, sin and death in particular, require hard thinking if we are to take evolution seriously in a Christian context. In traditional western theology these matters have been dealt with in terms of a historical Fall of humanity, but how is a Fall to be understood if humanity appeared through evolution in the middle of cosmic history.²

Geologist Keith Miller, likewise, sees biological history through deep time as implying the existence of physical death and pain before the Fall. This conclusion is inescapable. If the Fall did not bring death to the non-human world, then how are we to understand its effect on creation? I believe that the message of Genesis 3 is that the Fall destroyed the relationship of humans with the rest of nature, not that it fundamentally altered nature itself.³

³Keith Miller, "Theological Implications of an Evolving Creation," 156.
Thus, these accommodationists see the Fall as fracturing relations, yet leaving nature fundamentally unaltered, continuing as it was in the beginning.\(^1\) God's very good creation is this "present creation, not a pre-fall paradise." This indicates that God wove death "into the very fabric of creation."\(^2\) Death was willed by Him from the beginning, and may be the dominant chisel in the Creator's toolkit. Miller acknowledges that "pain and death are inextricable parts" of the created order, and that nature's beauty and goodness on the whole "seem to be at odds with [the] pain and suffering embedded within it."\(^3\)

How does accommodationism, past and present, respond to "pre-Fall" paleonatural evils? One way is by simply stating that "perhaps we err in trying to impose our vision of goodness upon God."\(^4\) But by this account could not even the grossest evil be converted into a good thing? And what prevents one from affirming the opposite? i.e., "Perhaps we err in trying to impose our vision of badness upon Satan." Could not the purest good then, on this count, turn out to be a pernicious thing? If either good or evil becomes a relative concept, then so must the other.

Accommodationism blurs, if not deletes, the sin-death causal nexus, attempting to keep much of traditional theology intact, while denying any "causal connection between the first sin and the suffering and death that took place in the world before there were human beings."\(^5\)

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\(^1\) Cf. 2 Pet 3:4.

\(^2\) Ibid., 156.

\(^3\) Ibid., 157.

\(^4\) Ibid.
Cameron augments the ramifications of playing with this causal connection by affirming that "it is a fundamental presupposition of our evangelical understanding of the atonement, such that if the sin-death causality be undermined, the efficacy and indeed the rationale of blood atonement is destroyed."\(^1\) With each additional step of erosion on this singular point, it becomes increasingly difficult to distinguish those who wish to maintain the evangelical label, from those like Teilhard de Chardin, who aim "to show that Christian thought is being gradually obliged to abandon its former ways of conceiving original sin."\(^2\) This of course means abandoning a literal Fall and curse on creation. Still more unacceptable would be the traditionalist idea of the "permanent absence of death, suffering and evil,"\(^3\) since allegedly we find that nothing in deep time "resembles this wonderful state . . . [for as] far as the mind can reach backwards, we find the world dominated by physical evil . . . We find it in a state of original sin."\(^4\) Indeed, de Chardin wonders if anyone

\(^{5}\) Murphy, "A Theological Argument for Evolution," 24.

\(^{1}\) Cameron, *Evolution and the Authority of the Bible*, 52. David Lane makes a similar point in writing that: "If the general theory of evolution and a historical Fall of some kind are both historical facts . . . then human death preceded the entrance of sin into the human race, and cannot be its penalty . . . Theistic evolution attacks the very heart of the evangelical faith, for it denies the sin-death causality taught in Scripture" (David Lane, "Theological Problems with Theistic Evolution," *Bibliotheca Sacra* 150 (April-June 1994), 170-171). Dispensing with a literal Fall abolishes any space-time rationale for the evangelical doctrines of Christ's substitutionary atonement and the redemption of sinners.

Rebecca Collins McFarlan, referring to Milton and St. Paul, notes how sin and death are inextricably conjoined in their thought. She contends that they both "talk about sin and death either in the same or in consecutive sentences, and for both it is a causal [sic] relationship" (Rebecca Collins McFarlan, "Pauline Influences Concerning Sin and Death in Paradise Lost" [M.A thesis, Xavier University, 1986], 36). Cf. Terreros, 202-282.


\(^{3}\) Ibid., 46.

\(^{4}\) Ibid., 47.
can at the same time focus his mind on the geological world presented by science, and the world commonly described by sacred history. We cannot retain both pictures without moving alternately from one to the other. Their association clashes, it rings false. In combining them on one and the same plane we are certainly victims of an error in perspective.1

Yet some accommodationists are able to theodically circumnavigate the charges of "error in perspective," or lack of system coherence, by claiming that death and pain reflect God's nature, by which they often mean a God who has His eye on Calvary, and who is Himself willing to suffer and die for His creatures. But to see the present creation as exactly the way God intended it to be from His first creative command--rather than to see it as sin-corrupted--is to entertain radically different views of God, creation, and the Fall from those of the Reformers. Contemporary philosopher, Philip Clayton, displays an awareness of the impact that deep time has on God's character when fully worked out. He states: "A God who allows countless billions of organisms to suffer and die, and entire species to be wiped out, either does not share the sort of values we do, or works in the world in a much more limited and indirect way than theologians have usually imagined."2

1Ibid. When critiquing the accommodationists' attempt to limit the entrance of suffering and death to that of "man's suffering and death" (ibid.), Teilhard's logic seems unassailable. The idea is "precarious and humiliating," if not compromising of "the very content of dogma" (ibid.). It seem, further, that deep-time accommodationists, have no solid platform to answer his eschatological query: "If the era of paradise has made so feeble a physical impact on the historical progress of the world, how can we reasonably expect it to bear the weight of the new earth and the new heavens?" (ibid., 48). Indeed, later he puts pressure on theologians to concentrate on such questions so crucial to their economy, in light of his contention that "it no longer seems possible today to regard original sin as a mere link in the chain of historical facts" (ibid., 149). This challenge is premised on the assured results of geology, which point to "an intrinsic imbalance into the very core of dogma," mandating "an extensive metamorphosis of the notion of original sin" (ibid., 36).

Traditionalists may have problems on several flanks, but theodically they would
seem to have the theodical upper hand over accommodationism in believing that God did
not intend for creation to go awry, nor did God build death and natural evil into the
essential structure of creation. Rather, all natural evils result from a spatio-temporal Fall;
i.e., that "evil is historical rather than ontological in character."1 Traditionalists still have to
offer a theodicy, but to claim that entities such as physical suffering and death, and all
natural evils, have not always been seems less damaging than the accommodational model,
which is often pitted against God's love as classically understood. In addition, far less
doctrinal modification and virtually no category translation seem required in the strict
concordist perspective of natural history as compared to the broad concordist account.

For accommodationists, the "problem of theodicy is implicit in any view of an
ancient earth,"2 and as such the problem of paleonatural evil will be a permanent
impediment in their apologetic. William Dembski, a leading thinker in the intelligent
design movement, a conservative evangelical, who nonetheless does not accept the young-
earth perspective, believes that

the young earth creationists have an advantage here, because for them the carnage of
natural history occurs after the fall of Adam (and thus can be attributed to human sin).
But for those of us who place the bulk of natural history before the appearance of
man, there is no easy way out. I have seen nothing convincing that simply by looking
to nature vindicates God.3

1Langdon Gilkey, Maker of Heaven and Earth: A Study of the Christian Doctrine
of Creation (New York: Anchor Books, 1965), 221. As a contemporary
accommodationist, Gilkey believes that God initially suffused creation with evil of all
kinds (209); that evil is an "intended part of God's creation" (213); that evil is ontological
rather than historical (220); and, therefore, that evil did not come after creation, and is
thus not "an intruder' into a good creation" (221).

Such candor is uncommon coming from an old-earth creationist. Often accommodationists merely traffick in semantic ambiguity, employ category translations, resort to historical revisionism, or ridicule and caricature the opposition (as equivalent to flat-earthers, etc.). The end of these, whether by design or not, is to shunt one's thinking away from dealing with the pivotal doctrinal issues inherent in the problem of paleonatural evil.

If accommodationists desire to be considered evangelical and in line with Reformation understandings on Scripture and the Fall, while contending that God would intend or allow suffering, death, and extinction as key agents in His creative method, they should be accountable to answer crucial questions. For example, traditionalists would like to know, "On what basis can we continue to call this God omnibenevolent?"\(^1\)

At the very least, accommodationists should not be surprised if their God's face, the God of the Lagerstätten, is visaged by concerned thinkers along the following lines: as a "Disorderly designer";\(^2\) a "scatter-brained, semi-powerful, semi-impotent monster";\(^3\)

\(^1\)William Dembski to author, June 21, 1996.

\(^2\)To make matters more poignant, it might be asked on the broad concordists' count, "What amount of deep-time sub-rational suffering would be allowed to count against divine goodness?" Consider these contingents: What if it is later shown that: (1) sub-rational pain was actually many times more intense; (2) extends far deeper into deep time than originally thought; suggesting; and (3) that our entire globe is actually a charnel Lagerstätten far beyond any Tennysonian angst. Despite such developments, in principle, accommodationists could still maintain the goodness of the Creator, with no level of paleonatural evil able to negate divine omnibenevolence, hence making omnibenevolence unfalsifiable, and thus meaningless.


a "Cosmic Vivisector," a "criminal madman" who is "habitually a bungler," a "tyrant," a "Fiend with names divine"; a "Divine Marquis" a "blackguardly larrikin"; an "Almighty Fiend," and "horrible, sadistic monster" who enjoys spectator blood sports; "a Napoleon-like Deity [who] sacrifices with cynical indifference"; a "divine

1Stephen R. L. Clark, *From Athens to Jerusalem* (Oxford: Clarendon, 1984), 44. This description comes from Clark's appraisal of the conclusion to the fictional work by David Lindsay, *A Voyage to Arcturus* (New York: Macmillan, 1963), 242. Lindsay (through "Nightspore") shudders when finally comprehending that "the whole world of will was doomed to anguish in order that one Being might feel joy"; and that "nothing will be done without the bloodiest blows" (ibid., 244).

2Stephen R. L. Clarke, ibid.

3Ibid., 177.


6Praz, 223.

7Ibid. Blackguardly, a term of the utmost opprobrium, has various meanings, but in this context Mallock probably intends a rough and worthless character, addicted to or ready for crime; an open scoundrel. Larrikin is basically the equivalent of hoodlum or hooligan.


9Mattill, 34. Mark Van Bebber and Paul S. Taylor ask: "Could even a sadist think of a more cruel and ugly way to produce the animals over which Adam was to rule?" (*Creation and Time: A Report on the Progressive Creationist Book by Hugh Ross* [Mesa, AZ: Eden Productions, 1994], 21).


Nebuchadnezzar”;1 an "Ivan the terrible";2 and an "almighty tyrant" whereby we would "have to reckon Nero a saint in comparison."3 Bertrand Russell asks, "Do you think that, if you were granted omnipotence and omniscience and millions of years in which to perfect your world, you could produce nothing better than the Ku Klux Klan or Fascists?"4 William James sees this as a blending together of "beauty and hideousness, love and cruelty, [where] life and death keep house together in indissoluble partnership," which instead of conveying "the old warm notion of a man-loving Deity," instead gives us "an awful Power that neither hates nor loves, but rolls all things together meaninglessly to a common doom."5 Jack Provansha writes that "the god of the Darwinian evolutionary process is Nietzsche's god, but not that of Jesus Christ."6 Tennyson refers to Nature's


5William James, "Is Life Worth Living?" [1895] Ethical Addresses and Ethical Record 12 (September 1904), 9-10. Though not addressing accommodationists, per se, James's words seem nonetheless apropos toward them, when he writes: "This is an uncanny, a sinister, a nightmare view of life, and its peculiar unheimlichkeit or poisonousness lies expressly in our holding two things together which cannot possibly agree" (ibid., 10).

indifferent drift, as if ruled by "a maniac scattering dust." Matthew Arnold declares that "Nature is cruel," as well as fickle and vengeful. God appears to Frederick Sontag to be "clumsy and imprecise," and a poor engineer in need of a "refresher course at M.I.T." Chris Colby refers to God's design as moronic. Niels Henrik Gregersen notes that for some, "the brutality of the biological world as well as social competition both combine to make the Creator's righteousness and love questionable; prompting the question: "Is God the Creator an all-devouring Moloch?" William M. Thwaites claims, "If we take time to consider biology in any depth at all, we are left with a picture of a bumbling and frivolous god. . . . The Judaeo-Christian god is a bumbling and cruel oaf." So much of the natural orders seems to be "makeshift," "futile," "brutal," and "callous," according to Holmes


2Matthew Arnold, "In Harmony with Nature," in The Poems of Matthew Arnold, ed. Kenneth Allott (London: Longmans, 1965), 54. This sonnet was aimed at a "preacher" who apparently used the phrase "in harmony with nature" too flippantly for Arnold's comfort.

3Frederick Sontag, "Critique of Hick's Irenaean Theodicy," 56-57.

4Chris Colby, Loren Petrich, et al., "Evidence for Jury-Rigged Design in Nature." Later Matthew Wiener refers to God's "brain-dead design" as moronic (ibid., 4). E.T. Babinski, an avid dysteleogian, inquires sardonically as to "what the Designer was smoking" during some of his creations? "Cretinism or Evilution."


Rolston, that "if God watches the sparrow fall, [He] must do so from a very great distance."¹

If natural selection were God's best plan, then a conqueror such as Genghis Khan, who enslaves "nations so that his race might become rich and numerous at the expense of other races,"² would merely be reflecting divine method. This method has been described by Mill as a process which impales men and beasts,

burns them to death, crushes them with stones like the first christian martyr, starves them with hunger, freezes them with cold, poisons them by the quick or slow venom of her exhaltations, and has hundreds of other hideous deaths in reserve, such as the ingenious cruelty of a Nabis or Domitian never surpassed.³

Darwin, as noted earlier, responds to nature's disquieting redness by writing,

"What a book a devil's chaplain might write on the clumsy, wasteful, blundering, low and horridly cruel works of nature!"⁴ The process of natural selection has been described as "the Satan of the evolutionary powers,"⁵ perceived as "pitilessly indifferent,"⁶ and as "a bloody concatenation befitting the work of a demonic more than a divine artificer."⁷

⁵Schurman, 153. Clarke agrees that evolution, "like a great Juggernaut, grinds down relentlessly the weak and defenseless," and thus nothing more is "needed to account for man's growing disbelief in God or the wrecking of Human faith in divine goodness. Evolution becomes a synonym for devilry" (C. Leopold Clarke, Evolution and the Break-up of Christendom [London: Marshall, Morgan & Scott, 1930], 130.
⁶Dawkins, River Out of Eden, 96.
Price sees the choice before us as seeing the Creator as a "loving Father," or a "bungling, incompetent workman or a heartless fiend."¹

For traditionalists, the divine sowing of dragon's teeth and its yield of such deep time, fiercely crimson, Tennysonian harvests, is to recast God's countenance into a being the Reformers would not recognize. Would such a face really hearten the fathers of old to worship delightfully and dance rejoicefully before the Creator?² But according to accommodationists, a natural selection-like process is the best creative method that a loving God could offer, and thus they not only have to recast the divine visage, but are essentially bound to say that such a creative process should actually enhance our awe of Him. David Hull highlights the incongruity that they miss:

Such a process is "rife with happenstance, contingency, incredible waste, death, pain and horror," and thus concludes that "the God implied by evolutionary theory and the data of natural history ... is not a loving God who cares about His productions. He is ... careless, indifferent, almost diabolical. He is certainly not the sort of God to whom anyone would be inclined to pray."³

¹George McCready Price, Illogical Geology: The Weakest Point in the Evolution Theory (Los Angeles: Modern Heretic Company, 1906), 93. Price believes that if there were "countless millions of years of creature suffering, cruelty, and death before mankind" (ibid., 91) that such meaningless cruelty and death would seem to be the "work of a fiend creator, or a bungling or incompetent one" (ibid.). But such is "the God of the evolutionist" (ibid., 93). Some, like Ron Numbers, rank Price as an unsophisticated, pseudoscientist, and one of this century's most persistent scientific cranks (Ronald Numbers, The Creationists (New York: Alfred A. Knopf, 1992), 73, 79). But while some of Price's geological theories may remain unconvincing, he at least recognizes the theological repercussions accompanying paleonatural evil and the god of the accommodationists.

²In this regard George Stock asserts: "Let us therefore make up our minds what God it is we worship. Is it the God of Nature revealed to us by science or the God whom our hearts reveal to us? We must take our choice, and desist from the vain endeavour to fuse the two into one." George Stock, "The Problem of Evil," Hibbert Journal (July 1904), 778-779.

Such a god reflects a Frankenstein to some, rather than a good Creator. To adopt the accommodationist view of natural history, Jacques Monod depicts the evolutionary way as "a horrible process, against which our modern ethic revolts," and voices surprise "that a Christian would defend the idea that this is the process which God more or less set up in order to have evolution." And yet, according to John D. Hannah, this process is precisely what many nineteenth-century clergymen were more than willing to defend. They felt compelled to revise their explanations of Scripture in light of the dictates of geology and biology. They assumed correctly that science was ultimately in congruity with special revelation, but seriously erred in assuming that the contemporary interpretations of scientific data were necessarily valid. Accordingly, they adjusted their interpretation of the Scriptures in light of 19th-century science and eventually imposed a theistic developmentalism upon creation.

1 Twain, Fables of Man, 38.

2 Jacques Monod to interviewer Laurie John, Australian Broadcasting Commission, June 10, 1976, quoted in Ted Peters, 243. Did Monod have the likes of scientists and ordained priests such as John Polkinghome and Arthur Peacocke in mind when he spoke? Admitting that the natural realm is reminiscent of cosmic roulette, nonetheless Polkinghome still affirms that God is "no cosmic Tyrant"; no Cosmic Lord of Misrule" (Reason and Reality, 83). Polkinghome claims that physical evil has always existed, and in some sense, the universe has always been fallen, requiring him to deny an alleged "disastrous ancestral act" (ibid., 99-100). Evolutionary cosmology is, for him, "consonant with an Irenaean [theodicy] . . . , rather than an Augustinian picture of [a] decline from paradise" (ibid.). Arthur Peacocke, likewise, rejects any sin-death causal nexus (in part due to paleontology), and thus denies a literal Eden, a "golden age," and a historical Adam and Eve (Theology for a Scientific Age, enl. ed. [Minneapolis: Fortress Press, 1993], 222-223). Peacocke believes that death, "pain and suffering are inevitable," and that natural evil is a "necessary prerequisite" of nature's order (Intimations of Reality [Notre Dame: University of Notre Dame Press, 1984], 68-69). Cf. idem, Creation and the World of Science (Oxford: Clarendon Press, 1979), 164-166, 200. Consistent with deep-time, and its requisite concessions, these are theologians who not only accept evolution as the process God used, but they seem willing to go all the way with it. Such may be a portent of what is in store for other evangelicals, who have yet to go all the way with deep time. Evangelical Christianity has traditionally held to a spatio-temporal Fall. But a progressive adherence to deep time, I contend will proportionally tend to dehistoricize any aboriginal catastrophe as less and less feasible, and in fact disposable.
A final question remains: Given the admission by the accommodationists of the deep-time biological process red in tooth and claw, can any of the above thinkers really be blamed for drawing such maltheistic conclusions? The intensity of paleonatural evil, dysteleologies, and mass-death hardly justify the Psalmist's exhortation that "everything which hath breath, let it praise the Lord!" (Ps 150:6). One gentleman, having read the Origin as a teenager, cursed "the rigorous logic that wrecked the universe for [him] and for millions of others."¹ Himmelfarb believes the last act of desperation for such sensitive souls was to submit to scientific dogma, no matter how distasteful the results might be. And maybe this was the most "diabolical result of Darwinism: not the displacement of God entailed in the conventional loss of faith, but the substitution of Satan in the place of God, or even the Satanization of God himself."² The God of the Lagerstätten certainly does not seem prima facie to be the paternal, caring God of love, but ironically is more befitting of a lover of death like Satan.

Nineteenth-century strict and broad concordists are uniform in their belief that the world of nature which God initially established displays His power, wisdom, and benevolence. The real bones of contention then, as now, are ancillary to mere deep time. More specifically, it behooves the evangelical mind to ask whether the various natural evils implied in conventional theories on the origin and time frame of the geological

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¹Referring to in Gertrude Himmelfarb, 320-21. Though post-Darwinian, the tenor of this statement captures the same angst as Ruskin's geological hammers.

²Ibid., 321.
column and its *Lagerstätten* are consonant with the omnibenevolent Creator revered by the early Reformers. The early-nineteenth-century accommodationists would never dream of consciously undermining God's goodness, but they are anything but precise in laying out how the Church can both fully endorse deep time (and perhaps, but not necessarily, a developmental framework), while promoting an omnibenevolent and omnicompetent Creator and a truly biblical theodicy. Worse yet, given the way some accommodationists frame the picture, it seems that paleonatural evil actually demonstrates to them God's benevolence. Is this an example of darkness being called light and light being called darkness (Isa 5:20)?

Considering the staggering levels of paleonatural evil yet to be revealed, it must be asked what further concessions will be exacted of divine benevolence in order to preserve an all-loving God? Once the time-honored perspicuity of the Genesis account is allowed to be recalibrated by the extrabiblical yardstick of uniformitarian philosophy, is Evangelicalism opening up a Pandora's box of incremental accommodation to all subsequent edicts of scientism? For what rationale can an Evangelical give for accepting only one inch of such an extrabiblical philosophical yardstick, and not more?
APPENDIX 1

GLOSSARY

No attempt is made to define comprehensively or qualify philosophically every nuance of the following vocabulary. These notations serve as working definitions intended to indicate how the terms are utilized within the context of this dissertation.

**Accommodation**: The attempt to reconcile two opposing ideas. One prominent type of accommodationism reinterprets or deliteralizes Scripture to harmonize with the findings of geology as conventionally interpreted. Accommodationists of this type can be contrasted with traditionalists, who upon encountering apparent conflicts with science and Scripture, suggest plausible reinterpretations of science that are compatible with a natural reading of the creation, Fall, and Flood accounts.

**Category Translation**: The hermeneutical practice of shifting from an univocal reading of Scripture to an equivocal reading; a method often employed by accommodationists in an effort to reconcile the Bible with the findings of science as conventionally interpreted.

**Catastrophism**: The view (in contrast to uniformitarianism) that changes in the earth’s crust were formed locally, episodically, relatively rapidly, and by violently physical forces. This view that the earth has experienced numerous catastrophes is often called Cuvierianism and is to be distinguished from biblical catastrophism, which posits a single worldwide cataclysm; i.e., the Genesis flood.

**Charnel-house**: A repository for dead bodies; a house or vault in which the bones of the dead are piled up.

**Concordism**: Any of a variety of models which seek harmony between Scripture and science, for example, in explaining apparent contradictions regarding origins. Strict-concordists generally take Gen 1-11 literally, while broad-concordists generally do not, although they believe, for example, a concord is possible if flexibility is allowed for the meaning of "day" in Genesis, the impact of Adam’s sin, and the extent of Noah’s flood. Non-concordists deny that harmonization is possible.

**Deep time**: A temporal reference to the geological perspective that the earth is billions of years old. The phrase aptly captures James Hutton’s view of the world as having "no vestige of a beginning,—no prospect of an end."

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Dysteleology:¹ The doctrine of purposelessness in nature, evidenced in such things as so-called vestigial organs, in view of their apparent uselessness to the life of the organism. The word refers to both any aberrant design or the absence of purpose in nature.

Evil: That which is detrimental and antithetical to God’s goodness and to life. The two major types of evil with which theodicists deal are moral evil and natural evil.²

Evolution: The theory advanced by Charles Darwin that all living forms have developed from a common ancestor by process of unguided changes and natural selection.

The Fall: Consensually understood by the Reformers to refer to an original human act of disobedience in time and space whereby sin entered into creation, and death through sin (Rom 5:12), with the result that all of creation was cursed (Rom 8:20-21).

Geologic Column: The sedimentary fossil-bearing rock formations which make up part of Earth’s outer crust. While these strata imply a chronological sequence with the deepest layers being older and the upper being more recent, the issues of the manner, recency and rapidity of the column’s formation are subject to interpretation. A evolutionary interpretation is often inferred from the fossil record in the geological column, with a successive increase in bauplan complexity from the lowest layers to the top.

Golden Age: A phrase traceable back to Hesiod’s first of five periods of history. As the myth goes, in the time of Cronus the gods created a golden race of men. These men lived without any sorrow, grief, work, fatigue or hunger, and beyond the reach of any evil. This existence was characterized by luxurious peace with the complete absence of war and violence.³ The term has been adopted by subsequent thinkers to refer to time in real history which allegedly knew no evil of any type.

Good: Anything synonymous with that which is beneficent, wholesome, true, or right, i.e., whatever God approves (Gen 1:31), or reflective of His nature. Whatever is good in

¹The word dysteleology was invented in a sarcastic vein by Haeckel, to counter teleology; i.e., the study of design and purpose.


and of itself is intrinsically good; whatever serves or contributes to something else which is good in itself is extrinsically good. Both will be productive of the fulfillment of the creature and almost always accompanied by the happiness of the creature.

Lagerstätten (pl.): Literally a "lode place," a Lagersätte (sg.) is a sedimentary formation containing an abundantly rich deposit of fairly well preserved fossils, though the term can encompass less spectacular deposits such as shell beds, bone beds, and crinoidal limestones. Primarily used to designate concentrations which have preserved exquisite anatomical details, especially of soft parts, the term Lagerstätte allows for some latitude. Huge numbers and/or dense concentrations are not a necessary criteria, but are what typically comes to mind when thinking of the world's more spectacular Lagerstätten, and in the present study Lagerstätte refers to any highly concentrated mass-mortality assemblages in the geologic column.

Maltheism: Any evil acts, designs, or thoughts attributed to God (i.e., any "less than good," suboptimal entity designed by an infallibly benevolent and omnipotent Creator, or whatever can be reasonably inferred to be counterintuitive to what would be expected from a God of this nature). Wholesale prelapsarian extinctions, catastrophic mass mortality, and "nature red in tooth and claw," for example, might be described as maltheistic. While a good God could allow such, a bad god might be expected to do so.

Natural evil: Also called physical evil, this refers to any entity or state of affairs leading to the suffering, death, or significant detriment of sentient beings, which results from, (1) Impersonal causation (i.e., calamitous floods, avalanches, famines, fires, crop-killing frosts, glacial surges, hailstorms, mud slides, turbidities, tsunamis, storms, earthquakes, outgrassings, tornados, uninhabitable climates, plate tectonics, volcanic eruptions, ultraviolet or ionizing radiation, meteor impacts, supernovas, disease-causing bacteria, plagues, viruses, insanity, most diseases and congenital deformities; and "the pervasive conflicts and cruelties of animal life"; or (2) The results of actions by non-human agents for which human agents cannot be held accountable (i.e., fallen angels). Natural evil is contrasted with moral evil, which presupposes an objective moral standard, and is typically denotative of volitional wrongful acts by free and rational humans (lying, stealing, sadism, murder, rape, etc.).

Natural theology: The systematic pursuit of a knowledge of God by means of the human reason unaided by (and therefore in contrast to) special revelation. On this assumption, if the cosmos were created by God, then evidence of His divine handiwork should be

1See chapter 2 of present study, and Austin, "Regularity and Randomness as Elements of Theodicy," 22.

discernable at some level. Kant used the term 'physico theology', by which he meant any attempt of reason to extrapolate from the purposes of nature to the highest cause of nature and its qualities. Practitioners of natural theology, therefore, are occasionally referred to as physicotheologists.

Natural theologians: Theologians who emphasize that knowledge of God can be derived from studying nature. They believe that theology need not take special revelation as its starting point.

Pain: The sensation of physical or emotional suffering, or discomfort caused by bodily disorder or emotional distress.

Paleonatural evil: Any natural evil surmised through a deep-time interpretation of the fossil record in the geologic column, which by definition bears no penal qualities. Examples would include mass extinctions, evolutionary cul-de-sacs, pre-Adamic predation and death, or any prima facie dysteleological entities counter-intuitive to the best-of-all-possible environments which an omnipotent and infallibly benevolent Creator would be expected to ordain, based on the self-disclosure of His nature and most reasonably inferred from Scripture.

Panglossian: In Voltaire's satirical work, Candide, Dr. Pangloss is the philosopher who rationalized away the many terrible things which afflicted the other characters in the book, even himself, by insisting that they serve some good purpose in this "best of all possible worlds." This has given rise to the adjective 'panglossian,' which describes any bent to interpret any and all evils as God's good, if not necessary will, in this best of all possible worlds.

The pathetic fallacy: The imputation of human feelings to nature.

Providential evolution: Similar to theistic evolution, providential evolution depicts a broad-concordist (accommodationist) idea of continuous deep-time divine intervention in the development of biological forms. This position generally accepts the thesis of common ancestry, the conclusions of criticism, and an allegorical reading of Gen 1-11.

Provincialism: Any partial truth or emphasis within the total Christian teaching which tends to obscure other factors of the whole, or which denies or rejects any part of the whole. Lifting one aspect of doctrine into a central dominating position, away from its proper place in the whole doctrine, is provincialism.1

1Mildred Bangs Wynkoop, Foundations of Wesleyan-Arminian Theology (Kansas City, MO: Beacon Hill Press, 1967), 22. Wynkoop cautions that "provincialisms are not necessarily untruths but they invariably distort the Christian gospel because they, apart
Teleology: The consideration of ends, goals, purposiveness, design, as an explanation of physical reality; occasionally referred to as the doctrine of final causation.

Theistic evolution: Sometimes used interchangeably with providential evolution, this position affirms God's utilization of a Darwinian-type process to bring about the present diversity of life. Variations and emphases are legion, but usually God is said to have designed natural laws with initial conditions to ensure a developmental outcome. Wide latitude exists among theistic evolutionists regarding the degree in which God superintends, if at all, the process along the way.

Theodicy: The defense of God's power, love, providence, and justness in a world which seems *prima facie* to contain more evil and suffering than seems warranted or compatible with His divine character and attributes. A theodicean is one who frames or maintains a theodicy.

Theodical: An adjectival form of theodicy, which means pertaining to theodicy; i.e., having the character of a theodicy.

Traditionalists: Those who believe that Genesis, when properly interpreted, offers a reliable, propositional, historically accurate narrative of God's creation and subsequent interaction with His creation. Corollary beliefs include a recent and rapid creation (approximately 6,000 years ago), a literal Fall, and a global, and a catastrophic Flood which formed the present fossil-bearing sedimentary strata commonly referred to as the geologic column.

Uniformitarianism: The central philosophical premise of nineteenth-century geology whereby present geophysical process become a key to unlock the past. Thus, gradual geophysical processes which are currently modifying the earth's surface at a measurable rate, are then extrapolated into the geologic past to estimate the time period and/or manner by which some formation came about.

from the whole gospel, are made to become themselves the judge of truth and actually the gospel. . . . A fine, sensitive, and proper balance of all sides of biblical teaching is the great contemporary need" (ibid., 23).

<table>
<thead>
<tr>
<th>Millions of years before present</th>
<th>EPOCHS</th>
<th>Time-span in millions of years</th>
<th>The Five Big Mass Extinctions</th>
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<th>SERIES</th>
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<td>325my</td>
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<td>Cretaceous: substantial loss of dinosaurs and marine invertebrates</td>
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APPENDIX 3

ADDITIONAL EXAMPLES OF LAGERSTÄTTEN
AND MASS DIE-OFFS

Toward the end of chapter 3 several notable Lagerstätten were given as prime examples of mass-death assemblages. Many other such mass die-offs could be listed, and this appendix points to other such formations. Four brief clarifications are in order concerning questions which might arise regarding different types of "huge die-offs."¹

First, in Alaska and upper Siberia there are estimated to be the remains of an estimated 5,000,000 mammoths² co-entombed with myriads of other creatures.³ A frozen tundra contains these carcasses, and thus, strictly speaking, they are not fossilizing. This striking cluster of death may be just the tip of the iceberg. But while this surely represents one of the more prominent examples of natural evil, it is not strictly the type of deep-time mortality which concerns this study.⁴ The main focus here is on fossil graveyards which,

¹The phrase is from David Raup, Extinction, 69.

²This is based on a 600-mile stretch of the Arctic coast, between the Yana and Kolyma, containing an estimated 500,000 tons of mammoth tusks, with perhaps an additional 150,000 tons of tusks in the bottom of the lakes of the coastal plain. See John Massey Stewart, "Frozen Mammoths from Siberia Bring the Ice Ages to Vivid Life," Smithsonian 8 (December 1977): 68.

³Included are several avian types, antelope, badger, bear, giant beaver, buffaloes, camel, donkey, elk, Arctic hare, fox, horse, cave hyena, ibex, leopard, lion, lynx, oxen, musk ox, reindeer, woolly rhinoceros, musk sheep, ground squirrel, tiger, giant wolf, and wolverine. Alfred Rehwinkle, The Flood in the Light of the Bible, Geology, and Archaeology (St. Louis, MO: Concordia Publishing House, 1951), 240-243.

⁴Similarly, a massive fish kill, resulting from a radical change in water temperature, occurred in March-April 1882 on the east coast between Nantucket and Cape May, with dead fish...
if standard geochronology is correct, can be said to be exclusively prelapsarian and occurring in deep time.¹

Second, while chalk cliffs² and crinoids³ are deep-time mass-death assemblages, they do not capture the moral weight of the issue of paleonatural evil. Microfossils are not likely what Tennyson had in mind by "nature red in tooth and claw."⁴ Third, insect beds⁵ for the same reason will not be dealt with, although it will be remembered that floating on a surface area covering 25 by 170 miles. See M. Brongersma-Sanders, "Mass Mortality in the Sea," Geological Society of America 67, vol.1: 941-1010.

¹Some have posited that "the bones of these extinct animals lie so thickly scattered that there can be no question of human handiwork involved." See Loren Eisley, "Archaeological Observations of the Problem of Post-Glacial Extinction," American Antiquity 8, no. 3 (1943): 214. Though such conjecture might account for some bone beds, Eisley points out that although "man was on the scene at the final perishing," he did not have "the appetite nor the capacity for such giant slaughter" (ibid.). Is it not an "obvious point," continues Eisley, "that such disappearances of whole fauna . . . have taken place in periods prior to the intrusion of man upon the time scale" (ibid.). Deep-time evangelicals who take this line have to agree that whole fauna have disappeared for eons prior to the intrusion of man, and thus sin, into the geological time scale.

²Chalk is synonymous with the Cretaceous age (creta being Latin for chalk). This rock is largely a composite of trillions of microscopic algae called coccolithophorids. M.N. Bramlette writes: "The skeletal remains of the marine calcareous plankton (nannoplankton and planktonic foraminifera) constitute about one-half the total in these chalk formations--countless millions of the 'nanofossils' . . . occurring in a few cubic centimeters of the chalk" ("Mass Extinctions in Biota at the End of Mesozoic Time," Science 148 [1965]: 1696-99).

³The Lower Mississippian/Carboniferous Burlington Limestone, for example, has an estimated "volume of 300 x 10¹⁰ cubic meters, which represents the skeletal remains of approximately 28 x 10¹⁶ crinoid animals!" (Robert Dott and Donald Prothero, Evolution of the Earth [New York: McGraw-Hill, 1994], 330). George Young points to comparable numbers a century and a half earlier, referring to "myriads of infusoria . . . so minute that above 40,000 millions exist in a cubic inch" (George Young, Scriptural Geology, 17).

⁴No doubt some will claim such a statement exhibits specieism, that being the elevation of one species as inherently more valuable than another.

⁵Profuse deposits of insect fossils can be found in Florissant, Colorado; Lincoln County, Wyoming; and the Baltic amber deposits. See R.D. Manwell, "An Insect Pompeii," Scientific...
caterpillar pain played a part in Darwin's theodical ruminations. However, it could be
plausibly argued that animacula, insects, foraminifera, and other lower forms of animals
do not meet the biblical criteria of "life" and sentience, and thus may not bear the moral
weight, for example, of Lagerstätten like the Karoo. Fourth, while the presence of fossil
forests, mass tree kills, mass fossil plant beds, and other entities such as coal beds, and

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1 According to Raup, the skeletons of planktonic foraminifera dominated sedimentary
deposits at the KT boundary. In fact, "most planktonic forams were killed off so completely
that the overlying sediments are strikingly different in color and general appearance" (Raup,
69). Statistics for KT species mass-extinction are not affected by these creatures, since few
species of foraminifera were involved. But overall they constitute a disproportionately large
percentage of the total biomass (ibid.). It has been estimated that there are "a quarter of a
million Foraminifera in an ounce of marine sediment" (Norman Newell, "The Nature of the
Fossil Record," PAPS 103 [1959]: 270).

2 Cf. James Stambaugh, "Life' According to the Bible, and the Scientific
Evidence." Stambaugh contends that plants, single-celled life forms, and perhaps
invertebrates do not qualify as "living things" in the biblical sense.

3 Part of the Tennysonian angst described above, and similar distaste 140 years after
Darwin, comes with the existential introspection on the impersonality behind the veil of existence.
If the lines, "I care for nothing, all shall go," are really felt, how are we any more valuable than
sub-rational creation. Reactions to this awakening range from the hyper-activism of those fighting
for animal rights, to a desensitization toward any view of the sacredness of life.

4 The most notable petrified forests include, Napa Valley, California; Petrified
National Park, Arizona; Yellowstone Park, Wyoming; Ginkgo Petrified Forest, Washington:
and even Cairo, Egypt. See R.C. Moore, Introduction to Historical Geology, 2d. ed (New

5 For example, the Tunguska explosion, in Siberia, 1908, estimated to be the
equivalent of a 10-megaton nuclear blast, wiped out an estimated 80,000,000,000 trees.

6 Ginkgo Petrified Forest State Park, Washington, contains over 200 species of plants.

7 Estimates of earth's coal surpluses used to range from 3½ to 14 trillion tons (Eugene
1952], 53). But recent discoveries have obliterated this estimate. Foley estimates that there is
oil\textsuperscript{1} all point to past catastrophes, they may be regraded as peripheral to the deeper moral questions addressed in this study regarding the mass-mortality of sentient beings.\textsuperscript{2}

But geology was fairly young, and a plethora of discoveries lay ahead that was to widen the incipient rift between the traditionalists and the accommodationists. Entities such as suffering, death, mass-death assemblages, and mass extinctions were to receive poignant magnification in the post-Lyellian era to the present, with the uncovering of numerous mass-fossil graveyards, which were to become the ateleological showcase against a good Creator.

Colossal conglomerations of fossil remains arrest the attention of any observer. Observing fossil beds firsthand in Patagonia, Darwin wondered what could have "exterminated so many species and whole genera."\textsuperscript{3} He felt that "certainly, no fact in the long history of the world is so startling as the wide and repeated exterminations of its inhabitants."\textsuperscript{4} When such fossil remains are so numerous or densely oriented, the least biased response to such mortality

\begin{itemize}
\item $15.3 \times 10^{12}$ tons (G. Foley, \textit{The Energy Question} [London: Penguin, 1976], 115). The Powder River Basin alone is estimated to contain $1,200,000,000,000,000$ kg of coal. See, Anonymous, "Wyoming Geo-Notes," \textit{Wyoming State Geological Survey} 47 (1995). The Latrobe Valley coal seam in Victoria, Australia, holds an estimated $70,000,000,000$ tons of coal, but even more awe-inspiring is the bed's thickness of over 800 feet. How can one account for Latrobe based on uniformitarian dogma that 100 feet of peat is required for every ten-foot coal seam required?

\textsuperscript{1}This holds regardless of whether oil comes from sentient organisms or plant material. Byron Nelson holds that the earth's "immense quantities of oil . . . [are] the altered remains of immense quantities of ancient animal life, particularly ancient sea-animal life" (Nelson, \textit{After Its Kind} [Minneapolis: Bethany House, 1968], 78, n. 69).

\textsuperscript{2}With these four issues, when the attribute of sentience is absent, a theodical salvaging of omnibenevolence is not nearly as problematic, as when dealing with, say, evolutionary-generated pain. Questions do remain, however, regarding a divine rationale for allowing whatever non-sentient or inorganic paleonatural evils philosophers deem to be detrimental to God's character.

\textsuperscript{3}Jan 9, 1834, entry, \textit{The Voyage of the Beagle} (New York: Bantam Books, 1972), 149.

\textsuperscript{4}Ibid., 150.
\end{itemize}
is "Catastrophe!" Such graveyards are more conducive to a catastrophist model rather than uniformitarianism. But how these remains arrived at their stratigraphic orientation is another question. Of more immediate import are the foreboding facts of unfathomable deep-time mortality and suffering. It is to some of the more staggering bone beds that we now turn.

Notable Mass-Fossil Graveyards

What follows is a preliminary sketch of some of the world's most acclaimed fossil Lagerstätten, beginning in North America.

The Agate Springs Bone Beds

Embedded in the Miocene limestone of Carnegie Hill, at Agate Springs, and perhaps characteristic of much of Western Nebraska, are found the remains of an estimated 9,000 animals no longer indigenous to North America. V. Obruchev writes:

Scores of thousands of skeletons of Rhinoceratidae--Diceras, Moropus and Dinoceras, are buried here in a layer only 15-65 centimeters thick. A slab cut out of this layer and measuring 1.65 x 2 m... contains 22 skulls of Diceras and an enormous mass of its bones in a chaotic mixture.

In a 1,350-square foot area, constituting roughly 5 percent of the quarry, the Carnegie

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1 The Greek word literally means "a thorough turning around."

2 Alternative referents used to refer to sites of paleo-mass mortality are: fossil motherlodes; fossil cemeteries or graveyards; and death assemblages (thanacoenosis). Other sites of death assemblages, such as "bone breccias" and "bone beds," will be referred to below, but, strictly speaking, these are not deep-time boneyards.

3 This includes, for example, rhinoceros, camel, and giant boar.

4 A large, horse-like herbivore.

Museum found that

164,000 bones belonging to 820 skeletons of rhinoceroses have already been extracted, most of these bones from skeletons of Diceras. Numerous skeletons of a small antelope-like camel were found in two layers of a neighboring hill. All the bones are very well preserved and exhibit no marks of teeth of predatory animals or rodents. This shows that the corpses did not stay on the surface very long and were buried very soon. So extensive an accumulation of remains of herbivorous animals of few species in one place can be explained only by a catastrophe which rapidly destroyed whole herds of them.¹

Lull believes if this concentration is indicative of the whole, then we would have the skeletal remains of 100 great swine, 500 horses, and 16,400 rhinoceroses.²

In reply to a common uniformitarian claim that perhaps these "animals fell into a sink-hole at a watering place," Byron Nelson responds that "the fact that they are entombed in pure limestone and are in a horizontal layer which extends for miles beneath the prairie belies that claim."³

New Mexico Formations

In New Mexico, a Triassic formation has "at least a thousand specimens of the flatheaded, weak-legged labyrinthodont Metroposaurus."⁴ Dinosaurs are found in great "profusion, piled on top of one another, with heads and tails and feet and legs often inextricably mixed in a jackstraw puzzle of bones." Edwin Colbert writes that there are "literally scores of skeletons on top of one another and interlaced with one another. It would appear that some local catastrophe had overtaken these dinosaurs, so that they all

¹Ibid., 325.
²R.S. Lull, *Fossils*, 34.
died together and were buried together."¹ Near Lamy, New Mexico, is found a strata layer in a hill which is almost a solid mass of amphibian bones. Alfred Romer calls this site an excellent example of "mass death," which, before erosion, certainly "must have contained the closely packed skeletons of many hundreds if not thousands of . . . large amphibians."²

The Westphalia Limestone

Across the tri-state area of Kansas, Missouri, and Oklahoma lies the Westphalia Limestone, a one-foot-thick layer of limestone dense with an "estimated 20 trillion small wheat-grain-shaped invertebrate fossils called fusulinids."³ S.M. Ball notes that the mixed faunas of this formation include "trillions of fusulinids along with many other invertebrate grain fragments within the fusulinid lime packstone to grainstone, [covering an area] estimated very conservatively at 1450 square miles."⁴

Trailblazing fossil hunter, Charles Sternberg, in reference to the bone beds of western Kansas, writes that the soil there beneath one's feet is one vast cemetery;⁵ and of a Wyoming formation, he refers to the "miles of strata, mountain high, [that] are but the stony sepulchers of

¹Men and Dinosaurs, 141.

²Alfred Romer, "An Amphibian Graveyard," The Scientific Monthly 49 (October 1939): 337. Note the photograph of a sample area on the following page (ibid., 338) of a dozen densely packed Buettneria perfecta skulls.


the life of the past." Sternberg, referring to the largest upper Miocene bone bed in Kansas (i.e., Sternberg Quarry), writes that "it has always been a problem to account for the number of animals represented here and for the fact that the bones are so scattered. All parts of the skeletons are mingled in the greatest confusion, with no two bones in a natural position."2

The Sisquoc Formation

In the north Los Angeles area is a four-square-mile area in Lompoc, California, known as the Sisquoc Formation, of the Miocene Monterey Group, in which one finds within a slender diatom bed3 the entombed remains of an estimated one billion4 fossil *Xyne*, which average six to eight inches in length.5 That these fish are not characterized by any decay-induced or predatory disarticulation lends support to a catastrophic and rapid burial.6

The La Brea Asphalt Pits

A similar geological interpretation of catastrophic and rapid burial can be given to the

1Ibid., 277. Ironically, in this same paragraph, Sternberg can also say, "How wonderful are the works of an Almighty hand! The life that now is, how small a fraction of the life that has been" (ibid.).

2Ibid., 131.

3One cubic in. of diatomaceous earth contains an estimated 15,000,000 diatoms; i.e. one-celled water plants (Newell, "Adequacy of the Fossil Record," 270). Diatoms are amassed in the Lompoc formation in unfathomable numbers; up to 950 feet deep in some places (David Starr Jordan, "A Miocene Catastrophe," *Natural History* 20 [1920]: 18). The fish (*Xyne grex*) in this formation are under at least 350 feet of diatoms, and "are all well preserved" (ibid.).

4Jordan, based on the content of single slabs, calculates that the number of fish "in the bay on the day of the holocaust was about 1,337,195,600, a mighty school of fish!" (ibid.).


6Ladd omits these details when he claims that "catastrophic death in the sea on a comparable scale occurs today" (ibid.).
famous La Brea Asphalt Pits of Southern California. Here one finds an astounding accumulation of organic remains, including horses, sabertooth tigers, bears, birds, bison, camels, llamas, and giant wolves. Several million fossils have been tapped from this site, the skeletons of which are mostly disarticulated, and jumbled in a huge contorted assortment.

The Green River Formation

The Green River Formation, Wyoming, contains numerous catfish in oil shales. These Eocene-period fossil catfish, averaging 7 inches in length, are disbursed over an area in the Green River basin covering 16,000 square kilometers.¹

Cumberland Bone Cave

The fossil contents of the Pleistocene formation, known as Cumberland Bone Cave, Maryland, have been described as a "strange assemblage."² These "fossil remains," are described by J.W. Gidley as "hopelessly intermingled and comparatively thickly scattered through a more or less unevenly hardened mass of cave clays and breccias, which completely [fill] one or more small chambers of a limestone cave."³ In this formation has been found the mammal remains of dozens of species, including mastodon, bat, wolverine, grizzly bear, Mustelidae, peccaries, taper, antelope, ground-hog, rabbit, coyote, beaver, muskrat, as well as reptile and avian fragments. An apparent anomaly


³Ibid.
here, for the uniformitarian thinker, as with so many similar deposits, revolves around the salient issue of allochthonousness; i.e., water transport and deposition.¹ Many of the fossils above are of animals from radically different climatic zones (like the crocodile), and were likely transported in by some cataclysmic flooding.²

**Montceau-Les-Mines**

The Montceau-Les-Mines area of central France contains hundreds of thousands of fossilized marine creatures stretching from the end of the Carboniferous period to the beginning of the Permian. Motivated by imminent strip-mining, amateur paleontologists frantically rallied to salvage fossil materials. Working with two museums, they “harvested 7,000 shale slabs and more than 100,000 nodules, most of them bearing fossils.”³ Containing creatures which includes fishes, amphibians, spiders, scorpions, millipedes, worms, insects, reptiles, crustaceans, mollusks and sharks, makes this Lagerstätte one of the richest discoveries of the 1980s.

**The Monte San Giorgia Mélange**

On the Swiss border of northern Italy, is Monte San Giorgia, from which thousands of Triassic fossils have been excavated, including a diverse assemblage of fishes and reptiles.⁴

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¹A related term is autochthonous, which refers to position of growth.


"provid[ing] paleontologists with an unparalleled, if somewhat puzzling, view of the past."\textsuperscript{1} Similar interments are found at the quarries of Monte Bolca.

**Additional Fossil Cemeteries**

Other sites exhibiting mass mortality, catastrophism, and/or extinction include: Baja;\textsuperscript{2} Belgium;\textsuperscript{3} Central Germany;\textsuperscript{4} Percé Rock;\textsuperscript{5} British Columbia;\textsuperscript{6} the well-known Burgess Shale;\textsuperscript{7}

\textsuperscript{1}Ibid., 74.

\textsuperscript{2}See the finds of Shelton Applegate and William Morris, as reported in, "A Fossil Bonanza in the Baja," *Science News* 106 (October 19, 1974): 247. Applegate reported that "fossils literally cover the group [18 fossil sites on the Baja peninsula] for square miles in some locations . . . . At other sites, the team found fossil beds thousands of feet thick" (ibid.).

\textsuperscript{3}In 1878 an agglomeration of Iguanodon bones was found in a Belgian coal mine a thousand feet beneath ground surface. Colbert writes that "it could be seen that the fossil boneyard was evidently one of gigantic proportions, especially notable because of its vertical extension through more than a hundred feet of rock" (*Men and Dinosaurs*, 58).

\textsuperscript{4}The Eocene boneyard of the Geiseltal, Germany, holds thousands of vertebrates remains. Germany's great rivers all yield fossils; "those especially abutting on the Rhine are too numerous to mention. But of all parts of Europe, that in which [elephant fossils] are found in greatest numbers is the valley of the Arno, where we find a perfect cemetery of elephants" (Larlet and Guadry, quoted in Nelson, *The Deluge Story in Stone*, 114). The early Devonian Hunrück Slate, south of the River Mosel, West Germany, has provided about 400 species, mostly of small organisms.

\textsuperscript{5}Pioneer American paleontologist, John M. Clarke, estimated that this Quebec formation contained more than 60,000,000 specimens of the dalmanitic trilobite (Niles Eldredge, "Collecting Trilobites in North America," *Fossils Magazine* 1 [May 1976]: 63).

\textsuperscript{6}Mount Stephen and Field, B.C., house a massive cluster of fossil trilobites, "carloads" of which have made their way to geological laboratories (Rehwinkle, 212).

\textsuperscript{7}The lower Walcott Quarry alone has proffered over 65,000 specimens. See S. Conway Morris, "The Community Structure of the Middle Cambrian Phyllopod Bed (Burgess Shale)," *Palaeontology* 29 (1986): 423-467.
Egg Mountain; Shay Canyon; Glass Mountain; Mazon Creek; Tampa, Florida; Scioto River; Ediacara Hills, South Australia and Lancefield Swamp, Australia; Crags of

1 This Montana site, famed for yielding hundreds of dinosaur eggs, has a 1¼ x ¼-mile bed of maiasaur bones, containing up to 30,000,000 fossil fragments. Conservative estimates are that this boneyard, which John Horner classifies as "a huge killing field," contains the remnants of 10,000 maiasauras (Digging Dinosaurs [New York: Harper & Row, 1988], 128-132). Horner holds that all these creatures were "destroyed in one catastrophic moment," after which there was a flood (ibid., 131). See also P.J. Currie and P. Dodson, "Mass Death of a Herd of Ceratopsian Dinosaurs," in Third Symposium of Mesozoic Terrestrial Ecosystems ed. W.E. Reif and F. Westphal (Tubingen: Attempto Press, 1984), 61-66.

2 This is perhaps the world's richest site of Triassic dinosaur remains.

3 From this Texas locale G.A. Cooper extracted 3,000,000 individual invertebrate fossils from 30 tons of Permian limestone ("The Science of Paleontology," Journal of Paleontology 32 [1958]: 1010-1018). A single "control block" of 186 lbs. yielded 10,000 exquisitely preserved specimens of invertebrates, including Foraminifera, brachiopods, bryozoans, gastropods, and pelecypods (Newell, "The Nature of the Fossil Record," 283).

4 This Illinois creek area has over a hundred fossil collecting localities.

5 This rich fossil deposit has yielded the bones of more than 70 species of animals, birds, and aquatic creatures. About 80% of the bones belong to plains animals such as camels, horses, mammoths, etc. Bears, wolves, large cats, and a bird with an estimated 30-foot wingspan are also represented. Mixed in with all the land animals are sharks' teeth, turtle shells, and the bones of fresh and salt-water fish. The bones are all smashed and jumbled together, as if by some catastrophe. The big question is "how bones from such different ecological niches—plains, forests, ocean—came together in the same place" (Carol Armstrong, "Florida Fossils Puzzle the Experts," Creation Research Society Quarterly 21 [1985], 198). Further north, 12 miles west of Gainsville, is found the Love Bone Bed. Referring to this tersely packed deposit, paleontologist David Webb simply says, "The concentration of bones is unbelievable." ("Digging up Florida's Past," Science and Mechanics, special edition [1981]:108-109). This bone bed's modest dimensions of 120' x 60' and 15' deep has yielded over a million fossils, where in some areas the organic remains constitute more than half of the deposit.

6 Just west of Columbus, Ohio, a stratum is found, two to four inches thick, covering an area of many square miles. It is constructed almost entirely of fragments of plates, teeth, spines, and dermal tubercles of Ganoids, Placoderms, and Elasmobranch fishes.

7 This pleistocene bone bed, in southeast Australia, contains the remains of up to 10,000 extinct megafauna. See R. Gillespie et al., "Lancefield Swamp and the Extinction of the Australian Megafauna," Science 2000 (1978):1044-1048. Rehwinkle makes reference to numerous fossils of the enormous wingless bird, the moa, in Australia, New Zealand, Tasmania, and neighboring islands, but cites no specific sites. He writes that "thousands of
these gigantic birds are heaped together in a confused mass" (Rehwinkel, 216).

1This would include the pliocene deposits of Norfolk, Suffolk, and Essex. Buckland refers to the "oolitic slate of Stonesfield, near Oxford," where "a single bed of calcareous and sandy slate not six feet thick, contains an admixture of terrestrial animals and plants with shells that are decidedly marine; the bones of Didelphys, Megalosaurus, and Pterodactyle are so mixed with Ammonites, Nautili, and Belemnites, and many other species of marine shells... [not unlike the bones ] in the Miocene Tertiary formations of Touraine, and in the Crag of Norfolk" (Buckland, Geology and Mineralogy, 1:121). Intermingled in the allochthonous forest-bed of Norfolk are dozens of species, including saber-toothed tiger, wolf, fox, musk-ox, hippopotamus, beaver horse, rhino, snake, frog, and avian remains. For a fuller list of all the extinct animals found at this site, see W.B. Wright, The Quaternary Ice Age (London: Macmillan, 1937), 108-109.


3Michael Novacek et al. see this Cretaceous site as a "paradise for paleontologists" ("Fossils of the Flaming Cliffs," Scientific American 271 [December 1994]: 60).

4One of the more famous "bone-filled fissures," this calcareous bed yielded 4,500 bear bones, and was surrounded by numerous boar, deer, feline, fox, hare, horse, hyena, insectivore, mammoth, marten, otter, rhinoceros, rodent, wild ox, and wolf remains.


6See Nelson's synopsis of Henry Howorth, The Mammoth and the Flood (London: Sampson Low, Marston Searle & Risington, 1887), in The Deluge Story in Stone, 117 ff. Though "decidedly hostile" (ibid., 117) against a Genesis flood, Howorth nonetheless amply conveys many examples of "Nature's hecatombs" (ibid., 131). Concerning Liakov Island (also spelled Liaikof, Lachov, Liachoff, and Lyakhov), New Siberia, a small island about 50-square-miles, Howorth writes that its soil "is almost composed of fossil bones" (ibid., 121). Cf. Buckland, 1:113 and Ure, 492. The same thing is true of another island twice as big, Kotelnoi (also Kotelni), where one could find numerous elephant tusks jutting out of the surface everywhere. Cf. Nelson, The Deluge Story in Stone, 121; and Rehwinkle, The Flood, 243-245.
Siberia; the Bear Islands; Cérgo Island and Pakermi, Greece; Oradea, Romania; 
Tanzania; Tendaguru, East Africa; Patagonia, Argentina; several Italian sites; and

1Here, one finds the "bones of elephants, rhinoceroses, horses, cattle, sheep and other 
quadrupeds . . . entombed in enormous quantities" (Nelson, *The Deluge Story in Stone*, 122). Fossil elephants are found in great abundance in the strata and the foothills of the Ural Mts

2Howorth quotes Russian explorer, Ferdinand Petrovitch von Wrangle, as saying 
that "the soil of Bear Island consists only of sand and ice, with such quantity of mammoth 
bones that they seem to form the chief substance of the island."

3This Greek island has a site called "the mountain of bones"; one mile in circumference 
at the base; and blanketed with bones from base to summit (Howorth, *The Mammoth and the 
Flood*, 217). A similar formation is found in the Sloane Valley, Burgundy, France.

4Joseph Prestwich describes Greece as "largely covered by a thick mass of breccia" 
(*On Certain Phenomena Belonging to the Close of the Last Geological Period and on Their 
Bearing upon the Tradition of the Flood* [London: Macmillan, 1895], 10). Cf. George 
Twemlow, *Facts and Fossils Adduced to Prove the Deluge of Noah and to Modify the 
Transmutation System of Darwin*.

5This site contains over 10,000 dinosaur (and other terapod) bones. See M. Benton et 
el., "Dinosaurs and other tetrapods in an Early Cretaceous Bauxite-filled Fissure, Northwestern 

6Formerly German East Africa, Tanzania is has rich storehouses of dinosaur fossils.

7This location, one rivaling Como Bluff and Dinosaur Monument, flourishes with 
an "almost overwhelming abundance" of gigantic Jurassic dinosaur bones, which Colbert 
describes as "a veritable charnelhouse of immense, dense fossil bones" (*Men and 
Dinosaurs*, 239, 241). An early expedition at Tendaguru conferred hundred of diggers 
over a 1,000 boxloads of bones, which totaled 250 tons in weight (ibid., 245)!

8Leonardo da Vinci once noted that "above the plains of Italy, where flocks of birds 
are flying today, fishes were once moving in large shoals" (quoted in Claude Albritton, Jr., 

The massive Jurassic fish graveyard of Torre d'Orlando, as with similar graveyards 
at Molte Bolca (the Alps), the Hartz Mountains, and the Lias, according to Agassiz and 
Buckland, is due to water contamination or a rapid change in water temperature (Buckland, 
*Geology and Mineralogy*, 123). See chapter 5 of the present study for Buckland's theodical 
responses to the "distorted attitude" and "writhing and agony" which some see in these 
icthyological bone beds, but which Buckland claims is only appearance. Along with deer, 
ox, and elephant bones, a San Ciro cave, near Palermo, yielded 20 tons of hippopotami

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Brazil. ¹ The copper slate of Mansfeld (Thuringia); the slate of Eisleben; Grube Messel (West Germany);² the coal measures of Saarbrücken on the Saar; the Jurassic slate of Solnhofen (Germany);³ the black slates of Glarus; the calcareous marls of Oensingen (Switzerland) and of Aix-en-Provence;⁴ the black shales of Indiana and the Hartford basin;⁵ and the black Onondaga limestones of Ohio and Michigan are particularly known for their interring untold billions of fossil fish.⁶

bones which choked the fissures "in complete hecatombs" (Prestwich, *On Certain Phenomena*, 50). Ure writes that "scarcely any district of Italy seems to be without [abundant rhinoceros and hippopotamus remains]" (*New System*, 520), embedded there in the chalk cliffs. Aside from larger animals, according to Buckland, "Soldani collected from less than an ounce and a half of stone found in the hills of Casciana, in Tuscany, 10,454 microscopic chambered shells" (*Geology and Mineralogy*, 117). "Countless myriads of similar exuviae" can be found in the Wealden formation, the Hastings sandstone, the Sussex marble and the Purbeck limestone" (ibid., 118).

¹Brazil has the largest amount of "bone-caves" on the planet. Algeria, England, France, Germany, Sicily and Syria also have significant bone-caves.


³This German site is most famous for its six specimens of Archaeopteryx, but has also preserved more than 600 other fossil species. Other German Lagerstätten include Holzmaden and Hunsrückschiefer.

⁴Gerald Molloy writes that this French region "has earned for itself no small fame in the annals of Geology" (*Geology and Revelation* [New York: G.P Putnam & Sons, 1870], 175). An abundance of fossil insects and fish were "suddenly entombed" here. The fish are "not infrequently, crowded together as closely as they can fit" (ibid., 176; see figure 16 on this page for a woodcut of a slab of limestone heavily imprinted with fossil fish).

⁵Bruce Comet, et al. found over 450 fish in two cubic meters of shale (Bruce Comet, Alfred Traverse, and Nicholas McDonald, "Fossil Spores, Pollen, and Fishes from Connecticut Indicate Early Jurassic Age for Part of the Newark Group," *Science* 182 [1973]) 1245).

⁶Ure (*New System*, 144-46), highlights other European Lagerstätten not mentioned here.
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