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The Descent of Darwin—A Theological Understanding of Charles Darwin

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PART I

CHAPTER 1

PLAYING THE WRONG GAME

Playing the game of bridge while using the rules of chess obviously posits a logical impossibility. The two games fundamentally differ from each other. Such a scenario seems ludicrous even to contemplate; however, since the publication of Charles Darwin's *Origin of Species* in 1859, Christians subscribing to the doctrine of the inerrancy of Holy Scripture have played such a game in trying to comprehend the biblical account of creation (theology = bridge) in the light of Darwin's theory of natural selection and speciation (science = chess). Christian theologians, scientists, and lay people who have played the game are the losers. The reason for their loss: the *rules of the game* for doing theology are not complementary with the rules of scientific inquiry. Yet, in the sincere attempt to engage and respond to the challenges posed by the theory of evolution by natural selection, Christians have repeatedly in the last 145 years tried to play "bridge" using the rules of "chess." William Dembski of Baylor University, one of the staunchest advocates of this approach, has reinstated a very old argument along these lines known as Intelligent Design; in Darwin's day William Paley's *Natural Theology*, published in 1802, offers much of the same argument with his famous line that a "watch must have had a maker." [1] The premise of the arguments is that somehow science helps to understand theology. In *Unapologetic Apologetics,* Dembski writes:

> The basic concepts with which science has operated these last several hundred years are no longer adequate, certainly not in an information age, certainly not in an age where design is empirically detectable. Science faces a crisis of basic concepts. The way out of

[1] Larry Witham, *By Design* (San Francisco: Encounter Books, 2003), 41. Witham extensively traces the "Design movement" throughout the 20th century, giving further historical background when necessary.

> this crisis is to expand science to include design. To reinstate design within science is to liberate science, freeing it from restrictions that were always and now have become intolerable.[2]

Dembski's assertion likely falls on deaf ears within most of today's scientific community because, as John Greene convincingly demonstrates in his intriguing analysis entitled *The Death of Adam*, the conviction that the world has a concerned, intimate designer has increasingly waned since the time of Descartes. Greene portrays the Reverend John Ray as the first *modern creationist* to counter the then new Cartesian worldview, which he characterizes as a theistic, atomic hypothesis which eventually leads to a mechanical and then mutable world. Greene writes:

> Ray's main concern was with the second heresy, namely, the atomic hypothesis of Democritus and Epicurus, according to which the universe and all of its productions had resulted from chance collisions of atoms moving at random in empty space. In its ancient, atheistic form this doctrine had been amply refuted many times, said Ray, but of late a theistic version of the same hypothesis had been advanced by Descartes and his followers on the Continent. These writers explicitly rejected the idea that mankind could understand the final causes, or purposes, for which things had been made and undertook 'to solve all the *Phoenomena* of Nature, and to give an account of the Production and Efformation of the Universe, and all the corporeal Beings therein, both celestial and terrestrial, as well animate as inanimate, not excluding Animals themselves, by a slight *Hypothesis* of matter so and so divided and mov'd.'[3]

The latter portion of this quotation comes from the 1690 publication of Ray's work itself, *The Wisdom of God Manifested in the Works of the Creation*. Greene claims that throughout Ray seeks to reaffirm the Christian doctrine of the creation. Comparing Dembski's work with Ray's nearly 400 years earlier leads to the conclusion that little has changed substantively in the argument; obviously Dembski advances the argument for design using modern scientific data, but the theme remains the same.

An important element that has lured the Christian church into playing the wrong game

[2] William Dembski, *Unapologetic Apologetics: Meeting the Challenges of Theological Studies* (Downers Grove, Illinois: InterVarsity Press, 2001), 257.
[3] John C. Greene, *The Death of Adam* (Ames, Iowa: The Iowa State University Press, 1959), 8.

includes the confusing and complicated semantics upon which evolutionary theory depends. To be fair, within the scientific game evolutionists play among themselves, the meanings of terms remain consistent enough to communicate effectively. However, as the implications of the theory have meandered into other arenas of life, like religion, the semantics undergirding the theory has become more abstruse as terminology has become more prevaricative. In his book *Origins, Icons, and Illusions*, Harold Booher labels this problem as "semantic illusion." He writes, "When semantics confuse, there is a tendency to be befuddled, not knowing what to believe. But with illusion, the appearances are very real. It makes sense, and unless we know better, it becomes part of our belief system."[4]

Booher identifies four types of semantic illusion when the theory of evolution is discussed publicly: simplicity, universality, diffusion, and evasion. By simplicity Booher maintains that the term evolution is invoked often as a simple term which bridges complicated processes that are not yet fully understood; evolution has become the standard answer within the scientific community for questions that still have not been fully elucidated. The illusion of universality simply employs the power of numbers to convince people of the "factual" truth of evolution; Booher uses the example that when statements are made regarding the majority opinion of scientists, these statements often become accepted as true by most of the public hearing them. The illusion of universality simply means that the majority opinion rules. In the illusory technique of diffusion everything is presented as fact; any doubts or problems within the theory of evolution simply diffuse within the sea of data supporting evolution. Finally, evasion is often employed by evolutionists, often unwittingly because it is so common, as an illusory technique that utilizes various models of evolution to answer any objection to the theory. Booher explains, "Whenever a proponent of a particular wide sweeping hypothesis or theory

[4] Harold R. Booher. *Origins, Icons, and Illusions: Exploring the Science and Psychology of Creation and Evolution* (St. Louis: Warren H. Green, Inc., 1998), 33.

flips between evidences and across models, treating the models as synonymous and the evidences as all equally supportable, that person is feeding an illusion through semantic evasion."[5] Each of these techniques has become integral in the successful propagandizing of the theory of evolution. The Christian church has been negligent in failing to recognize them. The consequence is that she has played the wrong game. In order to play her game, and play it well, she must identify and confront semantic illusion when it is used by proponents of evolutionary theory. In doing so, she will expose the theory's weaknesses and provide herself the opportunity to play her own game: theology.

An unscientific conclusion of the overall effectiveness of methodologies like Dembski's, especially in terms of societal influence, would seem to favor heavily the adherents of evolutionary theory, even though they frequently employ semantic illusion in presenting the theory. The simple, yet telling, explanation for this is that most people believe evolutionists focus on and do science, that is, they deliberately limit their understanding of reality within specific parameters of reason. Evolutionists have played their own game, and most people recognize the legitimacy of their claim because they appear committed to their game. In contrast, most people discount what has been termed Creation Science because it employs the rules of science in interpreting the nonscientific text of the Bible. Proponents of Creation Science have tried to play the "game of religion" using the "rules of science." They have played the wrong game. Religion's loss has been devastating, most especially in its credibility among scientists. Philip Kitcher writes,

> Creation 'science' is spurious science. To treat it as science we would have to overlook its intolerable vagueness. We would have to abandon large parts of well-established sciences (physics, chemistry, and geology, as well as evolutionary biology, are all candidates for revision). We would have to trade careful technical procedures for blind guesses, unified theories for motley collections of special techniques. Exceptional cases, whose careful pursuit has so often led to important turnings in the history of science, would be

[5] Ibid., 39.

> dismissed with a wave of the hand. Nor would there be any gains. There is not a single scientific question to which Creationism provides its own detailed problem solution. In short, Creationism could take a place among the sciences only if the substance and methods of contemporary science were mutilated to make room for a scientifically worthless doctrine. What price creationism?[6]

Such a cavernous divide between two fundamental aspects of reality leaves most people opting to orient their life around either science or religion. In choosing one or the other, most people fail to realize fully what it means to be a human creature. After nearly a century and a half the time has fully come, a *kairos* moment has come,[7] to recognize the unique scope of both religion and modern science. Studying the life of Darwin reveals much about his influence upon western thought, not the least of which is the latent angst imbuing his personal writings regarding the relationship between his theory of evolution and his shriveling religious faith. In this regard Darwin becomes an archetypal figure for the modern person confounded between the faith claims of religion and the purported truths of science. Darwin's personal struggle in attempting to sort through the implications of his theory of natural selection and the upheaval of his traditional Anglican beliefs often is dismissed as a necessary consequence of his personal "enlightenment." However, Darwin clearly grasps the implications of his theory in its purest form; in this sense he is much more visionary than others who adopt his worldview. His personal angst regarding his theory must also be included in his legacy, for it sheds light on inadequacies he himself recognized but are rarely included in most popular presentations of Darwin. Ardent supporters of Darwin's theory exhibit similar hesitation, choosing to focus solely on the materialistic aspects of his theory while limiting discussion on its teleological impact. Towards the end of his life Darwin chooses to identify himself as an agnostic, a term he borrows from his friend and younger colleague Thomas Huxley. Understanding historically how he arrives at this self-designation not

[6] Philip Kitcher, *Abusing Science: The Case Against Creationism* (Cambridge, Massachusetts: MIT Press, 1982), 164.

[7] In the New Testament of the Bible *kairos* is used to describe a moment in history like no other. Romans 5:6 reads, "For while we were still weak, at the *right time* Christ died for the ungodly" (NRSV).

only offers a fascinating journey into the dynamic relationship between science and religion from the nineteenth century until today, but it also creates the opportunity to inaugurate a theological framework that welcomes scientific inquiry at all levels while properly limiting its claims on what is true.

In the process of seeking to understand Charles Darwin and his ideas that have come to dominate much of the modern/postmodern, western worldview, it is essential to elucidate the historical context in which both are developed is essential to elucidate. This approach asserts a reciprocity between Darwin the man (son, explorer, naturalist, husband, father, controversialist) and his ideas that not only derive from his life experiences but also contribute to them. An obvious place to start in this regard is the relationship he has with his mother. Although seemingly Freudian in tone, the purpose for this analysis does not include a psychoanalytical critique of their relationship. Rather, to show that Susannah Darwin's religious beliefs imprint Darwin's thoughts about God and religion for the rest of his life is the goal. Indeed, the turmoil that involves both God and religion during the latter part of his life exposes the nebulous faith foundation for which his mother is most influential when he is a young lad. A more intimate portrait of the relationship between Susannah and Charles Darwin, especially in its religious dimensions, proves most helpful in placing his worldview in historical context.

CHAPTER 2

SETTING THE GAME BOARD—DARWIN'S CONTEXT

BEFORE AND ON HMS *BEAGLE*

Though undoubtedly pious in her practice and demeanor, Susannah Darwin conveys to her son a form of Christianity that may be characterized as heterodox at best if not unorthodox. William Phipps describes her: "Susannah, like her father, was committed to liberal Christianity. Not thinking of herself as a fallen Christian, she and her six children worshiped at the Unitarian chapel in Shrewsbury."[8] The very presence of this chapel in Shrewsbury depends much on Susannah's efforts, but it also portends what would eventually happen within Darwin's mind. Adrian Desmond and James Moore write, "But Susannah stood quietly by her heritage. She took the children on Sundays to the Unitarian chapel. Set back from the High Street, it stood on the site of Shrewsbury's first meeting house for Dissenters, which had been razed by an Anglican mob a century before."[9] In the construction of Darwin's mind, both Unitarian and Anglican influences are present, but ultimately it was the Unitarian outlook that lasts. A portion of a sermon dated May 22, 1823 by William Johnson Fox at the dedication of Finsbury Unitarian Chapel in London gives a glimpse of what Darwin may have heard while attending services with his mother in Shrewsbury.

> He [the stranger within the gates of Unitarianism] will at once see that we cannot worship at altars raised to a plurality of divine persons, nor regard in any other light than as gross corruptions of the gospel, the deification of Jesus of Nazareth, and the denunciation of endless vice and misery against a large portion, or any portion, of mankind: he will also perceive that our dissent is on scriptural principles, and our creed a scriptural and

[8] William E. Phipps, *Darwin's Religious Odyssey* (Harrisburg, Pennsylvania: Trinity Press International, 2002), 1-2.

[9] Adrian Desmond and James Moore, *Darwin: The Life of a Tormented Evolutionist* (New York: W.W. Norton & Company, 1991), 12.

apostolic creed.[10]

Indeed, Darwin, too, would eventually doubt the divine nature of Christ and struggle with the seemingly endless evil inherent in the biological worldview he develops. Perhaps the most significant influence of Susannah Darwin upon Darwin, however, is her death. As an older man he claims to remember little about this tragedy; however, his evolutionary theories betray this claim as they seek to cast death as a positive, necessary element in the further development of organic life. In this way Darwin makes sense of the trauma he experiences as a young lad. Desmond and Moore hauntingly describe Darwin's grief over the loss of his mother:

> The shock of Susannah's death in July was traumatic for the family. Its impact on Charles, difficult to assess, was certainly profound. She suffered appallingly with a tumour, and in the last days only Marianne and Caroline—who helped with the nursing—were allowed to see her. ... When Charles returned to Case's school, his grief manifested itself in peculiar ways. One month after his mother's burial, he watched transfixed, out of the classroom window, as a horse was led to an open grave in the churchyard. The saddle was empty, with a man's boots and carbine hanging at the side. So soon after his mother's interment, the effect overwhelmed him.[11]

To be sure, both the confusing image of God as portrayed through nineteenth-century English Unitarianism and the traumatic death of his mother leave Darwin with a worldview that sees God as capricious and places him at a disconnected distance from the created world, particularly the one that Darwin would eventually study so meticulously. When considering further the formidable materialistic influence of Darwin's grandfather, Erasmus, as part of Darwin's mental ancestry, there is little wonder that Darwin eventually comprehends the world dramatically differently than orthodox Christianity. From an historical perspective, there exists little hope that Darwin would ever become an orthodox Christian.

After a brief description of the relationship between Susannah and Charles Darwin, the

[10] William Johnson Fox, *The Spirit of Unitarian Christianity: A Sermon, Delivered at the Opening of the Finsbury Unitarian Chapel, on Sunday, February 1st, 1824: To which is Prefixed, An Address, Delivered on Laying the First Stone of the Chapel, on Thursday, May 22nd, 1823* (Louisville: Lost Cause Press, 1977; London: C. Fox and Co, London, 1824), microfiche, 12.
[11] Desmond and Moore, *Life of a Tormented Evolutionist*, 4.

natural expectation arises for a similar discussion regarding Darwin's relationship with his father. In terms of ultimate influence upon Darwin's worldview, however, the next most important person in his life is his grandfather Erasmus. Whereas Robert Darwin's influence upon his son extends more to the practical, immediate situation, the intellectual legacy of Erasmus Darwin profoundly impacts Darwin's nascent ruminations about God and nature. Erasmus dies seven years prior to Darwin's birth, but the international success of his *Zoonomia*[12] seems to color the family lore with a radical hue. There are others who argued much the same ideas as Erasmus does, but none as effectively. Every student of Darwin recognizes the importance of Erasmus on him. John Greene captures its full extent:

> Although Lamarck provided the first systematic elaboration of the evolutionary idea, the idea was not original with him, nor were his writings the best vehicle to make it known. An earlier (and from the literary point of view much more effective) champion of the development hypothesis was 'the celebrated Dr. Darwin,' as Charles Darwin's grandfather Erasmus, was known to the reading public in Britain and America. ... Like Buffon and Lamarck, Darwin sought to explain the phenomena of life in terms of the operations of a system of matter in motion. The peculiarity of living matter, he observed, was its capacity to undergo progressive transformations resulting in the appearance of new structures, new needs, and new functions. ... In short, generation was a process of organic transformation produced by the interaction between matter possessing certain propensities and the forces which acted upon it from within and without. ... Thus at one stroke Darwin wrested from the new biology a cosmic underwriting of the gospel of human progress and invited Christians to exchange the hope of salvation in the next world for a share in building the increasingly better life on earth which God had prepared from the foundations of the world.[13]

Three fundamental ideas that carry over into Darwin's worldview stand out in this assessment of Erasmus Darwin's influence. First, Erasmus views reality strictly through a material lens; for him, only matter is real. Second, he ascribes to matter the inherent quality of self-organization. Consequently, and this is the third idea, there is no need for an external controlling or guiding force to that matter. In the minds of Erasmus and Charles this meant there is no need for God.

[12] Erasmus Darwin, *Zoonomia: Or the Laws of Organic Life (Language, Man, and Society)* (Stoughton, Massachusetts: AMS Press, 1988).
[13] Greene, *Death of Adam,* 166-169.

In brief, Erasmus Darwin bequeaths materialism to his grandson, leaving Charles Darwin to struggle with its implications throughout his life.

Before moving on to an understanding of Darwin's relationship with his father and a look at his Cambridge stint, a few comments regarding his theological nexus up to this point in his life are appropriate. Recalling his mother's constant, pious, yet unorthodox influence, and recognizing the profound, posthumous, and atheistical legacy of his grandfather, it is truly little wonder that Darwin comes to view the world in evolutionary terms. His Unitarian roots completely discount the biblical teaching of original sin and therefore the need for atonement. Jesus becomes nothing more than a moral teacher. Moreover, by adopting a materialistic outlook which calls into question the biblical account of creation and therefore the validity of Scripture, even Jesus's moral teachings in the New Testament become relativized. Thus, the religious foundation of Darwin only is capable of supporting a teetering faith, one that eventually leads him not only to travel around the world in search of its biological meaning, but also goes with him on a turbulent, internal, personal voyage seeking meaning for his own life.

Now, a brief comment about Darwin's father, Robert, is in order. To ascribe any sort of religious influence by Robert Darwin upon Charles may seem farfetched to those familiar with the family history. Desmond and Moore characterize Dr. Darwin as a freethinker, which in Victorian terms is nearly synonymous with "unorthodox" or "atheistic." Still, as a physician respected throughout England, Dr. Robert Darwin manages to appear orthodox when necessary. In many ways he represents Victorian society, always willing to look orthodox in public while harboring heretical notions in private. This dual sense of propriety and rebellion he conveys perfectly to his son. After Darwin withdraws from medical school in Edinburgh and chooses to gallivant throughout the English countryside collecting insects, Dr. Darwin steps into his son's life in order to restore familial respectability. Desmond and Moore capture the relationship's

dynamic perfectly:

> When it came to a career, Darwin now had little choice. While he was swanning around the country, carefree, his life was being mapped out. The Doctor, disappointed about Edinburgh [Charles had left medical school] and his son's disdain for medicine, now laid down the law with his usual heavy-handedness. No more misspent money, no more wasted time: if Charles reckoned he could fall back on his father's wealth, he had better think again. He would have to give an account of himself in a profession before he could have the security of the family purse. The only question was, if not medicine, which? The Darwins had produced lawyers and military men, true, but Charles lacked the self-discipline required for their ranks. There was, however, a safety-net to stop second sons becoming wastrels: the Church of England. Dr [sic] Darwin, a confirmed freethinker, was sensible and shrewd. He had only to look around him, recall the vicarages he had visited, ponder the country parsons he entertained at home. One did not have to be a believer to see that an aimless son with a penchant for field sports would fit in nicely. Was the Church not a haven for dullards and dawdlers, the last resort of spendthrifts?[14]

The significance of this moment in Darwin's life is twofold. First, it represents the beginning of that period in his life in which he becomes the most orthodox in terms of his Christian beliefs. Second, however, even though he prepares himself well enough at Cambridge to take the vow of holy orders within the Anglican church, he never does so because of his lurking doubts about God, religion, the Bible, etc. that stem from the unsettling religious environment during his years at his father's home. Eventually, Darwin will resolve this internal tension by asserting that conflict is the only solution when limited options are available. Before this resolution comes, Charles Darwin has much exploring yet to accomplish.

That all of Darwin's youthful wanderings through nature and his interest in its bizarre creatures would eventually land him at Cambridge is one of the great ironies, if not an act of providence, in his life. It is at Cambridge that Darwin learns thoroughly the Thirty-Nine Articles of the Anglican church. It is here that he also masters William Paley's *Natural Theology*, expanding his conception of nature beyond the parameters of England and Western Europe. Here he comes to befriend John Stevens Henslow who serves as his mentor naturalist. Several authors

[14] Desmond and Moore, *Life of a Tormented Evolutionist*, 47.

comment on this peculiar period in Darwin's life. Loren Eisley notes:

> Tiring of the medical round, Darwin drifted to Cambridge with the thought of entering the ministry, but he continued to cultivate naturalists, to dabble in geology, and to fear the wrath of his exasperated father who had grown weary of his eternal hunting and his lack of scholarly application. ... Darwin, in after years, sometimes spoke contemptuously of his Cambridge education, forgetting apparently that despite his opinion of the formal course work, he had been privileged to know there some of the finest scientific minds of the day and that the botanist Henslow had made his voyage on the *Beagle* possible. ...Solitary by nature, it is probably that he never consciously realized the full debt he owed to his Edinburgh and Cambridge years.[15]

Gertrude Himmelfarb describes Darwin's mastering of the religious curriculum:

> With theology, as it was understood for purposes of the B.A. examination, he had more success. He mastered the two required works, Paley's *Evidences of Christianity* and *Moral and Political Philosophy*, so that he was able to reproduce their arguments perfectly, discovering in them the same satisfaction of orderly, logical reasoning that attracted him to Euclid. He enjoyed the experience so much that he was inspired to take up another of Paley's books, *Natural Theology*, which was not required reading. For the youthful Darwin, as for Cambridge, right thinking on religion began and ended with Paley. When he later wrote to one of his Cambridge professors, 'It would, indeed, be a grand step to get a little more divinity in study for men of different minds,' it was the study of Paley he had in mind. And toward the end of his life he reaffirmed his early impression that the analysis of Paley was the only part of the university course which was 'of the least use to me in the education of my mind.'[16]

William Irvine comments on the epistemological influence of Paley upon Darwin: "Paley had taught him to delight in reasoning about material phenomena and to regard the power of assent as dependent on rational argument and physical evidence."[17] Additionally, Phipps highlights the presupposition at Cambridge that science supports religion:

> Studying about God and nature were presumed to be totally compatible; consequently, students and faculty believed that increasing scientific knowledge would strengthen one's theological certitude. Darwin assumed he would become a country parson and would

[15] Loren Eisley, *Darwin's Century: Evolution and the Men Who Discovered It* (Garden City, New York: Doubleday & Company, Inc., 1958), 148, 149, 158.
[16] Gertrude Himmelfarb, *Darwin and the Darwinian Revolution* (New York: W.W. Norton & Company, Inc., 1962), 35.
[17] William Irvine, *Apes, Angels, and Victorians: Darwin, Huxley, and Evolution* (New York: Time Incorporated, 1955), 135.

have leisure to pursue his scientific hobbies amid his religious duties.[18]

These observations of Darwin's time at Cambridge reveal an important fact that often is omitted in the popular demonizing or idolizing of him: he becomes a good Victorian, maintaining a difficult tension between the dominant Anglican beliefs alongside a complex set of questions arising from heterodox beliefs and an emerging modern biological worldview. For Christians to castigate Darwin without considering these essential historical dimensions is not only shallow but unwise, for it further isolates the church from those holding evolutionary worldviews, the very people with whom they are trying to communicate.

After discussing the complex theological foundation of Darwin, a brief description of nineteenth century English economics may seem like a drastic if not unnecessary detour. However, most Darwin scholars find the diversion historically interesting and helpful. The reason is simple. A comparison of free-market economic theory and evolutionary theory highlights striking similarities in emphases: limited resources, increasing population, competition, and adaptation. It naturally triggers the question, "Did Darwin adapt his biological worldview from that of the emerging economic worldview in late nineteenth century Britain?" For some, like the Tufts University scholar, Daniel Dennett, it does not matter:

> Had Darwin not had the benefit of being born into a mercantile world that had already created its Adam Smith and its Thomas Malthus, he would not have been in position to find ready-made pieces he could put together into a new, value-added product. (You see, the idea applies to itself very nicely.) The various sources of the Design that went into Darwin's grand idea [evolution by natural selection] give us important insights into the idea itself, but do no more to diminish its value or threaten its objectivity than the humble origins of methane diminish its BTUs when it is put to use as a fuel.[19]

Dennett's dismissal of any worldview other than that of evolution fails to consider seriously the historical context in which Darwin conceives his theory. Indeed, the economic setting of England

[18] Phipps, *Darwin's Religious Odyssey*, 10.
[19] Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life* (New York: Simon & Schuster, 1995), 73.

in the nineteenth century may be characterized as turbulent because the ramifications of the Industrial Revolution in 1760 continue to pose significant challenges to English society.[20] Christopher Harvie and H.C.G. Matthew assert that one of those challenges is how to manage the concept of progress or evolution in a society that is accustomed to the status quo. They write:

> This view of individualism gained from the widely popular writings of the social evolutionists. Charles Darwin's *On the Origin of Species* (1859) was not a bolt from the blue: it fitted naturally into, as well as transcending, a corpus of writing on evolution. The concept of evolution, and consequently of *progress*, whether on the individual, national, or global level, came to permeate every aspect of Victorian life and thought. Because evolution was determined by laws of science (a view usually described as *positivism*), man's duty was to discover and obey such laws, not meddle with them. Hence most positivists (such as Walter Bagehot, editor of the influential weekly *Economist*, and Herbert Spencer, author of many works on sociology) were strong *laissez-faire* supporters.[21]

Although Darwin leaves only a tiny bit of space for progress in his theory, those who read and accept his theory take the notion of progress far beyond Darwin's intent. In addition to progress, Robert Nelson includes the problem of change in his assessment of English society's struggle at this time.

> If anything, the pace of economic change was even more rapid in the second half of the nineteenth century [in England]. It was during this period that the immensely productive marriage really occurred of modern technology with economic organization. ... Another revolution was brewing in the nineteenth century in natural history. ... The pervasive sense of rapid change in the nineteenth century spurred a search for better understanding of change itself ... If the nineteenth century was especially concerned with understanding the mechanisms of change, the account given by Charles Darwin would prove the most persuasive of all.[22]

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[20] For brief discussions of the Industrial Revolution and its effects in the development of 19th century British economics see John Bowle, *Nations of the World. England: A Portrait* (New York: Frederick A Praeger, 1966), 147ff. and G. M. Young, *Victorian England: Portrait of an Age*, (London: Oxford University Press, 1960).
[21] Christopher Harvie and H.C.G. Matthew, *Nineteenth Century Britain: Very Short Introduction* (New York: Oxford University Press, 2000), 69.
[22] Robert H. Nelson, *Reaching for Heaven on Earth: The Theological Meaning of Economics* (Lanham, Maryland: Rowman & Littlefield Publishers, Inc., 1991), 126-127.

For William Irvine, Darwin's notion of natural selection does not persuade with its all-encompassing understanding of reality, but it does embody "a master idea of the nineteenth century."[23] What demands attention at this point is not the *objectivity* of Darwin's dangerous idea, as Dennett claims, but the fact that there exists a striking correlation between the assumptions and principles used in free-market economics and those employed by Darwin. Postmodernism has taught us that no assumption or principle is inherently objective. But there is a historical link. Darwin's diligent hobby of reading on many subjects includes theories about how economies work. Similar theories also creep into his theory of natural selection in their scientific guise. Whether these theories are true remains debatable, and only the future (and certainly God) holds the definitive answer. But to assert, as Dennett does, that " ... anyone today who doubts that the variety of life on this planet was produced by a process of evolution is simply ignorant—inexcusably ignorant, in a world where three out of four people have learned to read and write" is intellectual arrogance.[24] The theory did not just happen. It has roots in what Darwin read and picked up elsewhere.

More general cultural overtones of nineteenth-century England add to the intellectual environment that shapes Darwin's thought processes. A thorough investigation into the cultural history of England during Darwin's day is not the goal here. Rather, for the purpose and scope of this study the Great Exhibition of London in 1851 serves to give a panoramic view of the changes occurring within Darwin's society and within his own mind at this time. Most scholars of Darwin recognize that by this time Darwin's notion of natural selection has already solidified; most date the completed development of the idea around 1839. Still, the Great Exhibition of London offers an excellent case study of the cultural elements of England at this time that assuredly influence Darwin's thinking. Harvie and Matthew give us a glimpse of its importance:

[23] Irvine, *Apes, Angels, and Victorians*, 218.
[24] Dennett, *Darwin's Dangerous Idea*, 46.

> The Great Exhibition of 1851 celebrated the ascendancy of the United Kingdom in the marketplace of the world, though many of the Continental exhibits, especially those from the German states, gave British manufacturers pause when the high quality of their technology was examined. The Exhibition, sponsored by the court and organized by the aristocracy, reflected Britain's commitment to economic progress and hence to Liberalism.[25]

That the Great Exhibition takes place in London is more than a mere detail of history. Rather, the London setting becomes integral for Darwin's thought development. Peter Bowler boldly maintains that "The London years were Darwin's one period of exposure to a really active scientific community. In a study of this period Martin Rudwick has argued that it can be no coincidence that it produced Darwin's great theoretical breakthrough in biology."[26] Desmond and Moore make a much more dramatic interpretation of this period in Darwin's life, recognizing that the very ideas which coalesce into the theory of natural selection also figure prominently in a much more radical agenda of English intellectuals. They write:

> All believed that the new age of the Crystal Palace [built for the Great Exhibition in 1851] demanded liberal, progressive reforms; that nature's interpreters had a fair claim to the status and rewards enjoyed by the Anglican Establishment. They formed an uneasy coalition whose creeds ran the gamut of Positivism, Republicanism, Secularism, Materialism, and even the more extreme '-isms' of unbelief. This intellectual elite began recasting nature as a competitive marketplace. They were the new constituency for evolution, committed to progress, technology, and the naturalizing of morals and man. As the champions of change, they were making the world safe for Darwin. ... A smart, sophisticated, and scientifically reputable notion of evolution was an urgent need, and the dissidents were casting around for one. Chapman asked Richard Owen, but got nowhere. Anyhow Owen's idea of development was a Platonic ideal, something that existed in the divine Mind. The 'Law' of evolution would have to explain human life rather more materially. It would have to account for the magnificent sights of the Crystal Palace—industrial achievement, English supremacy, and above all progress.[27]

These historical considerations recognize that Darwin, like many in England at this time, is wrestling to make sense of his world which is changing beyond his expectation and

[25] Harvie and Matthew, *Nineteenth Century Britain,* 64.
[26] Peter Bowler, *Charles Darwin: The Man and His Influence* (Cambridge: Cambridge University Press, 1996), 68.
[27] Desmond and Moore, *Life of a Tormented Evolutionist,* 93.

comprehension. Darwin unifies this cultural dynamic with his scientific observations which have also been transformed to incorporate a dynamic, non-static view of nature. The result of this union is his theory of biological natural selection. Bowler beautifully summarizes:

> It is now clear that there was no 'eureka' experience in which Darwin was converted to evolutionism or in which he suddenly conceived the mechanism of natural selection. His ideas underwent a process of continuous development passing through phases in which he tried out various ideas that had to be modified or even abandoned as he broadened the range of his thinking. It has also become clear that both scientific and nonscientific factors played a role in shaping his thoughts. Natural selection was not a simple induction from observed facts, but nor was it a mere reflection of the competitive ethos of Victorian capitalism. Darwin drew upon a whole range of influences and synthesized them to give a unique explanatory model for the origin of species.[28]

This historical, cultural dimension of Darwin's theory of natural selection often is ignored deliberately by brash proponents of evolution. Instead, evolution by natural selection is declared to be "true," and thus a form of cultural chauvinism from the nineteenth century comes in the guise of modern science, molding much thinking in the last 145 years.

In the emerging dynamic, ever-changing worldview of Victorian England in which change and progress become the defining cultural ideals, Darwin, like many other Victorians, finds a little respite in natural theology. Although there is nothing essentially new in the English version of this often revisited type of theology, its cultural influence during Darwin's day betrays the growing tension between religion and science. It allows Darwin and others to maintain a frame of mind that is fundamentally oriented towards nature and naturalistic explanations of its phenomena, while publicly dressing it in the ornaments of religion. James Secord captures this tension in the Victorian mindset:

> Talk about God's providential laws could smooth over these kinds of potentially awkward social situations. Natural theology offered a way to express shared religious sentiments while avoiding quarrels over doctrine. It has long been recognized that arguments 'from Nature to Nature's God' could be used to sidestep political and religious

[28] Bowler, *The Man and His Influence,* 76.

controversy; but natural theology's mediating role was most critical in conversation.[29]

Desmond and Moore elaborate, capturing both the religious and mechanistic dimensions of natural theology:

> Animals, including humans, are complex mechanisms from the divine workshop, and exquisitely fitted to their places in the world. They are so obviously designed, there has to be a Designer. For Paley such a rational proof of God's existence would make men look for signs of revelation and attend to their civic duties.[30]

Reconciling the problem between religion and science in the form of natural theology occupies the attention of men as diverse as William Buckland of Oxford and Thomas Malthus, author of the pessimistic if not realistic *An Essay on the Principle of Population.*[31] Finally, Darwin confesses in his own autobiography which he writes towards the end of his life while he remains steadfastly committed to his God-free theory of natural selection, "I am convinced that I could have written out the whole of the *Evidences* [*Evidences of Christianity*] with perfect correctness, but not of course in the clear language of Paley. The logic of this book and as I may add of his *Natural Theology* gave me as much delight as Euclid."[32] These observations demonstrate both the societal and personal angst which many Victorians feel, most especially Darwin. That natural theology becomes a last resort to release the tension between religion and science makes perfect sense because it incorporates just enough of each discipline in its understanding of reality. Yet it becomes only a matter of time before this tactic fails because the ultimate claims of both would be too contradictory. Until that time Victorian conversations remain anxiously reserved, anticipating the end of the calm induced by the conviction of natural theology that God and science are perfectly reconcilable.

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[29] James Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of 'Vestiges of the Natural History of Creation* (Chicago: The University of Chicago Press, 2000), 162.
[30] Desmond and Moore, *Life of a Tormented Evolutionist*, 90.
[31] For a history of the British secularist movement see Edward Royle, *Victorian Infidels: The Origins of the British Secularist Movement 1791-1866* (Manchester: Manchester University Press, 1974), 17. Regarding Malthus, see Himmelfarb, *Darwin and the Darwinian Revolution*, 165.
[32] *The Autobiography of Charles Darwin: 1809-1882*, ed. Nora Barlow (New York: W.W. Norton & Company, 1958), 59.

Without reading too much into the possible psychological workings of Darwin's mind, a thorough understanding of the genesis of his theory of natural selection would not be possible without a few comments about his time in London following the voyage of HMS *Beagle* and the subsequent move of his family to Down. First, having grown up in the quaint setting of his father's little kingdom known as The Mount at the edge of Shrewsbury, Darwin's disdain for the clamor of London has deep, familial roots. Even when he and his wife, Emma, do finally live in London, their choice is a quiet residence Darwin calls Macaw Cottage. Desmond and Moore describe the residence: "Still it was perfect after the West End noise. Uncle Jos thought it 'the quietest place he had ever been.'"[33] One can only imagine what the scene is like when the pastorally-inclined Charles and Emma arrive at their first home in the heart of London. Phipps gives a somewhat prosaic but accurate description of London: "Finding the smoke of the world's largest city unhealthy and its fast tempo life unappealing, the Darwins, including now their two babies William and Anne, withdrew in 1842 to the village of Downe."[34] Many biographers couch this move from London to Down in a somewhat bizarre tone, as if Darwin is fleeing the situation in the city which will overwhelm him if he does not take immediate action. Stated more poignantly, Darwin seems to make the move to Down as he himself feels the pressures of natural selection working on him. Himmelfarb gives a very straightforward explanation: "Darwin explained that he chose Down because of the extreme quiet and rusticity of the place and the diversity of its vegetation."[35] Desmond and Moore capture the immediate effect of the move to Down:

> The scene [at Down] struck a responsive chord. He breathed an enormous sigh of relief. Here he was at a safe distance from society. No more worrying about what people might say; the rustics would respect him for the gentleman he was, not judge him by what he thought or wrote. He would see everyone on his own terms, when and as he pleased.[36]

[33] Desmond and Moore, *Life of a Tormented Evolutionist*, 277.
[34] Phipps, *Darwin's Religious Odyssey*, 45.
[35] Himmelfarb, *Darwin and the Darwinian Revolution*, 138.
[36] Desmond and Moore, *Life of a Tormented Evolutionist*, 302.

Having retreated to his deliberately remote residence where he is able to resolve the natural-selection-like pressures of city life, Darwin immediately sets to work on his theory of natural selection. Yet, even here what may be described as evolutionary-like pressures begin to consume Darwin, leaving him only mental excursions for release. Irvine comments:

> Henceforth, all Charles's voyages were to be intellectual, and all were to be made at the fireside of Down. Surely, his happiness was perfect. Unfortunately, he was not the man to be tranquil, even in tranquillity. He soon fell to worrying once more—about his health, the expense of improvements, about the responsibilities of his rapidly growing family, and probably about his own inability to earn money, should other income fail.[37]

Thus, at the very time when Darwin begins to assemble his theory of natural selection, traces of its theme of choosing those organisms best fit for their environment may be seen in his personal life. Darwin develops his theory not only from his observation of biological phenomena, but he also projects into it many of his own tumultuous emotions resulting from his overall feeling of uneasiness.

Without diminishing the significance of the personal nature of this uneasiness, recognition of the Enlightenment's lasting impact upon Darwin also helps to situate him within the broader cultural struggle confronting Europe at this time. Although it is common to delimit the Enlightenment within the hundred years from the English Revolution in 1689 to the French Revolution in 1789, Darwin is actively engaged with much of its intellectual legacy in the first half of the nineteenth century.[38] This is the legacy described by Peter Gay.

> But the cohesion among the philosophes went deeper than this: behind their tactical alliances and personal fellowship there stood a common experience from which they constructed a coherent philosophy. This experience—which marked each of the philosophes with greater or lesser intensity, but which marked them all—was the dialectical interplay of their appeal to antiquity, their tension with Christianity and their pursuit of modernity. This dialectic defines the philosophes and sets them apart from other enlightened men of their age: they, unlike the others, used their classical learning to

[37] Irvine, *Apes, Angels, and Victorians*, 81.
[38] Peter Gay, *The Enlightenment: The Rise of Modern Paganism* (New York: W.W. Norton & Company, 1958), 17.

> free themselves from their Christian heritage, and then, having done with the ancients, turned their face toward a modern worldview. The Enlightenment was a volatile mixture of classicism, impiety, and science; the philosophes, in a phrase, were modern pagans.[39]

To call Darwin a *philosophe* and place him in the company of Hume, Kant, Voltaire, and others could frustrate an attempt to understand better the Enlightenment as a unique intellectual era. But my goal in doing so is rather simply to recognize the powerful influence of the European intellectual culture that carried over and undoubtedly influences Darwin. Due to Darwin's unfettered access to the British literati by virtue of his family's privileged status, he assuredly becomes acquainted with the ideas of the Enlightenment. Indeed, by the time Darwin has developed his theory in full, he likely could be considered an ardent supporter of David Hume's maxim which Gay reports: "'No testimony,' he wrote, 'is sufficient to establish a miracle, unless the testimony be of such a kind, that its falsehood would be more miraculous, than the fact, which it endeavors to establish.'"[40] Within this context it is intriguing that Darwin, with his Cambridge education, never overtly acknowledges his indebtedness to the Enlightenment. Perhaps this is the case because of his disdain for studying the classics of antiquity—an essential element in the Enlightenment program. Still, his passionate pursuit of the scientific investigation of the natural world with an optimistic outlook toward the future allows him to adopt many Enlightenment tenets. Always his own man standing at the complicated scientific crossroads of the nineteenth century and the Enlightenment background, Darwin utilizes aspects of the Enlightenment's intellectual legacy to forge his own thinking about the world in a way that would make philosophes like Hume, Kant, and Voltaire proud.

The paradigmatic shifts in the intellectual framework of Victorian England relentlessly plague the realm of religion. Leaving no cherished idea unchallenged, Darwin's theory of natural selection in the *Origin of Species* almost immediately places the Anglican church in a defensive

[39] Ibid., 8.
[40] Ibid., 406.

posture regarding its teachings. This is not insignificant, as the Church of England, like most of Christendom throughout Europe since the Enlightenment, must also deal with the latest threat from the bastion of reason. Reaching almost folklore-like status, the Oxford debate between Samuel Wilberforce and Thomas Huxley at the British Association for the Advancement of Science in 1860 classically represents evolution's role in this dramatic shift in thinking. The debate is retold in almost every historical account that seeks to comprehend the influence of Darwin's thinking upon the present worldview. Indeed, the debate as it is presented from the recollections of those in attendance at the time deserves attention because in ironic fashion it captures the sociological tension of the day. Two important lessons are learned. First, the scientific understanding of reality finally triumphs over that of its religious counterpart. James Secord comments:

> The changed situation was clear at the Oxford British Association of 1860, when Wilberforce launched into the *Origin* at a section meeting held in the newly built natural history museum. Thirteen years before, the bishop's sermon on pride had been hailed by scientific men and clerics alike. But the old consensus no longer held. Wilberforce was put down in speeches from Hooker, and Lubbock, and by Huxley's angry remark that he would rather have a 'miserable ape for a grandfather' than a man who misused his powers 'for the mere purpose of introducing ridicule into a grave scientific discussion.'... Afterward, many spectators felt the session was a draw; but the common view was that clerical interventions of this kind belonged to the past rather than the future.[41]

David Livingstone recognizes how obviously devastating Wilberforce's, and hence religion's, loss is:

> Every schoolboy knows that when Soapy Sam Wilberforce, the Bishop of Oxford, had his wings clipped by Thomas Huxley in their debate over Darwin and the ape, it was just the latest in a series of defeats that Christianity had sustained at the hands of science. Warfare had long raged, but this most recent skirmish confirmed that science had found its greatest champions in Master Darwin and 'Bulldog' Huxley.[42]

[41] Secord, *Victorian Sensation*, 513.
[42] David N. Livingstone, *Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought* (Grand Rapids: William B. Eerdmans Publishing Company, 1987), 1.

The polymorphic change occurring within Victorian culture assumes a specific shape within the context of the conflicting worldviews of orthodox Christianity and modern science. Because few values are as deeply held like those religious, the consequences prove to be dramatic if not tragic.

The second lesson to be learned from this now mythic British Association Meeting of 1860 is that the church, and not just the Anglican portion of it, needs to prepare herself better for such challenging encounters. Although Wilberforce is remembered as a great orator, his credentials are not enough to uphold his embarrassingly weak rebuttal of Darwin's thinking. As Phipps points out: "Wilberforce admitted that he had not read the *Origin*, and his paucity of understanding can be illustrated by this comment, 'If transmutations were rapidly occurring ... the favourable varieties of turnips are tending to become men.'"[43] Irvine describes the defeat: "Huxley had committed forensic murder with a wonderful artistic simplicity, grinding orthodoxy between the facts and the supreme Victorian value of truth-telling."[44] The observers' shock at the overwhelming defeat by Huxley likely delays the inevitable, as Bowler provocatively suggests:

> In fact, Huxley did *not* convince the majority of people in his Oxford audience, and the general conversion to evolutionism was not completed for some years. To explain what was going on, historians are now looking beyond the evidence for evolution to the social pressures that were at work within the scientific community and within Victorian culture as a whole. The new interpretation suggests that Darwin was able to initiate a scientific and cultural revolution because he linked his own very specific interests in evolutionism to a more general trend in Victorian intellectual life, a trend that reflected the changing power structure of British and indeed Western society. Against a background of ongoing social unrest, the middles classes whose wealth was derived from the new industrialization were seeking to wrest control of society from the old landed interests. Science was an important battleground because any challenge to authority of scripture threatened to undermine the conceptual foundation of the establishment's claim that the existing structure of society was divinely ordained. Evolutionism was an important scientific innovation because it could be used to suggest that nature was an inherently progressive system. Social progress could be seen as a continuation of natural evolution, the inevitable replacement of outdated forms by those more advanced. The inevitability of progress should reassure everyone that what was going on would ultimately be for the

[43] Phipps, *Darwin's Religious Odyssey*, 89.
[44] Irvine, *Apes, Angels, and Victorians*, 6.

benefit of all.[45]

Amidst the intellectual storm which Darwin's idea seeds, the church struggles to find an orientation that will prove helpful in meeting the challenges presented by nineteenth-century scientific thought. One of the first attempts comes quickly in 1860 with the publication of *Essays and Reviews*.

In the same year as the Wilberforce-Huxley debate, the book *Essays and Reviews* captivates the minds of the British literati. Consisting of seven monographs, each written by different authors, the entire work represents an effort by the liberal Broad Church Movement within Anglicanism to grapple with the same issues confronting the general public: progress and change. In the preface to a recent edition of the text, Victor Shea and William Whitla identify its historical purpose: "The seven articles collected as *Essays and Reviews* (1860) engaged the relations between the religious faith and mid-Victorian discussion about education, theology, science, literature, biblical studies, politics, and philosophy."[46] Although its popularity surpasses that of other publications attempting to sort through many of the same issues, the availability of these other works indicates the pervasive awareness of the cultural upheaval which takes place during the reign of Queen Victoria. Shea and Whitla write:

> *Essays and Reviews* is one of a series of texts published in the decade questioning the authority and control of the Anglican Church in the Victorian social formation: Mill's *On Liberty* (1859), Darwin's *On the Origin of Species* (1859), Colenso's *The Pentateuch and Book of Joshua Critically Examined* (1862), Huxley's *Man's Place in Nature* (1863), Lyell's *Antiquity of Man* (1863), the translation of Renan's *Vie de Jesus* (1863), Newman's *Apologia Pro Via Sua* (1864), Seeley's *Ecce homo* (1865), Arnold's *Culture and Anarchy* (1869), and Darwin's *Descent of Man* (1871). Each of these works challenged the widely assumed hegemony of Anglican values and orthodoxies in a broad range of public discourses and unsettled the controlling power of 'clerical culture,' as Frank Turner calls it (1993, 43), in Victorian society.[47]

[45] Bowler, *The Man and His Influence*, 145-146.
[46] Victor Shea and William Whitla, *Essays and Reviews: The 1860 Text and Its Reading* (Charlottesville: University Press of Virginia, 2000), 3.
[47] Ibid., 6-7.

Even though Darwin is mentioned specifically only one time in the entire volume of *Essays and Reviews*, the single reference indicates the sway his idea is having among intellectuals because it is still less than a year after the publication of his *Origin of Species*. One mention may seem minor, but in a horse and carriage society the transmission of information depends on the speed of feet, not the speed of light and electrons. More important than the presence of Darwin's name is the way Anglican theologian Baden Powell invokes it. He writes,

> Yet it is now acknowledged under the high sanction of the name of Owen, that *creation* is only another name for our ignorance of the mode of production; and it has been the unanswered and unanswerable argument of another reasoner that new species must have originated *either*, out of their inorganic elements, *or* out of previously organized forms; *either* development *or* spontaneous generation *must* be true: while a work has now appeared by a naturalist of the most acknowledged authority, Mr. Darwin's masterly volume on *The Origin of Species* by the law of *natural selection*, which now substantiates on undeniable grounds the very principle so long denounced by the first naturalists, '*the origination of new species by natural causes*': a work which must soon bring about an entire revolution of opinion in favour of the grand principle of the self-evolving powers of nature.[48]

These thoughts represent not only the thinking within Britain during 1860 but the culmination of ideas developed in a parallel relationship with those of Darwin's. Both attempt to give expression to the more fundamental social phenomena of change and progress at an incomprehensible rate. Not only economics, not only the increasing awareness of the world, but even religion becomes involved in this process. As one of England's most affluent literati, Darwin has the time and the means to muse about such grand thoughts. Considering his unique historical context, both on a personal and societal level, his understanding of these historical forces is expressed in the theory that has made him famous: evolution by natural selection. Failing to incorporate these historical dimensions in a modern understanding of his theory not only fails to recognize the uniqueness of the era that helped create it, but it is also intellectually negligent.

[48] Ibid., 258.

Finally comes one more element in this section on the multidimensional factors that lead Darwin to think along the line of natural selection: Darwin's voyage on the *Beagle*. A brief sketch of his intellectual journey while on the HMS *Beagle* between 1831-1836 offers the last look into his mind before all the elements come together and his subsequent thinking holds unwaveringly to that line. Darwin himself declares that it is his experience on the *Beagle* that most influences his mental development. In his *Autobiography* he writes:

> The voyage of the *Beagle* has been by far the most important event in my life and has determined my whole career; yet it depended on so small a circumstance as my uncle offering to drive me 30 miles to Shrewsbury, which few uncles would have done, and on such a trifle as the shape of my nose. I have always felt that I owe to the voyage the first real training or education of my mind. I was led to attend closely to several branches of natural history, and thus my powers of observations were improved, though they were already fairly developed.[49]

Such a comment immediately evokes a question about the nature of this "training" and "education." Thankfully, Darwin himself, spends some time contemplating this and provides an answer:

> I discovered, though unconsciously and insensibly, that the pleasure of *observing* and *reasoning* was a much higher one than that of skill and sport. The primeval instincts of the barbarian slowly yielded to the acquired tastes of the civilized man. That my mind became developed through my pursuits during the voyage, is rendered probably by a remark made by my father, who was the most acute observer whom I ever saw, of a skeptical disposition, and far from being a believer in phrenology; for on first seeing me after the voyage, he turned round to my sisters and exclaimed, 'Why, the shape of his head is quite altered.'[50]

Observation and reasoning, both living vestiges of the Enlightenment, thus become the dominant influences shaping Darwin's burgeoning theory. As can be seen from the following description by James Creech of the fundamental components of Enlightenment thought, Darwin exemplifies the "enlightened" scientist of his day:

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[49] *Autobiography of Charles Darwin*, 76-77.
[50] Ibid., 79. Emphasis added.

> The leaders of the Age of Reason relied heavily on the scientific method, with its emphasis on experimentation and careful observation. ... Reason was thought to be the power that enables people to "see" mathematical truths just as clearly as they can see a hand before their eyes by visual perception. However, visual perception yields only particular, or contingent, truths. For example, most hands have five fingers. But it is not necessary that every hand have five fingers, because one or more fingers could be lost in an accident. Only reason yields necessary, or universal, truths.[51]

Although Darwin's journey occurs nearly a century following the recognized end of the Enlightenment, its residual presence in the minds of most European intellectuals still dramatically colors their worldview. Cherished but antiquated ways of thinking never die easily, and in Darwin's case the apparitions of the Enlightenment lurk behind comments which appear on the surface to be little more than biological observation.

A simple case study demonstrates the point well. Almost any page of Darwin's diary entitled the *Voyage of the Beagle* contains an example, but part of the entry from March 23, 1835, serves well the purposes here. In order to demonstrate the "enlightened" progression from contingent truth to necessary truth, the diary itself can be divided into Darwin's observations (contingent truth) and his subsequent reasoning about those observations (necessary truth). For Darwin, even in the biological realm much more is happening than the eye is able to observe. All biological occurrences are governed by the unalterable laws of nature. Darwin writes in his journal:

> I was much struck with the marked difference between the vegetation of these eastern valleys and those on the Chilian side: yet the climate, as well as the kind of soil, is nearly the same, and the difference of the longitude very trifling. The same remark holds good with the quadrupeds, and in a lesser degree with the birds and insects. I may instance the mice, of which I obtained thirteen species on the shores of the Atlantic, and five on the Pacific, and not one of them is identical. We must except all those species, which habitually or occasionally frequent elevated mountains; and certain birds, which range as far south as the Strait of Magellan.[52]

[51] Creech, James, "Age of Reason," in *World Book Multimedia Encyclopedia Mac OS X Edition* (Chicago: World Book, Inc., 2001).
[52] Charles Darwin, *Voyage of the Beagle*, Harvard Classics (New York: F. Collier & Son Company, 1909), 346.

Darwin finds intriguing the difference in vegetation and animals that exists on opposite sides of the mountain ridge even though the physical conditions on both sides seem identical. The underlying assumption here is that when physical conditions remain constant, little variation should occur in species. Stated differently, to understand the historical context of Darwin's thinking at this point, Arthur Lovejoy explains, "In spite of the violent reaction of the astronomy, physics, and metaphysics of the Renaissance against the Aristotelian influence, in biology the doctrine of natural species continued to be potent—largely, no doubt, because it seemed to be supported by observation."[53] Yet, when Darwin reasons about this observation to arrive at the necessary truth supporting his observations, he teeters and then begins to tip over into the idea that makes his legacy so influential. He reasons:

> This fact is in perfect accordance with the geological history of the Andes [developed with Lyell's understanding of the geographical distribution of species]; for these mountains have existed as a great barrier since the present races of animals have appeared; and therefore, unless we suppose the same species to have been created in two different places, we ought not to expect any closer similarity between the organic beings on the opposite sides of the Andes than on the opposite shores of the ocean. In both cases, we must leave out of the question those kinds which have been able to cross the barrier, whether of solid rock or salt-water.[54]

The dramatic, physical barrier of the Andes mountain range explains his observations—or does it? By avoiding at this point the question relating to species which cross this barrier, Darwin is really bluffing, because already in 1835 he is questioning the immutability of species. Darwin's bluff stems not from confidence but from sincere perplexity as to how his thinking should integrate this new observation.

By the time Darwin arrives home in October of 1836, nearly eighteen months have passed. Similar observations continue to call into question the accepted thinking regarding

[53] Arthur O. Lovejoy, *The Great Chain of Being: A Study of the History of an Idea* (Cambridge, Massachusetts, Harvard University Press, 1961), 227-228.
[54] Darwin, *Voyage of the Beagle*, 346.

species, and the search for this new, necessary truth propels Darwin into a frenzied pace of activity once he sets foot again on English soil. Ironically, the very "enlightened" framework of his thinking that leads him down this path will result in a solution that erects a fundamentally different system of thought, one that is less like a frame and more like a set of materials that continuously morphs in new directions based on the contingencies of the moment.

Returning to the bridge-chess metaphor, Charles Darwin has been dealt a very difficult "hand" of ideas at various times of his life. These ideas emerge from a complex historical nexus that includes both personal and social dimensions. Because of the eclectic nature of his upbringing, Darwin plays his hand as best he can for a while. But as time passes, the mental cards are shuffled so well in Darwin's mind that it is a wonder he is able to comment at all about God, having set aside the value judgments of orthodox or unorthodox. In the end, he chooses to play an entirely different game: chess. For the Christian seeking to make sense of his contemporary influence, what is essential is to understand as best as possible the presuppositions that drive his thinking. In bridge, an instructor will ask the student, "Why did you play your hand that way?" The analogous historical question here is, why does Darwin play his intellectual cards the way he does? Or, even better, why does Darwin opt to leave the game of bridge (theology) for the game of chess (science)? Dealing with these questions allows Christians to respond to the theory of evolution by recognizing that in many ways the theory is historically contextualized.

PART II

CHAPTER 3

MAKING THE FIRST MOVE—DARWIN'S THOUGHTS AFTER HMS *BEAGLE*

When Darwin sets foot again on the shores of England in October of 1836, he embarks on a fundamentally different journey. No longer does the seascape of the ocean or the landscape of coastal South American dominate his thinking. Rather, a new mental horizon has emerged, consisting of new observations, new discoveries, and new species. Many others in the field by this time have already started to map out this horizon; however, theirs is a blind mapping, inferring as best they can what can be learned from the data Darwin has sent them . Darwin's arrival back in England now gives the mapping work context, as he provides an eyewitness account for each piece of data collected. Left in a contextual vacuum, the information collected from the voyage of the *Beagle* remains useless. As the naturalist on the voyage Darwin becomes the primary interpreter of the data, even though it quickly becomes scattered in various places: Oxford, Cambridge, College of Surgeons, and the University College of London. In this entire process of sorting through what amounts to be a massive amount of information, an uneasiness subtly enfolds Darwin. In some portrayals of this period in Darwin's life, the uneasiness is often ignored as it is purportedly irrelevant for scientific purposes. From an historical and theological perspective, however, Darwin's uneasiness serves as a key for interpreting the meaning and significance of his discoveries. Two aspects of this uneasiness become evident. They are best characterized as external and internal. Darwin's external uneasiness relates to his involvement with the British scientific community as it seeks to incorporate his discoveries into an antiquated paradigm. The internal uneasiness directly corresponds to Darwin's inability to make sense of

his discoveries on the *Beagle* due to his inadequate theology. It is essential to remember that both aspects are inherently related to each other. In brief, by unsettling the accepted scientific paradigm of the external world, Darwin's data, his mental specimens from the voyage, also disrupt the accepted theological paradigm of his internal world.

Most important for supporting the assertion that Darwin's physical specimens create a sense of uneasiness related to the external world is the frenetic pace at which he and his colleagues engage their work upon his return from his voyage. Assuredly, most scientists and explorers become excited when new discoveries are made. However, the reaction of Darwin and the British-American scientific community upon the completion of his journey around the world hints at something deeper and more profound. Historically, it is now recognized that Darwin's work has led to seemingly irreversible epistemological transformations in western science, culture, education, economics, etc. Darwin's contemporaries seem to sense this future. A few descriptions of that exciting time between October 2, 1836, and January 29, 1839, attempt to capture the Zeitgeist of this transformation. Desmond and Moore describe in several places:

> He introduced himself, and dined out on his South American stories, trying to tempt the experts with his collections. He was strutting, a celebrity; the geologists had read his printed letters, and many had seen his megatherium fossils. Everyone wanted to meet the tropical traveler and hear his tales of savages and rain forests and giant ground sloths.[55]

> Should he emulate Lyell and Eras in the city with its intellectually bracing atmosphere, moving in their circles of advanced intellectuals—freethinking, political, exciting?[56]

> Darwin's rising and falling lands had other—more covert—consequences. They raised tantalizing questions about the inhabitants; about annihilation and repopulation, about Creation itself. On this key question he was still moving away from Lyell. The Galapagos finches, all feeding in flocks together (or so he thought), suggested that Lyell was wrong—that conditions did not strictly determine what was created there. So what could explain these variants? There had to be another solution.[57]

[55] Desmond and Moore, *Life of a Tormented Evolutionist*, 198. This series of quotations is given to demonstrate the pivotal nature of this time period for Darwin.
[56] Ibid., 200.
[57] Ibid., 208.

> Darwin found the old design arguments in tatters in London. The medical schools were brimming with dissident ideas. ... So in Darwin's London, there was a new fueling of excitement, Natural theology [sic] was in crisis, and many expected a new life science to arise like a phoenix from its ashes. Here Darwin could make his mark. He could see the need to solve the great 'mystery of mysteries.' Lyell was bold, he would be bolder. He would prove the sort of reforming, developmental science so admired in his brother's circle. Almost imperceptibly, he glided towards transmutation himself. It was easy because he had been habituated to it, in his grandfather's writings and Grant's talks; because London provided a conducive environment; and because he had the time and patience and love for intractable theoretical problems. He had been wondering about the stability of species since the last leg of his voyage. Now the experts were to supply the zoological rivets to hold his ideas together.[58]

Finally, Peter Bowler adds, somewhat anti-climatically, "The London years were Darwin's one period of exposure to a really active scientific community. In a study of this period Martin Rudwick has argued that it can be no coincidence that it produced Darwin's great theoretical breakthrough in biology."[59] Slowly and certainly the understanding of the physical world fundamentally evolves as a result of Darwin's *Beagle* voyage. The complete *otherness* in his discoveries trespasses the accepted and long-cherished boundaries thought to exist in the natural world. Darwin's voyage completely ignores the centuries-old *No Trespassing* sign. Uneasiness stemming from this transformed understanding of the external world is the natural response.

The way in which Darwin and other members of the British literati grasp and mold this uneasiness into a new, biological worldview deals the final death blow to the cherished beliefs regarding creation within much of the Christian church and western culture. Indeed, Darwin himself recognizes the significance of his idea as Desmond and Moore record:

> A 'MURDER,' Darwin compared it to. He was writing to his new friend, the botanist Joseph Dalton Hooker, just back from four years at sea. It was 11 January 1844, and he was talking about the transmutation of life. From behind his great wall at Down he plucked up courage and confessed his awful secret, his belief that all animals were descended from common stocks.[60]

[58] Ibid., 219-220.
[59] Bowler, *The Man and His Influence*, 67-68.
[60] Desmond and Moore, *Life of a Tormented Evolutionist*, 313.

Upon receiving the letter, Hooker becomes perplexed, uncertain of how to interpret the meaning of "MURDER." With the passing of time Hooker, along with many others, come to realize what Darwin has slain. Dead, at least among intellectuals, is the notion that a providential God created man, woman and the creatures inhabiting the various nooks and crannies of the world. Dead is the notion that God has been and is intimately involved in the sustenance and development of the world. Thus, the biblical God who is frequently called upon in the construction of western thought has now been brought to the grave by the pallbearer Charles Darwin. What is of historical significance in this ideological murder is the intentionality of its perpetrators. The murder is not accidental. Rather, Darwin deliberately pursues a course which slowly suffocates the traditional idea of God within Christendom. Dead, finally, is the God whom William Paley describes in his *Evidences of Christianity*. Part of the interment includes passages like the following from Paley's *Evidences*:

> Again, the effect of the Messiah's coming, supposing Jesus to have been he, upon Jews, upon Gentiles, upon their relation to each other, upon their acceptance with God, upon their duties and their expectations; his nature, authority, office, and agency; were likely to become subjects of much consideration with the early votaries of the religion, and to occupy their attention and writings. I should not, however, expect that in these disquisitions, whether preserved in the form of letters, speeches, or set treatises, frequent or very direct mention of his miracles would occur. Still miraculous evidence lay at the bottom of the argument. In the 'primary' question, miraculous pretensions, and miraculous pretensions alone, were what they had to rely upon.[61]

Darwin's motive for committing this 'murder' includes both his public interactions among the British literati and his private thoughts/sentiments. Each becomes a key factor in his ideological crime. In figuring out how to make his next move, Darwin begins to position himself for a possible lethal checkmate. How he does so offers a fascinating investigation into the theology of his time.

Darwin's public interactions during the late 1830s and early 1840s help to explain the

[61] William Paley, *Evidences of Christianity* (New York: R. Carter Publishers, 1865), 83.

acceleration with which he abandons any traditional Christian beliefs he still holds. It is not exaggerating to say that Darwin internalizes much of the turmoil coinciding in British society at this time. As religion and the idea of evolution are key components of this turmoil, Bowler comments, "Whatever the creative uses to which Darwin put his doubts about religion and the purpose of evolution, it seems clear that here was the source of the emotional tensions which may have begun to exaggerate his predisposition to stomach upsets and heart palpitations."[62] Three specific undercurrents repeatedly redirect the focus of the turmoil and thus compound its social disruption: the surge of influence from science upon nearly every aspect of life, the decline of religious influence within British society as the Anglican church suffers repeated attacks from various angles, and the confusion regarding God and his beautiful world arising from what we may call the yuck and muck discoveries of the biological societies. At first this may seem to overstate the case for the influence of these seemingly peripheral, even mundane, social elements upon Darwin's "scientific" theory of natural selection, but the historical evidence proves otherwise. To ignore these is to undervalue the tumultuous context which is continuously shaping Darwin's thinking.

Inner turmoil can be masked by outward acclaim, even celebrity status. Although news of his return from the *Beagle* voyage takes time to circulate among the British dons of science, Darwin's ideas about his discoveries fan out quickly once he begins making contact with longtime friends and colleagues. Naturally, everyone with whom he meets wants to hear about the interesting details of his sailing around the world. The specimens which he already shipped home help to fuel the *paparazzi-like* fervor that greets him at nearly every public, scientific meeting. Desmond and Moore write, "These spectacular fossils were his entree into the world of high science. The College [Owen's College of Surgeons] sent casts to the Geological Society and the

[62] Bower, *The Man and His Influence*, 87.

British Museum; Cambridge received some, as did Oxford."[63] Eventually, the high profile attention surrounding Darwin at this time leads to his inclusion in prominent societal organizations. Within these influential social circles Darwin seems to ignite a latent tendency for social upheaval or to spread wider and deeper such feelings that are already present. Darwin's activity within the Geological Society of London is an important example. Within this organization Darwin becomes the leading advocate for the controversial views put forth by Charles Lyell in his *Principles of Geology*.[64] The point of contention within this work is Lyell's principle of Uniformitarianism, which asserts that the geological forces active at the beginning of the world are uniform with those of the present. This forces Lyell to conclude that the world is much older than the calculation of Archbishop James Usher which dates the creation of the world to Saturday, October 22, 4004 B.C. at 8 P.M.[65] Because of Darwin's reputation at this point, his support of Lyell's theory begins to change the conventional wisdom. Peter Bowler explains:

> He was now deeply involved with the Geological Society of London which—as Rudwick points out—was then the most active scientific society in the country. Although ostensibly committed to the collection of factual data, the society's papers often alluded to the confrontation over geological dynamics between the catastrophists (of whom Sedgwick was a leading member) and Lyell's uniformitarians ... As a supporter of Lyell, Darwin was soon acknowledged as one of the elite group entitled to speak with authority on the most basic theoretical issues.[66]

Having been catapulted into the realm where only the dons of science roam, Darwin reluctantly assumes a position of immense social significance, both scientifically and culturally.

When he finally picks up Thomas Malthus's *An Essay on Population* in October of 1838, Darwin begins to assemble dangerously disruptive ideas.[67] The main idea Darwin employs from Malthus is stated as follows:

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[63] Desmond and Moore, *Life of a Tormented Evolutionist*, 205.
[64] Charles Lyell, *Principles of Geology* (Chicago: University of Chicago Press, 1990).
[65] Himmelfarb, *Darwin and the Darwinian Revolution*, 351.
[66] Bowler, *The Man and His Influence*, 70.
[67] *Autobiography of Charles Darwin*, 120.

> That the checks which have been mentioned are the immediate causes of the slow increase of population, and that these checks result principally from an insufficiency of subsistence, will be evident from the comparatively rapid increase which has invariably taken place whenever, by some sudden enlargement in the means of subsistence, these checks have in any considerable degree been removed.[68]

Since these ideas also are promoted vigorously by the pesky Whig party, Darwin consciously positions himself within the very group of people causing the turbulence in British society. Desmond and Moore note, "Darwin was learning Malthusian Whig ideals: his family and friends were justifying the reforms, rationalizing middle-class values, underpinning competition, arguing for free trade, factory expansion, and the removal of religious disabilities."[69] It must be noted, however, that Darwin does not simply insert Malthus's idea into his biological framework; it is not an useless philosophical appendage but an essential creative component, as Peter Bowler explains:

> The role played by Malthus' principle may suggest that Darwin drew his inspiration in part from the individualist ideology of the middle classes. ... Yet in the end Darwin took from Malthus something that was not really there in the original: a sense that struggle could become a creative process by weeding out the unfit in every generation.[70]

If one imagines oneself as a typical Victorian standing next to Darwin around 1840, hearing such an idea would be more than shocking. It would instill genuine, Godly fear, as if someone had been openly murdered at the steps of London's bastion of Christianity, St. Paul's Cathedral.

The very public nature of Darwin's ideological murder eventually compels him to retreat to the village of Down, sixteen miles from St. Paul's. It is from this personal hideaway that Darwin finishes his crime. Although Darwin chooses to isolate himself in the secluded confines of his home in Down, the public nature of the crime would continue through letters and thoughts exchanged with friends who would often include London as part of their itinerary since it was

[68] Thomas Malthus, *The Principle of Population* (London: J. M. Dent & Sons, Limited, 1914), 304.
[69] Desmond and Moore, *Life of a Tormented Evolutionist*, 218.
[70] Bowler, *The Man and His Influence*, 83-84.

relatively close. By these avenues people begin to realize that not only the old science has died, but the old religion as well. If science could explain the processes of life based on natural laws, God could be disposed. Not only God, but all the religious baggage that seemed to stifle society could also be buried. Ironically, by murdering the omnipotent, biblical God about whom the church taught could do anything, Darwin and others begin to imagine an unlimited progression free of theological overtones. Their imaginations, encapsulated in Darwin's thinking, envision a dramatically different society:

> Darwin pressed on, stomach notwithstanding, cleansing a corrupt science, convinced he was right, dying to make his mark—his moral sanction coming from the huge shift to Dissenting values in the country. He was leading a crusading reform, breaking Whewell's old Tory Anglican dynasty, stripping the privileges it accorded man in the cosmos, as the Whigs were stripping the clergy's privileges on earth. Darwin became more and more frustrated by an arrogant theology. 'People often talk of the wonderful event of intellectual Man appearing,' he sniffed, smashing another idol, yet 'the appearance of insects with other senses is more wonderful.' Human chauvinism now outraged him.[71]

Darwin's rage eventually spills over to others, whom Desmond and Moore label as Dissenters:

> By 1837 attacks on the Anglican miracle-mongers were barbed. Up-and-coming Dissenters wanted *more* reforms, furious at being barred from jobs in the hospitals, the law courts, Oxford, and Cambridge. They fulminated against Anglican privilege, indicting the Established Church of the *filthy crime* of adultery with the state. The harlot had to be wrenched from her caress. These fierce Dissenters saw nature as a product of self-adjusting laws, initiated by God and proclaimed to everyone through His Word and Works. All men were therefore equal before Him, and no state-endowed priests were needed to interpret life or control science. The Church should be disestablished, its privileges stripped. With the four million Dissenters making political headway under the Whigs, their lawful explanation of nature was beginning to challenge the Anglicans' supernatural one.[72]

Almost unwittingly, then, Darwin becomes a public persona, a public murderer standing before a society that not only seems to ignore the murder but enthusiastically welcomes it. Desmond and Moore describe it this way: "Darwin—with his Unitarian family and friends—stood at the

[71] Desmond and Moore, *The Man and His Influence*, 237.
[72] Ibid., 218.

crossroads [between conservative Anglicans and the Dissenters]. As he pondered life's progression on the earth he continued to hear a chorus of complaints about the old miraculous explanations."[73] In other words, what Darwin and others rebel against in the name of scientific progress is a theology of Christianity that fails to consider and integrate the common reality of everyday life for the typical sinful person. Certainly, the scientific theories offer a source of ideological and philosophical intrigue; however, Darwin's biological ideas gain popularity initially because of their sociological implications. Whereas, in time students of Darwin would turn his ideas into what has become known as Social Darwinism (which is just as paralyzing in its application to social development), initially the theory of natural selection is welcomed enthusiastically by the general population as another expression of development. Darwin's murder of the former conception of life as God supposedly created it gives new life to an increasingly scientifically oriented population stifled by a form of Christianity that could not integrate the new scientific discoveries into its theology.

The alternative which Darwin offers in place of the dead theology of his day arouses surprise, at least from an historical perspective. This alternative often is decked out in its 20th-century garb. (Herbert Spencer's influence is not easily removed in this regard.) Perhaps a reexamination from a historical theology perspective will give Darwin's ideas more realistic attire for the 21st century. In place of the inadequate theology of his day Darwin offers what may be facetiously, yet seriously, called the yuck and muck worldview. Darwin must murder the beautiful, glorified, and holy view of God because it does not fit into the more observable, scientific, and repulsive view of life as represented by nature. This statement at first seems ludicrous, but Darwin's objections are blatantly clear as Desmond and Moore demonstrate: "What virtue could an Anglican Creationist be expected to find in parasitic polyandry among barnacles? If true, there was little in it to praise God for. Nature could hardly have moved

[73] Ibid., 219.

further from 'Time's Noblest Offspring,' Man.'"[74] When Darwin combines the crudeness of biology with the environmental filth stemming from the birth pangs of British capitalism, he is left with a gruesome if not repulsive image of life. "It [London] 'admits only a wan daylight and casts a funeral pall over all things. In London one draws gloom with every breath; it is in the air; it enters every pore. ... One's head is heavy and aching, one's stomach has trouble functioning, breathing becomes difficult for lack of pure air.'"[75] The slime of biology, the filth of pollution, what more could be added to this increasingly unappealing image of life but human suffering, especially in the form of slavery. "This Dissenting [sic] mood [within Britain, especially in regards to the slave trade] gave Darwin his sanction as he filled his heretical pages. Radical Dissenters were openly discussing mind and pain in nature. Many were adamant that all creation [e.g., "miserable beasts"] was conscious and suffering."[76] Thus biological, ecological, and sociological issues united by the theme of yuck and muck help to seed Darwin's radical new thinking about life and how it functions.

> He had reduced life to its starkest, to its living elements—self-organizing atoms. This sort of flaming science was favoured by street agitators, the people trying to overthrow the undemocratic state. It petrified clerical society; self-sufficiency was tantamount to atheism. With Christianity part of the law of the land, and used to keep the lower orders in check, anything that undermined it was seditious. If living atoms had the power of self-development, the divine influence of [Adam] Sedgwick's God was lost. And since that influence worked through the Church, the chain of command from God down through the priesthood into nature would be snapped. And with that, Sedgwick believed, came the end of civilization.[77]

It may not have been the end of civilization, but Darwin's idea puts an end to civilization as it is known up through the middle of the nineteenth century. In public, the murder Darwin commits against the cherished ideals about God is brutal. There is no possibility of resurrecting the old ideas about God after Darwin goes public with his theory. This may lead him to an apparently

[74] Ibid., 355.
[75] Ibid., 206.
[76] Ibid., 238.
[77] Ibid., 249.

more civilized but, nonetheless, dramatic murder in his private musings, allowing him to hope that maybe, just maybe, a new idea of God is still possible within the worldview he has created.

The qualification *civilized* attempts to assimilate the evidence that suggests Darwin attempts to memorialize certain characteristics and teachings of Christianity that he views as beneficial to humankind. In the process Darwin creates a dichotomous system of thinking in which he maintains that absolutes still exist but are continually guided or influenced by self-evolving forces. The strenuous mental effort to hold together this system ultimately collapses again into the quagmire of the yuck and muck worldview, which he expresses much more virulently in private than he ever does publicly. But whether in public or private, for Darwin one idea has not been fit enough to survive: God.

Initially, pursuing absolutes within the discipline of science seems like a laudable goal; however, further reflection upon the nature of science eventually leads to the conclusion that there can be no absolutes within science because the entire premise of scientific investigation is that change is a necessary fundamental. But the temptation for an unchanging anchor is too great, however, for every scientist soon makes the move of deciphering the absolutes governing the change that seemingly defines reality. In his writing Darwin uses the phrase "the fixed laws of nature" to describe what is absolute; here we see the influence of Charles Lyell's principle of Uniformitarianism. In Darwin's mind the idea of God has died because there is no evidence of him that can be trusted; the only remnant he may have left, if it exists, is the laws of nature. That being said, it is important to remember that Darwin clings to the vacuous belief that these laws have some purpose which awaits to be discovered in the future—teleology. Himmelfarb highlights this characteristic in Darwin's thinking:

> Whether the *Origin* itself was as anti-teleological as has been made out, or whether it seemed so to its readers, will be the subject of a later discussion. What is interesting now is that its inspiration was just this kind of metaphysical, teleological curiosity that recent

> pragmatic and positivist philosophy so deplores. There is no doubt that Darwin's own point of departure was an examination of *absolute origins and absolute finalities*, the ultimate *why*. Nor is it by accident that this was so. Darwin was able to give ultimate answers because he asked ultimate questions.[78]

The ultimate, however, that now occupies the attention of Darwin resides not in the biblical God but in amorphous laws that have the same, continuous influence upon matter throughout time. Consider the following statement in *The Origin of Species*:

> Our ignorance of the laws of variation is profound. Not in one case out of a hundred can we pretend to assign any reason why this or that part has varied. But whenever we have the means of instituting a comparison, the same laws appear to have acted in producing lesser differences between varieties of the same species, and the greater differences between species of the same genus.[79]

The ineffability of God has been replaced by the ineffability of nature's laws which are relentlessly at work to create the variety between and among species. In other words, the natural laws are saturated with an eternal quality. Darwin reasons about his decision to abandon God for natural law:

> During these two years [October 2, 1836 to January 29, 1839] I was led to think much about religion. ... By further reflecting that the clearest evidence would be requisite to make any sane man believe in the miracles by which Christianity is supported,—that the more we know of the fixed laws of nature the more incredible do miracles become,—that the men at that time were ignorant and credulous to a degree almost incomprehensible by us,—that the Gospels cannot be proved to have been written simultaneously with the events,—that they differ in many important details, far too important as it seemed to me to be admitted as the usual inaccuracies of eyewitnesses;—by such reflections as these, which I give not as having the least novelty or value, but as they influenced me, I gradually came to disbelieve in Christianity as a divine revelation.[80]

Still, when applying his reformulated understanding of natural law to the specimens he had collected from the *Beagle* voyage, a process that culminated in his transmutation hypothesis, hints of biblical conceptions regarding species are evident in his attempt to describe and classify.

[78] Himmelfarb, *Darwin and the Darwinian Revolution*, 158.
[79] Charles Darwin, *The Origin of Species*, Great Books of the Western World, No. 49 (Chicago: Encyclopedia Britannica, Inc., 1952), 78.
[80] *Autobiography of Charles Darwin*, 86.

Bowler's comments about this work give the impression that while the new theory of natural selection is continuing to develop in Darwin's thinking in the early 1840s, old epistemological categories remain:

> Darwin's coordination of the process by which the *Beagle* specimens were described and classified was also linked directly to his adoption of the transmutation hypothesis. It was the ornithologist John Gould who made it clear to him that the Galapagos finches were distinct but closely related species and thus precipitated his doubts about creationism. His interaction with Owen on the fossils also bore directly upon his thinking about the relationships between species in time.[81]

Though the vestiges of his Christian thinking often elude the reader, probing deeper reveals the intellectual difficulty Darwin faces in reshaping his conceptual frame of reference. Desmond and Moore explain, "He was pulling away from Cambridge theology: his example suggested that perfection *might* be the serendipitous product of chance."[82] Like revisiting a murder, Darwin repeatedly returns to the scene of his mental crime and tries to cover the evidence with biblical allusions. Eventually, he strives to come to terms with this problem by employing the concept of force.

As the traditional idea of God lies in ruins in the increasingly motley landscape of Darwin's mind, he begins to reformulate his thoughts about absolutes into what he calls *force*; today, Darwin's concept of force has multiplied into a host of forces. He gives no indication as to the origin of this force, nor its destination. In the words of Desmond and Moore:

> There was 'no' limited life-force holding species back. He [Darwin] had broken through [Richard] Owen's barrier. Life had originated only once, then ramified through history, an endless growth, terminal buds dying as others appeared. No revitalizing was necessary, no creative energizing. ... Adaptation—the fit of an organism to its niche—was back on the agenda. If the environment changed gradually, animals adapted, transmutating to keep themselves synchronized; if they failed to keep pace, extinction was inevitable.[83]

In other words, Darwin identifies the absolute in terms of the relationship between an organism

[81] Bowler, *The Man and His Influence*, 76.
[82] Desmond and Moore, *Life of a Tormented Evolutionist*, 241.
[83] Ibid., 231.

and its environment. When harmony defines this relationship, life thrives. However, when the environment initiates change, the organism must respond accordingly or face extinction. Elsewhere, Darwin acknowledges that this force is not only one-sided (the environment always acting upon the organism), but an organism also constantly modifies its surroundings. Fitting into the reciprocity in this time-tested relationship becomes every organism's goal, even humankind's. Especially important for people in this regard is the balance achieved in matters related to mind and morality.

> By subjecting mind and morality to self-evolving forces, he threatened the ideals so cherished by the geological gentry: human dignity and accountability. If man was only a better sort of brute, where was his spiritual dignity, and if he had self-evolved, what of his moral accountability to God, no more his creator? Since moral accountability, with eternal punishment and rewards, was part of the fabric binding society, that too would crash.[84]

Fundamental to the radical nature of Darwin's initial thinking about this self-evolving life-force is that it is not progressive. Desmond and Moore continue, "His reflections became startling. Because life followed the vagaries of climate, there was no yardstick to measure progress."[85] Eventually, Darwin would sculpt more precisely this force, calling it selection. In doing so, he co-opts the principle of selection used by animal breeders and attributes it to the self-evolving life-force; here, the idea of competition in economics is also important. Life is reduced to the absolute of selecting those features that make an organism more fit in its environment. Any person with a basic 20th century biological education (or an economic one) recognizes this as the principle of adaptation; however, what is important to recognize is the underlying religious premise that absolutes exist in life. In his biological scheme of life Darwin identifies these absolutes with the selective forces active in nature. In essence, he *transmutes* the traditional idea of God into a strictly biological, selective force that continually reshapes the world. Because of

[84] Ibid., 239.
[85] Ibid., 231.

its ever-changing nature, this force defies any sort of definition or characterization. Darwin, and strict adherents to his thinking, are left only to observe and ponder its bizarre effects within the biological world. His religious pursuit of absolutes culminates in a view of life preoccupied and fascinated with its contingencies. Although Darwin tries to cover his assault with religion, his crass biological conclusions become blatantly exposed.

Darwin's fascination with the yuck and muck of creation has been noted previously in the section discussing the public nature of his intended, mental agenda. In his private thoughts the theological quagmire of biological grotesqueness becomes even more suffocating. This point is not trivial in Darwin's mind for with each repulsive discovery of nature, his faith in the awe-inspiring God as portrayed in the Bible shrinks under the perplexing question of why would God create life in this way. A few observations from various Darwin scholars illustrate the point well.

> To conclude a sketch of his theory, in 1842 Darwin wrote: 'It is derogatory that the Creator of countless systems of the world should have created each of the myriads of creeping parasites and slimy worms which have swarmed each day of life on land and water on this one globe. ... From death, famine, rapine, and the concealed war of nature we can see that the highest good, which we can conceive, the creation of the higher animals has directly come. ... The existence of such [evolutionary] laws should exalt our notion of the power of the omniscient Creator.'[86]

> Here he [Darwin] was, scratching breathlessly: 'If we choose to let conjecture run wild then animals our fellow brethren in pain, disease, & suffering & famine; our slaves in the most laborious work, our companion in our amusements. They may partake, from our origin in one common ancestor we may all be netted together.' The dangerous point was that man's mind had emerged from the worm's in the first place. This was the crux.[87]

> What a book a devil's chaplain might write on the clumsy, wasteful, blundering low and horribly cruel works of nature.[88]

> His new theory of divergence created a chilling image. Nature became a seething slum, with everyone scrambling to get out, rushing to break from the rat-pack. Only the few survived, bettering themselves by creating new dynasties. Most remained trapped on the

[86] Phipps, *Darwin's Religious Odyssey*, 44.
[87] Desmond and Moore, *Life of a Tormented Evolutionist*, 238-239.
[88] Ibid., 449 and Greene, *The Death of Adam*, 246.

> breadline, destined to struggle futilely, neighbours elbowing one another aside to get ahead, the weak trampled underfoot. Sacrifice and waste were endemic, indeed necessary. Nature was abortive, squandering, profligate. Her failures were discarded like the breeder's runts to rot on some domestic dump. In Victorian poor-law society, the image did not seem unduly sombre. ... Nature's depravity cried out against a noble Providence. ... How different from Archdeacon Paley's 'happy' nature in his *Natural Theology*.[89]

All these examples convincingly demonstrate that Darwin's main mental contention with the biblical portrayal of God stems mostly from the yuck and muck of the world which he observes on his *Beagle* voyage and continues to witness every day of his life thereafter. It is no small problem, as the Christian church has so casually overlooked such natural oddities in the name of grander theological pursuits like grace, forgiveness, good works, salvation, etc. Yet for Darwin and those who inhabit the ideological world which he has redefined, the objection of yuck and muck is legitimate because it stares them in the face every day in the laboratory and in nature. Thus Darwin's objection is based on more than a materialistic philosophy. His objection also includes the nature of that material. Darwin objects to the biblical concept of God not because the material world is all that is capable of being truly known; rather, the very character of those material elements seems to defy the existence of the Holy God which the Bible conveys. Indeed, Darwin calls into question the standard depictions of God in his day and ours; for him the holy God in Holy Scripture cannot complement well the muddled picture of life as seen through biology. With all the biological advancements at the microscopic level since the days of Darwin, his objection becomes even more poignant. One can only imagine his objection to the idea of God if he were aware of flesh-eating bacteria. To dismiss the yuck and muck objection of the biological worldview is to dismiss those objecting: physicians, geneticists, chemists, molecular biologists, developmental biologists, physicists, etc. Sadly, the dismissal occurs far too frequently among theologians and Christian philosophers. In such a suspicious environment the

[89] Desmond and Moore, *Life of a Tormented Evolutionist*, 449.

cavernous divide between theology and science should be expected.

A new approach is needed to harness the two real-life perspectives of religion and science in a way that comprehensively embraces life in its entirety, one that expands the use and application of traditional, Christian theology to make sense of the yuck and muck biological worldview. Darwin tries looking for one and ultimately fails. Since Darwin's death in 1882, many others have also tried and apparently failed, since the divide between science and religion continues to widen. Exactly 145 years after the first publication of the *Origin*, it is time for the Christian church to play a new game, one which brings to the table its own skills rather than attempting to employ those of other players, namely science. To prepare adequately for such an endeavor, though, it is helpful to review the construction of reality Darwin creates in his two most famous works, *The Origin of Species* and *The Descent of Man.*

To say that in the *Origin* Darwin sets the world in motion teeters toward overstatement; however, by endowing nature with power as the source of this movement that leads to a physical transformation of one species into the next, Darwin uniquely identifies himself in a long line of evolutionary thinkers. As Bowler and Lovejoy note, Darwin's idea has several connected antecedents.[90] Lovejoy writes:

> For one of the principal happenings in eighteenth-century thought was the temporalizing of the Chain of Being. The *plenum formarum* came to be conceived by some, not as the inventory but as the program of nature, which is being carried out gradually and exceedingly slowly in the cosmic history. While all the possibles demand realization, they are not accorded it all at once. Some have attained it in the past and have apparently since lost it; many are embodied in the kind of creatures which now exist; doubtless infinitely many more are destined to receive the gift of actual existence in the ages that are to come.[91]

[90] In this regard Lovejoy surveys the intellectual premises of the idea of evolution in *The Great Chain of Being.* Peter Bowler, however, in *Evolution: History of An Idea* (Berkeley: University of California Press, 1984) traces how the concept of evolution is developed from biological observation, beginning with Buffon and Lamarck. Whereas, Lovejoy looks at the underpinnings of evolutionary thinking, Bowler is more interested in the story of the men who do such thinking.

[91] Lovejoy, *The Great Chain of Being,* 244.

Darwin's historical role is that he supplies the "details" of the program, showing how it works. It is important to recall, however, that Darwin, though certainly well read in philosophy in his free time, is less philosopher and more natural historian. His greatest skill is observing the peculiarities of nature, a skill fostered by all his rebellious jaunts through nature as a young English lad. Based on these observations, Darwin conceives of nature in a way somewhat obvious to most twenty-first century readers but dramatically different for most people living in his day. In his view, nature is understood as a series of horizontal planes intersecting a vertical axis. Each horizontal plane is an instant or snapshot in nature. Plotted on a three dimensional graph with X, Y, and Z coordinates, the horizontal plane is defined as the intersection between the X and Z axes. From his voyage on HMS *Beagle* Darwin ties together these various images of life within this plane into a larger continuum. Important to remember for this horizontal continuum is that time remains constant but location changes. Thus, even though his clockwise jaunt around South America takes several years, Darwin imagines the landscape from Brazil to Chile in a moment. The result is a series of transitions, each blending from what came before and into what follows. Darwin calls this series of transitions geographical distribution. In an age of history when airplanes can demonstrate such distribution within a single flight, the idea of geographical distribution seems simplistic. However, for Darwin and his contemporaries, when ships dependent on the variable currents of the ocean are really the only means to observe such phenomena, the realization is dramatic. This is especially true for most people who live in the nineteenth century, who never even have the opportunity to step onto a ship. Using his keen observational skills, Darwin puts the world in motion, recognizing geographical distribution in biology and geology. In so doing, he continues to prepare for his "checkmate" move. It would be a move only Darwin would see.

The geographical distribution in landscape soon leads him to an even more earth-

shakening observation. Not only does Darwin see a continuum in the geographical landscape, but he also envisions an organic continuum in the biological landscape. More specifically, Darwin begins to notice varieties in supposedly definite species. As in geographical distribution, the boundaries that have been taken for granted for so long gradually merge into each other. Thus *species* becomes an ambiguous term, attempting to recognize distinctions between living beings even though many similarities may exist between them. Listen to Darwin speak about the difficulty in the concept of species:

> The forms which possess in some considerable degree the character of species, but which are so closely similar to other forms, or are so closely linked to them by intermediate gradations, that naturalists do not like to rank them as distinct species, are in several respects the most important for us. We have every reason to believe that many of these doubtful and closely allied forms have permanently retained their characters for a long time; for as long, as far as we know, as have good and true species. Practically, when a naturalist can unite by means of intermediate links any two forms, he treats the one as a variety of the other; ranking the most common, but sometimes the one first described, as the species, and the other as the variety. But cases of great difficulty, which I will not here enumerate, sometimes arise in deciding whether or not to rank one form as a variety of another, even when they are closely connected by intermediate links; nor will the commonly-assumed hybrid nature of the intermediate forms always remove the difficulty. In very many cases, however, one form is ranked as a variety of another, not because the intermediate links have actually been found, but because analogy leads the observer to suppose either that they do now somewhere exist, or may formerly have existed; and here a wide door for the entry of doubt and conjecture is opened.[92]

To sort through this problem, Darwin posits laws of variation. Two foundational laws govern variation, Darwin believes. The first is the law of use/disuse:

> From the facts alluded to in the first chapter, I think there can be no doubt that use in our domestic animals has strengthened and enlarged certain parts, and disuse diminished them; and that such modifications are inherited. Under free nature, we have no standard of comparison, by which to judge of the effects of long-continued use or disuse, for we know not the parent-forms; but many animals possess structures which can be best explained by the effects of disuse.[93]

[92] Darwin, *Origin of Species*, 26.
[93] Ibid., 66.

The second is the law of adaptation; a better term for what Darwin has in mind is *environmental pressure*. Within any particular setting the environment exerts pressure that induces change in the organisms living there. He writes, "Hence adaptation to any special climate may be looked at as a quality readily grafted on an innate wide flexibility of constitution, common to most animals."[94] Thus, the environmental conditions surrounding a species influence any necessary organic change that may increase survival. Admittedly, Darwin's argument is circular: the environment determines the usefulness of a species and whether an organism succeeds in its environment depends on its usefulness. Darwin likely would say, "Precisely!" His goal is to perfectly correlate biological distribution with geographical distribution. A change in geographical landscape will correspond to change in biology. The change is infinitely subtle, however, making the general idea of distribution difficult to observe at any given moment in time; Darwin confronts this difficulty when he considers the vertical dimension of time. Before considering time, though, Darwin's use of the concept of competition in the horizontal plane deserves mentioning.

> Taking his cue from Thomas Malthus, Darwin writes regarding competition:
>
> > Hence, as more individuals are produced than can possibly survive, there must in every case be a struggle for existence, either one individual with another of the same species, or with the individuals of distinct species, or with the physical conditions of life. It is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdoms; for in this case there can be no artificial increase of food, and no prudential restraint from marriage. Although some species may be now increasing, more or less rapidly, in numbers, all cannot do so, for the world would not hold them.[95]

Darwin's conception of competition thus depends on a closed system in which no alleviating inputs are possible. Space is limited. Population growth always increases. The rational conclusion is that competition exists and exerts differentiating pressure within the horizontal plane of space and time. Those who are able to compete best based on their more conducive

[94] Ibid., 69.
[95] Ibid., 33.

variety in a particular environment have a greater chance of thriving, and therefore, surviving. Here, the free-market, economic overtones blatantly appear. Benevolence of any kind is excluded. However, this is to be expected, especially with Darwin's fixated worldview that sees only the yuck and muck of life. Confined to this limited view of life, he begins looking for evidence to substantiate it. His tunnel vision eliminates lofty thoughts and channels him directly "to the ground," that is, to observations of nature where he imagines millions of years of this way of life. He does not arrive here unaided. His help comes from his longtime friend and mentor, Charles Lyell. Lyell gives Darwin the vertical dimension, the Y axis, to his theory. It is the last essential move Darwin needs to make in order to exclaim, "Checkmate!"

Playing the perfect game of chess not only demands a mastery of the rules of the game but also requires the artistic use of those rules to envision the necessary moves before play actually begins. Becoming a master involves the integration of skills, experiences, and imagination. When Darwin recalls in 1837 his first application of Charles Lyell's *Principles of Geology* at St. Jago of the Cape Verde Archipelago on January 16, 1832, he finally begins to imagine the impossible. Darwin recalls, "I am proud to remember that the first place, namely St. Jago, in the Cape Verde Archipelago, which I geologised, convinced me of the infinite superiority of Lyell's views over those advocated in any other work known to me."[96] He not only is the scientific naturalist, but he is an excellent artist, seeing natural history like no one else had previously. By employing Lyell's thesis that the earth must be vastly older than traditionally assumed (early estimates of Lyell included an age greater than 100,000 years), Darwin creates a vertical dimension in history that only becomes known by peeling back each horizontal plane that overlays the previous one. The geological column/record provides the Y-axis to Darwin's view of life, completing the three dimensional structure of biological space and time. Desmond

[96] *Autobiography of Charles Darwin*, 101.

and Moore elaborate on the St. Jago realization:

> Lyell's *Principles of Geology* could help here, even though Henslow [a conservative and catastrophist] had said to beware. Lyell pictured a world constantly and slowly changing, with the past no more violent than the present—so that today's climates, volcanic activity, and earth movements are all we need to explain the ancient world. Crustal movements balance one another: land rises in one area as it falls in another, not cataclysmically, as Sedgwick thought, but gradually. Was Lyell right? Thousands of miles from Cambridge, Darwin thought for himself. It was impossible that the sea itself had fallen; a lower Atlantic was unimaginable in St [sic] Jago's volcanic lifetime. So had the island risen slowly or abruptly? He inspected the oyster band again. It was practically intact, showing no sight of catastrophic violence. And it varied in height above sea-level along its length, suggesting secondary subsidence in places. St Jago, at least, seemed to prove Lyell's point. Darwin started to view the world as slowly and gradually changing.[97]

For Darwin even man is not an exception. In the "Introduction" to *The Descent of Man* he writes, "The high antiquity of man has recently been demonstrated by the labours of a host of eminent men. ... I shall, therefore, take this conclusion for granted, and may refer my readers to the admirable treatises of Sir Charles Lyell."[98] Darwin eventually coins the phrase *natural selection* to describe his checkmate move that views the biological world in a constant, three-dimensional flux. Conceived as a dynamic system of horizontal and vertical pressures acting upon organic species, natural selection becomes the dynamic creative force within the world, giving rise even to humankind.

Although many people before Darwin toyed with the idea of evolution, his unique concept of natural selection based on a three-dimensional view of biological life in constant flux affords him *Life* magazine's recognition as the ninth most important person in the last millennium.[99] Historically, one may legitimately wonder if he would be recognized at all if he had never applied the theory of natural selection to humankind. That he does reveals his intellectual

[97] Desmond and Moore, *Life of a Tormented Evolutionist*, 117-118.
[98] Charles Darwin, *The Descent of Man and Selection in Relation to Sex*, Great Books of the Western World, ed. Robert Maynard Hutchins (Chicago: Encyclopedia Britannica, Inc., 1952), 253.
[99] Internet: (http://www.life.com/Life/millennium/people/01.html).

courage, especially in a culture that continued on the whole to view man as the epitome of God's creation. That being said, however, it is important to remember that great courage does not guarantee great results. For the result of Darwin's application of the theory of natural selection to humankind in his 1871 work *Descent of Man* deemphasizes the unique quality as well as the special position men and women occupy in the cosmos. Instead, he proposes that because of its similarities with other animals, humankind is merely a more sophisticated form that has resulted biologically from the pressures of natural selection. To be sure, Darwin tries to maintain some respectability for humankind by recognizing its unique mental capacity and its sense of morality; however, this recognition pales in comparison to his detailed emphasis on physical homologies. These homologies eventually ensnare him with the idea that humankind is simply the most dominant animal:

> Man in the rude state in which he now exists is the most dominant animal that has ever appeared on this earth. He has spread more widely than any other highly organised form: and all others had yielded before him. He manifestly owes this immense superiority to his intellectual faculties, to his social habits, which lead him to aid and defend his fellows, and to his corporeal structure. The supreme importance of these characteristics has been proved by the final arbitrament of the battle for life.[100]

Although Darwin concludes that man is the dominant animal, he arrives at this conclusion in a fundamentally different way than biblical anthropology does in its traditional teaching . Darwin's man fights his way to the top, triumphing in the normal battle for life. In this battle anything goes, in the name of survival. In contrast, the "man" in the Biblical account of creation man is given his unique position in creation and commanded to exercise responsible authority over creation. In Darwin's conception of humankind within a three-dimensional world continually in flux, humankind struggles in the yuck and muck like every other creeping creature. Any attempt to invoke Darwin in a different, more respectable perception of human life blatantly misuses the central idea of natural selection as applied to humankind. While making his

[100] Darwin, *Descent of Man*, 278.

checkmate move, Darwin finds himself descending into the very yuck and muck that initially precipitates his thinking about man's place in nature. If we recognize that he has tunnel vision as a result of this perspective, his comments regarding God and religion may receive a more sympathetic treatment from us.

Just as Darwin insists throughout the years in which he is developing his theory of natural selection that any comprehensive view of life must consider its yuck and muck details, the same approach is requisite when assessing Darwin's religious views. Although William Phipps recently has attempted to do this, his conclusions deviate too radically from an orthodox Christian perspective to be helpful.[101] Phipps wants to include Darwin's views on religion as part of the ever-evolving nature of man's thoughts about God. Historically, Phipps falls right in line with Darwin because both begin with an anthropocentric approach to God, asking what humankind thinks about God based on rational inferences. Reversing this approach is the goal of historical theology. The question becomes, "What does God's Word say about the latest theory man has contrived about him?" More specifically, historical theology seeks to understand the way in which God's Word is interpreted within a particular historical context and to compare that understanding with the confessional witness of the Christian church. Whereas Phipps assumes an evolving standard that changes depending on a historical context, the following analysis of Darwin's religious views maintains a biblical standard that deliberately includes the confessional witness of the Christian church while remaining cognizant of the many varied religious influences during Darwin's life. The intent of this approach is threefold. First, it avoids

[101] Phipps writes, "Darwin's theory, along with other scientific theories, can lessen self-centeredness and thereby focus the faith of religious persons outwardly. Accepting that they live on a minor planet that revolves about a minor star, they become aware that their particular species and religion may not have a most favored status with the Orderer of nature. Religion and as well as science can advance by the suppression of human arrogance" (194). Phipps's label of self-centeredness is a frequent critique of Biblical anthropology; however, the natural selection view of humankind may also be conversely critiqued as irresponsible, failing to recognize the God-given stewardship given to the man and woman in the Biblical account of creation. Whereas, the theory of evolution by natural selection relegates humankind to being one of many animals and therefore not accountable to anything other than the laws of nature, the Biblical witness in the book of Genesis places humankind in a position of stewardship in God's creation.

what may be called "Darwin bashing," the fruitless tactic employed by many within Christendom to make Darwin appear the sole cause for the problems facing the Christian church today. Together with belligerent rhetoric, "Darwin bashing" often comes packaged with the current Intelligent Design movement. It pokes fun at Darwin for not realizing that every watch has a watchmaker. This approach has failed not only in the present time but for centuries, as history demonstrates. Second, the following approach attempts to show how the struggle Darwin faces in losing his belief in God is a realistic possibility for any Christian living in today's world and, therefore, should restrain any hasty demonizing of him. Finally, this approach works with the understanding that Darwin's supposedly biological theory of natural selection is really a theodicy based on inadequate theological presuppositions. Darwin makes his "checkmate" move according to his biological/anthropological understanding of life as best he can, but it is not the best move. Had Darwin been equipped with a more substantive theological framework than that which fails to comprehend the complexity of the yuck and muck of the world, it is quite possible that he and the people who now endure his legacy would view the world much differently than they now do.

Most "Darwin bashing" begins by attacking his faulty or incomplete science, leaving the impression that Darwin arrives at his conclusions within a metaphysical vacuum. Nothing could be further from the truth, as Darwin himself admits that his initial ponderings which eventually lead to the theory of natural selection begin emanating from religious doubts and objections. Like most, if not all, matriculates of Cambridge University in the mid-nineteenth century, Darwin becomes heavily steeped in the historico-critical method of biblical exegesis, ultimately resulting in doubt regarding certain passages of scripture and leading him to object even more sternly based on biological observations. Although claiming to be devoutly orthodox at the initial sailing of the *Beagle* in December of 1831, it is likely he is only more orthodox when he compares himself to

his rowdy shipmates. He even expresses doubt regarding the inerrancy of Scripture while still at Cambridge; his position is likely the norm there, even though it was still expected at the time to consent verbally to the ancient teaching. Darwin recounts:

> Whilst on board the *Beagle* I was quite orthodox, and I remember being heartily laughed at by several of the officers (though themselves orthodox) for quoting the Bible as an unanswerable authority on some point of morality. I suppose it was the novelty of the argument that amused them. But I had gradually come, by this time, to see that the Old Testament from its manifestly false history of the world, with the Tower of Babel, the rainbow as a sign, etc., etc., and from its attributing to God the feelings of a revengeful tyrant, was no more to be trusted than the sacred books of the Hindoos [sic], or beliefs of any barbarian.[102]

As one would expect, doubt concerning the validity of Scripture soon spills over into the teachings derived from the same. Darwin especially seethes over the church's teaching about hell:

> Thus disbelief crept over me at a very slow rate, but was at last complete. The rate was so slow that I felt no distress, and have never since doubted even for a single second that my conclusion was correct. I can indeed hardly see how anyone ought to wish Christianity to be true; for if so the plain language of the text seems to show that the men who do not believe, and this would include my Father, Brother and almost all my best friends, will be everlastingly punished. And this is a damnable doctrine.[103]

Aside from specific issues related to the Biblical text, Darwin expresses experiential doubt during his voyage on the *Beagle*. What strikes him the most is the "savage man" and his lifestyle. Darwin's is the stereotypical case of the privileged boy meeting the underprivileged, dismayed because his reading of Scripture has been filtered through the lens of the civilized British Empire. In turn what Darwin says about natives of South America appalls a twenty-first century reader inclined to be generous in this politically correct era:

> There is no evidence that man was aboriginally endowed with the ennobling belief in the existence of an Omnipotent God. On the contrary there is ample evidence, derived not from hasty travelers, but from men who have long resided with savages, that numerous races have existed, and still exist, who have no idea of one or more gods, and who have no

[102] *Autobiography of Charles Darwin*, 85.
[103] Ibid., 87.

words in their languages to express such an idea.[104]

Increasingly, Darwin adopts an internal hatred for religion and public reticence to even speak about life's most fundamental beliefs. Himmelfarb notes, "His cousin, Julia Wedgwood, remarked upon the curious fact that his antagonism to religion increased, 'while all the apparent reasons for it were vanishing quantities.' In the same proportion, she observed, as the churches approached him in docile and even eager acceptance of his teachings, so he receded from them."[105] These thoughts and feelings eventually coalesce into a sense of ambivalence concerning the relationship between religion and science: "When the editor of an American rationalist journal solicited his views for publication, he declined, pleading ill health and the lack of time for sustained thought on the subject of 'religion in relation to science, or on morals in relation to society.'"[106] Indeed, many biographers of Darwin seem to interpret his frequent illnesses in a psychosomatic light. By the time he writes his *Autobiography* in 1876, perhaps it is this struggle which leads him to write almost in a tragic tone:

> It may be truly said that I am like a man who has become colour-blind, and the universal belief by men of the existence of redness makes my present loss of perception of not the least value as evidence.[107]

Such observations by others and self-reflections by Darwin clearly call for a more sympathetic treatment of Darwin by those who disagree with his theory. His theory is conceived out of an ever-present angst that fluctuates throughout his life. It is an angst that most Christians would acknowledge themselves at some point in life if they were more humble in evaluating Darwin. Such humility is dramatically lacking among many Christians and has resulted in them playing the wrong game when trying to make sense of the evolution controversy. Ultimately, this has

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[104] Darwin, *Descent of Man*, 302.
[105] Himmelfarb, *Darwin and the Darwinian Revolution*, 386. Regarding his reticence, she cites, "To his son George, then at Cambridge, he confessed his doubts: 'It is a fearfully difficult moral problem about the speaking out on religion, and, I have never been able to make up my mind'" (387).
[106] Ibid., 383.
[107] *Autobiography of Charles Darwin*, 91.

allowed Darwin's biological objections to Christianity to reign supreme.

The faith that begins to teeter back and forth under the influences of religious skepticism and doubt eventually crashes dramatically because Darwin reaches the point where all phenomena in life must have a biological explanation. Darwin eventually comes to understand the interconnectedness of the biological world not in the sense of coming from the God who has created everything, but in terms of biological patterns shared between the lowliest of organisms and the highest, namely humankind. Even religious devotion, once conceived as a uniquely human characteristic, he explains on primal biological grounds:

> The feeling of religious devotion is a highly complex one, consisting of love, complete submission to an exalted and mysterious superior, a strong sense of dependence, fear, reverence, gratitude, hope for the future, and perhaps other elements. No being could experience so complex an emotion until advanced in his intellectual and moral faculties to at least a moderately high level. Nevertheless, we see some distant approach to this state of mind in the deep love of a dog for his master, associated with complete submission, some fear, and perhaps other feelings. The behaviour of a dog when returning to his master after an absence, and as I may add, of a monkey to his beloved keeper, is widely different from that towards their fellows.[108]

Such feelings become advantageous over time, as humans, like other animals, develop them to further their survival. Greene describes:

> As an anthropologist, Darwin believes that religion had been born in the fears and misconceptions of primitive men. 'The idea of a universal and beneficent Creator does not seem to arise in the mind of man, until he has been elevated by long-continued culture,' he declared. Once this idea had arisen, he conceded, it became 'a potent influence on the advance of morality.' Yet the latest advances in science, to which Darwin himself had contributed mightily, seemed to undermine belief in such a Creator. In discovering the secret of man's lowly origin Darwin had lost confidence in the power of human reason and intuition to penetrate the riddle of the universe. He had, he confessed, an 'inward conviction' that the universe was not the result of mere chance. 'But then,' he added, 'with me the horrid doubt always arises whether the convictions of man's mind, which has been developed from the mind of the lower animals, are of any value or at all trustworthy. Would any one trust in the convictions of a monkey's mind, if there are any convictions in such a mind?'[109]

[108] Darwin, *Descent of Man*, 303.
[109] Greene, *The Death of Adam*, 329-330.

Once Darwin concludes that humankind is not unique in any way compared to other animals but is integrally similar because of the primordial need to survive, he justifies the problem of suffering by making it an essential component in his biological worldview. In this way his emphasis on detached observation of the mundane may be characterized as chilling if not macabre. He blatantly concludes that suffering is a necessary component in the process of natural selection. Coldly, he writes in his *Autobiography*:

> 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 a God who could create the universe, is to our finite 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 sufferings of millions of 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; whereas, as just remarked, the presence of much suffering agrees well with the view that all organic beings have been developed through variation and natural selection.[110]

By replacing God with the concept of natural selection to account for the presence of suffering in the world, Darwin finally achieves a one-sided reconciliation in his mind that fails to deal realistically and responsibly with the complexities of life on this side of heaven. Ironically, the battle-torn arena in which natural selection works gives Darwin peace because it is more feasible to deny God in this setting than it is to be reconciled with him.

By reducing every aspect of human life into the biological paradigm of natural selection, Darwin finally can be honest with himself: "Therefore I cannot see that such inward convictions [i.e., believing in God] and feelings are of any weight as evidence of what really exists."[111] Religious doubts and biological speculation form a confluence in Darwin's mind and heart that leaves him apathetically disconnected from those aspects of life that people cherish most: love,

[110] *Autobiography of Charles Darwin,* 90.
[111] Ibid., 91.

meaning, security, family, friendship, etc. At the end of this reduction process in natural selection, Darwin arrives at the abyss of his own personal descent. When he is finally buried in Westminster Abbey on April 26, 1882, one senses an uneasy ambivalence among the onlookers that mirrors the triumph and despair in Darwin's life. His unleashing of a new worldview creates excitement throughout England and much of the western world, but it is excitement amidst the yuck and muck of life. Darwin, indeed, helps to transform the way people understand the world; however, the lasting image does not inspire life but demeans it. Still unsure of how to proceed from this standpoint, society has continued to wrestle with the implications of Darwin's ideas. Perhaps theology may help.

Tinkering with the doctrine of creation as given in the biblical witness unleashes a whole host of problems in the process of constructing a worldview. Darwin not only tinkers with the doctrine, he smashes it. Misguided by a confluence of religious doubt and biological speculation, Darwin concludes his life in a way that should be expected. He remarks, "Nothing is more remarkable than the spread of skepticism or rationalism during the latter half of my life."[112] Remarkable, indeed, but also tragic, for Darwin is an excellent example—almost a stereotype—in an age of disbelief, an age that begins many years before him and continues to this day. Whether this age is described as a vestige of modernism or as a seed of postmodernism, both of which are descendants of the Enlightenment, Charles Darwin plays a fundamental role in its transformation. Several biographical attempts have been made and continue to be made regarding this role. Few, with the recent exception of William Phipps and the earlier treatment of Frank Brown, have attempted to understand comprehensively the theological framework of Darwin which plays a vital role in the formation of his ideas.[113] Because his ideas have influenced essentially every

[112] Ibid., 95.

[113] See Phipps, but also extremely important is the monograph of Frank Burch Brown, *The Evolution of Darwin's Religious Views*, Special Studies Series, Number 10. (Macon: Mercer University Press, 1986). Brown gives more of an historical account while Phipps seems to have a defense or an apology as his goal.

aspect of the contemporary worldview, elucidating their theological presuppositions proves helpful in making sense of Darwin without bashing him.

Within the space of about one page in his *Autobiography* Darwin struggles to comprehend himself. First he writes, "When thus reflecting I feel compelled to look to a First Cause having an intelligent mind in some degree analogous to that of man; and I deserve to be called a Theist."[114] Turn the page and he continues, "The mystery of the beginning of all things is insoluble by us; and I for one must be content to remain an Agnostic [a term coined by his friend and ardent supporter, Thomas Huxley]."[115] Which is he: theist or agnostic? Historically, it is difficult to decide. Perhaps a better description is *troubled.* He is clearly not theistic in the traditional sense of the term; neither, though, does he ardently insist on the inability to know God. Instead, Darwin recognizes that Something/Someone (God, in traditional Christian terms) must be responsible for life as we know it; yet the way in which this God works does not make sense. Darwin's is a first cause argument but not in a philosophical sense; instead, his latent and confused conviction that God must have initiated life stems from his unshakable love for it. His insistent and persistent objection of the yuck and muck is really a guise for covering his perplexity that God would create something as bizarre and innovative as a polyandric, parasitic barnacle. That wonder arises from what is bizarre and innovative should trigger theological sparks among Christians, especially those who identify themselves as Lutheran.

Bizarre and innovative—Martin Luther uses similar ideas to describe the work of God the Father in and through his Son Jesus Christ on the cross of Calvary. No one in his rational mind would imagine that the God who creates this wondrously beautiful cosmos would choose to reveal himself to that cosmos on a cross. The Apostle Paul's familiar assertion reminds us, "For the message of the cross is foolishness to those who are perishing, but to us who are being saved

[114] *Autobiography of Charles Darwin*, 93.
[115] Ibid., 94.

it is the power of God."[116] Thus it becomes clear that from a theological perspective Darwin's struggle is *a* reflection of *the* struggle that has echoed throughout time since Jesus died. Why would God do it this way? Why would he choose to reconcile the cosmos unto himself through the death of his beloved Son? Why would he create barnacles? To the limited mind of a human creature the questions have no end.

[116] 1 Cor. 1:18 NRSV.

PART III

CHAPTER 4

DARWIN'S CHECKMATE—THE WELTANSCHAUUNG OF EVOLUTION

It seems clear on one hand that the Christian church has played the wrong game in responding to the theory of evolution. That is so because even as the church was willing to play, Darwin offered plenty of reasons not to get involved. His descent in terms of familial influence and religious angst has provided a historical reorientation to the ongoing debate regarding the relationship between evolution and Christianity. The result clearly shows that Darwin's theory of natural selection is not purely "scientific." Rather, like all ideas, Darwin posits the theory of evolution by means of natural selection within a specific personal context that is also influenced by his sociological surroundings. Darwin himself descends with qualifications. His ideas have been *naturally selected* (by him!) as a definitive way to understand the processes of life, biologically and in almost every other discipline as well. They have helped to shape a dominant worldview that is less provable scientifically but convincing nonetheless. Many supporters of Darwin argue against this, maintaining that because his theory is so scientifically sound, it must be true. For them the theory of evolution by natural selection best explains the available scientific evidence and approaches more closely the true processes undergirding life in its present form. They have little concern for the historical derivation of the idea. Still, whether his ideas result from a historical process long in the making or represent a unique and definitive turn in the course of western culture is hotly contested by many within the "Darwin industry."

Less controversial is the recognition that he has significantly altered the way people since the late nineteenth century understand life. In many ways he has become the popular

representative of the school of thought which sees history as a dynamic process, unfolding in no particular progressive direction. Because he explains this process in naturalistic, biological, and even simplistic terms with which people may identify because of their life experiences, he is often invoked as this school's spokesman. People seem to resonate better with his commonplace discussions about the yuck and muck biology of barnacles than they do with someone like Hegel, whose dialectical understanding of history often eludes most people. Both men understand history to develop within a specific context which eventually leads to a new, adapted situation; however, what Hegel expresses philosophically, Darwin expresses using examples from life that most people have experienced. Darwin never claims to be more than a naturalist, but in doing so he comes to embody the ideas of his time and expresses them in a way available to all. Thus, mentioning the name Darwin calls up a host of ideas that have resulted in a new worldview which differs dramatically from that described in the Bible. Not only does Darwin descend from a specific social context and into a personal faith crisis, but he also descends to an era today that is a century past his death with its own unique worldview. Understanding this worldview is crucial for the Christian church because it allows for the counter-expression of an alternative worldview that entails a more inclusive apprehending of life that does not relegate its "unnatural" components to the fringe. Before unpacking this alternative worldview, however, a brief historical sketch concerning the development of the concept of worldview proves helpful.

Whereas the term *worldview* has developed over time a comfortable niche within the English language, David Naugle maintains that its inception actually occurs in Immanuel Kant's *The Critique of Pure Reason*, first published in 1790. Kant coins the term *Weltanschauung,* meaning literally "world opinion." Naugle asserts that in Kant's usage of the term it refers simply to the sensory perception of the world around us. Naugle quotes Kant:

> If the human mind is nonetheless to *be able to think* the given infinite without contradiction, it must have within itself a power that is supersensible, whose idea of the

> noumenon cannot be intuited but can yet be regarded as the substrate underlying what is mere appearance, namely, our intuition of the world [Weltanschauung].[117]

Expounding on this citation Naugle further interprets Kant, "Various phrases in the context of this quotation, such as *mere appearance* and the *world of sense*, suggest that for Kant the word *Weltanschauung* means simply the sense perception of the world."[118] Moreover, Naugle also believes that it is Kant's own philosophy which creates the conceptual space for the term. Ultimately, though, it is Kant's student, Schelling, who gives the term its meaning which still governs its use today. Naugle notes:

> As Martin Heidegger points out, however, the meaning of the word changes in Schelling [Friedrich Wilhelm Joseph von Schelling, 1775-1854], who gave it its commonplace meaning as 'a self-realized, productive as well as conscious way of apprehending and interpreting the universe of beings.'[119]

Stated more succinctly, the term *worldview* attempts to make sense of life in all of its various aspects; in this respect, it is to be distinguished from the term *philosophy* based on the criterion of practicality. A philosophy may or may not be practical, but by definition a worldview is. Using this definition, Darwin's conception of evolution by means of natural selection functions not only as a scientific theory to explain the origin of species but also as a worldview. It attempts to make sense of the world by postulating a very down-to-earth scheme which explains the cosmic processes leading to life in its present, observable form. Evolution as a theory gathers the yuck and muck details of life and reformulates them into a nebulous worldview which itself mutates continually depending on the circumstances. In almost tautological fashion, the term evolves according to life's biological evolution. Stuck within this vicious circle of understanding the world, the tantalizing theological question becomes one of why evolution is so appealing as a worldview to so many people, both within and outside of the Christian church.

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[117] David Naugle, *World View: The History of a Concept* (Grand Rapids: W. B. Eerdmans, 2002), 58-59.
[118] Ibid., 59.
[119] Ibid., 60.

In answering this question Naugle points out that the concept of worldview helps not only to make sense of the world philosophically but also practically. He writes, "He [philosopher, Anthony Flew] does make this important point, however, about its [worldview] relationship to philosophy proper: 'Usually the term is applied to a philosophy affecting the practical (as opposed to purely theoretical) attitudes and beliefs of its adherents.'"[120] This nuanced definition fits well with Darwin's obsession with the yuck and muck of the biological portion of the world. For Darwin, what is happening around him, above him, and beneath him matters most. For Darwin, nothing could be more practical than understanding the biological relationship between female and male barnacles, because within this quirky biological relationship, the secrets of life become known. This practicality aspect of the notion of worldview, however, does not diminish the power of the theory of evolution by natural selection. Instead it fortifies the idea of evolution as a worldview by embedding it in the everyday experiences and questions of life. Naugle comments, "World views [sic] themselves, if only tacitly, are a response to the problem of the existence and meaning of the world, and at least sketch a subliminal answer to the ultimate question of existence."[121] For Darwin, the answers relating to the existence and meaning of the world are available through the diligent observation of life in all its peculiar forms. Extrapolating from the mundane, biological quirks within nature, Darwin posits a worldview rooted in practicality. Indeed, this is his worldview's strength, for it seems to make sense. It is also its weakness.

Throughout most of his life Darwin struggles to provide answers to the *why* questions which life so poignantly and frequently poses. His goal, like many others before and after him, is to comprehend life as best he can based on his observations. Once he realizes that observations tend to create more questions of the same type, he resigns himself to answering a different sort of

[120] Ibid., 66.
[121] Ibid., 61.

question. The theory of evolution by natural selection answers for Darwin the *what* question which arises when he intently gazes at the processes active in nature. What explains the subtle but significant differences between organisms inhabiting different environments? What explains the different survival rates of individuals of the same species inhabiting the same environment? What explains the gradual transitions in flora and fauna as geographical conditions change? The answer is the same for each question: natural selection. For Darwin and for those who adhere to his theory, evolution by means of natural selection prevails as the best worldview because it explains *what* happens. By intentionally avoiding the *why* questions in life which relentlessly plague him, Darwin develops a theory that answers the *what* questions that offer a practical worldview which resonates better with the experiences of most people.

Constructing a worldview based on the theory of natural selection poses a significant challenge when basing it on the personal, private thoughts of Darwin. Always reticent to speak in a straightforward manner so as not to offend others and embarrass his respected family, Darwin never systematically lays out the values that underlie his thinking. John Greene reminds us, "Unfortunately for the intellectual historian, Darwin never undertook to expound his worldview systematically."[122] Embedded within this statement is Greene's recognition that both of Darwin's major works, *Origin of Species* and *The Descent of Man*, serve as treatise-like expositions of his worldview. The problem, historically speaking, is that neither work specifically intends to express a worldview, and therefore neither is usually read in that light. However, Greene's major contribution to Darwinian studies is that he convincingly demonstrates that Darwin's theory of evolution is much more than science. Seemingly unaware of the epistemological descent that shapes his worldview, Darwin makes no serious attempt to understand the history of his idea. The one possible exception is his *Autobiography* which by its very nature is a less rigorous analysis of his thought processes and more of a relaxed recollection

[122] John C. Green, *Science, Ideology, and Worldview* (Berkeley: University of California Press, 1981), 136.

of the events and occurrences in his life. What Darwin never does, Greene attempts and succeeds. Much of his success hinges on his relentless focus on the historical understanding of Darwin, avoiding as best he can any ideological slant that he might otherwise bring to the study. Greene does not embark on his study to prove Darwin wrong. Rather, mindful of his own context, he offers a balanced assessment of Darwin, succinctly identifying the component elements that lead to the formulation of the theory of evolution by natural selection, which is itself an ideology. The outcome of his study reminds everyone who basks or burns in the light of Darwin's ideas that his theory is as historically contextualized as are the biblical texts which offer a different worldview. Because Darwin's theory still occupies a dominant role in our current thinking about life, it is difficult to analyze either independently or objectively. Ours is an age that is living within the very history which the theory shapes. Greene's study is the best attempt to understand the storm of worldviews caused by the theory of evolution from within the vantage point of the hurricane's eye.

The first historical component which Greene identifies as contributing to Darwin's thinking is the idea that nature functions within a set of laws. He reminds us that the quest to understand these laws was undertaken by many legendary figures of science and philosophy: Galileo, Descartes, Boyle, Newton, and Ray. Although Newton, Boyle, and Ray were hesitant to explain all things according to nature's law, Descartes's heart was elsewhere: "'Give me extension and movement and I will remake the world.'"[123] Fundamental to this system of thinking is the concept of derivation. Greene says, "To speculative thinkers like Descartes this mechanistic cosmology opened up the exhilarating prospect of deriving the present structures of nature—stars, solar systems, and others—from a previous, more homogenous state of the universal system of matter in motion by the operation of laws in nature."[124] It is the deriving

[123] Ibid., 130.
[124] Ibid., 130, emphasis added.

element here that also exhilarates Darwin. As he contemplates nature, everything, both inorganic and organic matter, must be intrinsically connected. For him that means establishing a reasonable explanation for the connection between flora in England and flora in Argentina. Though geographically these two settings are drastically different, Darwin sees their connectedness through the laws of nature as most important for it reveals a more fundamental, unifying aspect of life. Ultimately, what comes to unify life for Darwin are the component parts that are both shared proportionately among organisms and distributed geographically. The geographically differentiated scale of similarities and differences that characterizes life must function based on a set of laws. Thus, as Green points out, where Newton, Boyle, and Ray see the hand of God creating a world of manifold beauty, Darwin sees the hand of nature slowly chiseling each masterpiece of life.[125] Although many before Darwin see these laws as God's sure fingerprint upon creation, Darwin comprehends them as a collective entity whose origin cannot be determined. Darwin never approaches the "first cause" question because it cannot be observed in the present. For Darwin, the predictability of nature's laws becomes a source of personal and scientific security and replaces God whose ways remain unknown to the finite human creature. To Darwin it makes more sense to establish predictability on observable laws than on a "God" lost in the fog of history. Ironically, though, in his rebellion against a very static view of nature—the kind of static scheme portrayed in the chain of being concept where God is the first link—he conceives of a different system which is just as confining.

Whereas the external natural laws in the Cartesian worldview act upon the world to govern its running, the organic laws within living matter govern the world internally. Greene writes, "The progress in the organic world, said Erasmus Darwin, was 'analogous to the improving excellence observable in every part of creation; such as in the progressive increase of the solid or habitable parts of the earth from water; and in the progressive increase of the wisdom

[125] Ibid., 130.

and happiness of its inhabitants.'"[126] Thus, according to Darwin, this translates into the ability of any organism to adapt to its surroundings. In most cases this means organically evolving from simple to more complex organisms. In Darwin's mind, then, the reciprocity between the external forces of nature and the internal forces of living organisms interact to generate life dynamically as we know and experience it. The productive result of these forces, though, is much too positive for Darwin. His experiences on the *Beagle* journey have demonstrated this. In order to be satisfied with his theory, Darwin must incorporate a component which accounts for the disparity between human cultures and the brutal aspects he notices in the wild. Again, Thomas Malthus provides the missing link.

The powerful influence of Thomas Malthus's economic theory upon Darwin has already been discussed in describing the horizontal dimension to Darwin's theory. What has lasting influence in the broader endeavor of creating a worldview, however, is the Malthusian concept of competition. Greene masterfully describes its importance and deserves to be quoted at length:

> This competitive ethos [in Malthus's theory] was to exert a powerful influence on the thinking of Darwin, [Alfred] Wallace, and [Herbert] Spencer when combined with the idea of organic evolution and with another idea of a science of human progress based on laws analogous to those governing the physical world. Adumbrated in the writings of Rousseau, Turgot, and Condorcet, this concept was clearly articulated in Auguste Comte's project of a social physics—or sociology, as he later called it—which would discover laws and stages of historical development and show 'by what necessary chain of successive transformations the human race, starting from a condition barely superior to that of a society of great apes, has been gradually led up to the present stage of European evolution. ... It was not until the idea of social evolution was linked to the idea of organic evolution in the middle of the century that the concept of nature-history as a single continuum undergoing progressive development emerged as the central theme of evolutionary naturalism.'[127]

Call it competition or natural selection, it does not matter pragmatically, this third component of the worldview as sketched by Greene integrates living beings into the dynamic interaction

[126] Ibid., 131.
[127] Ibid., 132.

between external and organic laws. Evolution as a worldview as Darwin saw it is not purely deterministic, governed only by the external laws of nature and the internal laws of organic beings, but also voluntaristic. Although staunch defenders of Darwin casually dismiss this Lamarckian characteristic in his writings in order to maintain its scientifically acceptable status today, it is too prevalent to ignore from a historical perspective. Herbert Spencer coins the phrase "survival of the fittest" in his theories of social evolution, and it is little wonder that it has also been carried over into Darwin's understanding of biological evolution. The economic pulse of free-market survival capitalism in nineteenth-century England is too pervasive for Darwin to ignore, and even though he tries to distance himself from it in developing his theory, it always finds a way back into his thinking even as it influenced politics of that era. Because it does, it functions as a vital component in his worldview. Natural laws, organic laws, competition: only one component remains in Greene's construction of an evolutionary worldview.

The fourth and final component of Greene's evolutionary worldview is positivism. He describes it thus:

> A final ingredient in the worldview that came to be called Darwinism was the stream of Lockean epistemology and sensationalist psychology that ran strong in the English-speaking world and taught all whom it influenced to reject notions of innate ideas, intuition, and the like and to rely upon sense experience as the source of knowledge. In the nineteenth century this intellectual tendency was powerfully reinforced and given new expression by a growing positivistic faith in the methods of natural science as man's sole means of gaining knowledge of reality.[128]

Again, this fits well with Darwin's fascination with the yuck and muck of the world. From the time as a little boy until just before his death, Darwin remains fascinated with his sensory experience. His descriptions of the smells, sights, and sounds while traipsing along the seashores of Scotland as a young lad demonstrate this. His acuity in observation even as an old man is evident in his tedious descriptions of plant movement as they respond to changing light in the

[128] Ibid., 133.

greenhouse at Down. Barely able to walk at this point in his life, Darwin observes and describes in meticulous detail the life around him. When he combines his observational skills with the law-oriented understanding of nature and the competitive ethos of imperial England, he constructs a worldview that has sent shock waves through western civilization in general and the Christian church specifically. Two responses have resulted. The first has already been discussed in terms of the Christian church trying to play the science game with the nonscientific biblical text. The second response has been to incorporate craftily the evolutionary worldview into the worldview offered by the Bible. An emblematic example of this latter epistemological endeavor comes from the Catholic theologian Herman Häring.[129]

If a large portion of the Christian church has played the wrong game in the name of Creation Science, trying to play chess instead of bridge, a less outspoken portion of the church has essentially capitulated to the idea of evolution by attempting to integrate the Christian message into the evolutionary worldview. Proponents of this approach are called evolutionary theists. Whereas Creation Science attempts to read the present scientific understandings of the world into the Biblical text, evolutionary theism attempts to force the biblical text into the evolutionary understanding of life. Both aim to reconcile the disparate understandings of life that exist between the biblical worldview and that suggested by modern scientific theory. Häring represents a classic example of this less outspoken group. It could be argued that, aside from exhibiting political correctness, the less vocal nature of evolutionary theists tacitly reveals their primary commitment to reason as opposed to revelation. Häring goes so far as to call evolution the "Megatheory of Western Culture." He argues this not on the basis of its influence but on its truthfulness:

> Now is the course of development of the cosmos as life holds the universe together from its origins to its end. This is an earthly material life which develops from itself, supports

[129] Hermann Häring, "The Theory of Evolution as a Megatheory of Western Thought," in *Evolution and Faith,* eds. Bas van Iersel, Christoph Theobald, and Hermann Häring (London: SCM Press, 2000).

> itself and—perhaps in accordance with an unknown plan—keeps unfolding. Life (now used in the singular) becomes the decisive, almost miraculous, basic dynamic of our reality which is always at work. This theory of evolution in the comprehensive sense of the world has quasi-mythical, almost religious features. In this article, which is simply meant to comment on the article which precedes it, I have called the theory of evolution the megatheory of Western culture.[130]

As a megatheory, evolution embraces all other theories. It alone unifies the knowledge of the world. Häring continues, "But the reason for the success of this theory is not only its acceptance by society but its capacity to absorb further theories or to adopt them as expansions of its own scheme."[131] At this point, however, Häring, like other evolutionary theists, distort the true sense of the theory of evolution to accommodate their own use of it. Whereas Darwin understands life in its most brutish sense, evolutionary theists almost deceitfully and willingly overlook the ugly biological facts which compel Darwin in the first place to think beyond the biblical understanding of creation. It is this dubious use of the theory by those who call themselves religious that irks the devout scientist even more. Häring twists the meaning of evolution most when he writes:

> Those who acknowledge it [evolution] put themselves in a context of biological life. The old and banal question whether human beings descended from apes therefore still always gives the same clear signal. The theory of evolution affects the whole of humanity in its self-understanding. Above all, it affects a culture which has attached the utmost significance to reality—something that differentiates us qualitatively from the animal.[132]

Which is it? Are human beings an essential component in the context of biological life or are they qualitatively different from the biological animal? In the end, the attempt of evolutionary theists to read the biblical text into the theory requires the elimination of all fundamental distinctions which function in the construction of a biblical anthropology and cosmology. When Häring writes, "The experience of God who is life has thus expanded; for the view of this [scientific] world always has something to do with the view of God," he has obliterated the essential

[130] Ibid., 23.
[131] Ibid., 26.
[132] Ibid., 25.

distinction between the Creator and his creation. Because Häring and those who would ascend to his position comprehend the Bible within an evolutionary paradigm, they are not far from slipping into the agnosticism which eventually plagues Darwin. By completely surrendering to the theory of evolution, evolutionary theists eviscerate the core themes of the biblical witness and isolate themselves not only from the scientific community but also from the orthodox Christian community as well.

The primary and fundamental problem in attempting to employ the theory of evolution as an a hermeneutic for understanding the biblical text relates to the problem which Creation Science also faces: the Bible is not a scientific text. Whether one tries to force a scientific reading onto the biblical text or attempts to meld the biblical text into an evolutionary worldview, the effort is doomed to fail. In the latter case, when the biblical text is melded into an evolutionary worldview, at least three biblical teachings go awry. It should be no surprise that they relate to the three articles of the Apostles' Creed. By applying an evolutionary hermeneutic to the biblical text the relationship between Creator and creature dies. Instead of the creature being dependent on a caring and loving Creator, the creature succumbs to the nebulous forces active in nature. The only hope in the evolutionary interpretation is that these forces come together in a fortuitous way in order to promote survival on an individual basis. This obviously fails to inspire much hope. Moreover, an evolutionary hermeneutic annihilates the biblical teaching that this creation is in need of salvation. Sin is reinterpreted as a competitive force leading to speciation. Whereas the biblical teaching confesses that sin leads to death, an evolutionary hermeneutic completely reverses the outcome so that sin leads to new life. Finally, a true evolutionary hermeneutic abrogates the community-building work of the Holy Spirit which anticipates a new creation at the second coming of Christ. It offers survival of the fittest as the backbone of community development.

Precisely because evolutionary theory has become the megatheory in western culture, those within the Christian church are not immune to its influence. This does not justify manipulating it into something it can never be. To put a positive, theological spin on the theory of evolution changes it into something totally other than Darwin intends. Darwin would abhor the idea, and so should those who understand the theory and its application. The Christian church need not tinker with the theory to make it more palatable for the twenty-first century Christian. Instead, the Christian church needs to articulate a more comprehensive worldview as an alternative to that offered by the theory of evolution. Based on the Bible, such an endeavor allows the church to play the right game, and, in doing so, win the respect of both those within and outside her community.

Recognizing that the Christian church has succumbed to the temptation of playing the wrong game in her response to the theory of evolution depends on several factors. As has been discussed already, semantic illusion plays a role, but other more fundamental, epistemological issues have also lured the Christian church into playing the wrong game. First and foremost, the power of reason looms large in Darwin's theory, and people are innately inclined to counter or incorporate a certain reasonableness into a different worldview that still looks Christian, though it may be only a veneer. Second, and this is more of a corollary to the first, the sheer number of Christians who use reason to respond to the theory of evolution overshadows any other alternative that may be available. Lumping Roman Catholics and Evangelicals (in the American sense of the term) into a group seems like a theological stretch, but when highlighting each group's emphasis on reason in the construction of their theology, a striking similarity is seen. Roman Catholics plus Evangelicals equals a significant majority of Christians who respond to the theory of evolution in a reasonable way. In a democracy of ideas this reasonable response prevails as the most dominant. Finally, a third reason for the church playing the wrong game is

the failure or refusal to use the lessons from church history. The reformer Martin Luther certainly has something to say about the theory of evolution. Obviously, he does not do so explicitly since he precedes Darwin by three centuries. Nonetheless, Luther's theological worldview allows the Christian church to play the right game in responding to Darwin.

Some could argue at this point that such an approach is anachronistic because allowing the world of Luther to communicate with the world of Darwin fails to recognize and respect the historical contingencies of each. This may be true if one understands history as only the accurate reconstruction of the past. However, if history is defined not only as the reconstruction of the past but also as the legacy of that past manifested in subsequent generations, then Luther certainly has something to say to Darwin across the three-hundred years that separate them. Giving voice to Luther's view of the world allows the Christian church to play the right game. Luther's response to Darwin is theological, as any reasonable person would expect from one of the church's great reformers. Responding theologically to the biological, philosophical theory of evolution reminds all who are interested in Darwin that it is challengeable as a worldview. The claim that such a challenge is antiquated because of its pre-modern assumptions finds its strongest rebuttal in Luther's ability to make better sense of life in its entirety than the theory of evolution ever attempts to do. Luther places the human creature between God and his neighbor in a relationship defined by grace, forgiveness, and love. Darwin places the human species between natural forces and competing species in a relationship determined by survivability. People may choose which worldview works for them, but the more humane one is obvious. What is an obvious choice, however, is not necessarily the easiest. Help is needed. Luther offers that help, as Brian Gerrish explains.

In his book, *Grace and Reason: A Study in the Theology of Luther*, Gerrish devotes an

entire chapter to the way Luther demarcates the proper use of reason.[133] Even devoting this much attention to the topic seems somewhat ridiculous to the present culture which is steeped in a rational mode of thinking. Moreover, directly going to Luther at this point seems like a more efficient approach than using Gerrish to interpret him. Efficiency, a wonderful term often employed by evolutionists, is not the goal, however. Instead, thanks to Gerrish, Luther's subtle distinctions concerning the proper use of reason become starkly noticeable. Thus, the approach initially seems circuitous but ultimately proves more helpful than sorting through the literary and historical context which frequently steep Luther's writings. When Gerrish finally finishes sifting through Luther's thoughts, he effectively demonstrates that for Luther reason is limited in its ability to comprehend reality. It is this insight from Luther which the Christian church could and should use more in playing the right game. Invoking Luther's proper limits of reason as its main argument against evolution allows the Christian church to counter effectively the theory of evolution. Because it is an honest theological argument not guised in scientific terms, it maintains respectability in these postmodern times. Understanding the intricacies of Luther's argument proves to be invaluable in this endeavor.

For Luther, reason only takes humankind so far in its quest to understand what is real. Gerrish notes, "Right reason is, to be sure, a kind of righteousness: it belongs to the Earthly Kingdom."[134] In other words, reason helps to make sense of phenomena people experience in this sin-filled world. Reason puts life in a right order. "The Kingdom of Reason embraces such human activities as caring for a family, building a home, serving as a magistrate, and looking after cows. All that can be demanded of me by God in such a sphere is that I should 'do my best.'"[135] Based on this line of thinking, Luther would also say that the kingdom of reason embraces the

[133] Brian A Gerrish, *Grace and Reason: A Study in the Theology of Luther* (Oxford: Oxford University Press, 1962), 69-81.
[134] Ibid., 75.
[135] Ibid., 72.

human activity of science and observing nature. Hence, the theory of evolution is a theory belonging to the Kingdom of Reason. As a reasonable theory, it makes sense, even to the most faithful Christian. This, of course, says nothing of the theory's power in undergirding the genetic revolution that has been taking place for some time now. It is for these reasons that Creation Science often seems so desperate in its attempts to prove evolution wrong. The physical, reasonable evidence in support of evolution far outweighs the evidence against the theory. For Luther, though, as Gerrish points out, this does not make it definitive. Reason, and therefore evolution, does not have the final word because it ultimately leads humankind down the wrong path. Gerrish writes, "Reason constructs a 'theology of glory'; and the consequences of reason's overreaching its limits are two: incredulity and the attenuation of belief."[136] The main concern of the Christian church is that all people may come to believe that Jesus is the Savior of the nations. Reason does not contribute in this process. Consequently, for the Christian church to exert such time and energy to either reasonably counter or incorporate evolution wastes resources. Luther's worldview offers a better way!

> Gerrish reminds us of Luther's help in the current battle between worldviews:
>
> For perceiving the Kingdom of Christ one needs other eyes than reason affords, spiritual eyes. Hence, for instance, reason fails to see the enormity of such sins as resentment against God. The very concept of sin falls outside the province of reason, which is concerned only with the personal and social dimensions of immorality and injustice—with what Luther calls 'crass peccata.'[137]

In a different and more positive light, Gerrish clarifies the central idea from Luther this way: "Reason, indeed, may be of service even in spiritual matters, provided it is kept subordinate to faith and is first illuminated by the Holy Spirit."[138] What Gerrish brings out in Luther, then, is that the right game to play with evolutionists is the faith-based, theological game and not the

[136] Ibid., 76.
[137] Ibid., 71.
[138] Ibid., 81.

reason-based, pseudoscientific game. For Luther, faith has precedence over and beyond reason.

> But even here reason is not wholly to be trusted, both because it is corrupted and blinded 'vitio diaboli' and also because, when uninstructed by faith, it substitutes for love toward neighbor 'childish ceremonies or monstrous works which the justiciaries themselves think up.'[139]

Although this citation has as its context the issue of good works, its characterization of reason as corrupted and blinded by the devil applies to the reasonable theory of evolution. Stated most succinctly, Gerrish frames Luther's worldview this way: "The spiritual world, in short, is wholly incommensurate with the powers of natural reason."[140] That being said, it is truly remarkable that the Christian church has played the wrong game for so long. Perhaps in doing so, she reveals her insecurity that stems from losing her position as the dominant cultural influence in western society. Science has succeeded her, especially in the form of evolutionary theory as a worldview. Perhaps a broader evaluation of the whole controversy surrounding the theory of evolution will help the church to gain a new identity that is independent of her ability to shape culture.

In a brief section entitled "Creator and Creatures" in his book *The Christian Faith: A Lutheran Exposition* Robert Kolb helps the Christian church to retreat and view the larger, historical picture that gives context to the debate surrounding evolutionary theory and its derived worldview.[141] First, Kolb encourages Christian scientists to engage the theory through their experimentation based on the firm conviction that God is the creator of all that exists. In other words, Christians face the theory with confidence that comes through faith. In doing so, they avoid becoming sectarian and demonstrate a willingness to understand the creation which God has made. Second, he highlights the fact that the theory is based on epistemologies which are fundamentally contrary to the biblical epistemology. The empirical, experimental, scientific

[139] Ibid., 74.
[140] Ibid., 72.
[141] Robert Kolb, *The Christian Faith: A Lutheran Exposition* (Saint Louis: Concordia Publishing House, 1993), 70.

methods of learning automatically employ a different way of knowing and understanding the world than that given through biblical revelation. The former depend on sensory perceptions which are not immune from the effects of sin while the latter hears God's word *and believes*. Finally, he also hints at the danger of playing the wrong game when he writes, "They [Christian Scientists] should recognize, however, that conducting the defense of the biblical teaching of creation on the turf of empirical epistemology undercuts the biblical position."[142] As Kolb rightly illustrates throughout his book, the whole life of the Christian proceeds on fundamentally different ground than that offered by evolutionary theory and its worldview. As a respected Luther scholar, Kolb does well to highlight effectively the limitations that circumscribe humankind's reason. For Kolb the Christian worldview depends entirely on faith. Reason is a gift to be used in the light of faith. Various epistemologies will come and go throughout history, just as the theory of evolution has emerged as one of the dominant ways of knowing in the present era and may very well pass away in the future. Throughout these historical vacillations within which Christians live, the worldview as shaped by faith proves to be a steadfast light in a storm of ideas. Sadly, this never-ending and always-changing storm confounds Darwin to the point that his theory of evolution is the best move he can make with his intellectual pieces positioned as they are on the board of nineteenth century science and theology. Thankfully, Luther plays a substantively different game and teaches Christians half a millennium later how to respond to evolution. By offering a worldview that is not dependent on reason but on faith, Luther continues to help the Lord's people live in perfect confidence no matter what the latest epistemology may be. In short, Luther encourages Christians to play the right game, the game of faith.

[142] Ibid., 70-71.

PART IV

CHAPTER 5

PLAYING CHESS?—WHY NOT BRIDGE?

That the main ideas of Darwin's theory of natural selection have descended to the present time with little variation since the 1925 *Tennessee vs. Scopes* trial should arouse curiosity if not amazement among those with a vested interest in the topic. Certainly, the integration of genetics into the overall evolutionary schematic has bolstered the theory's legitimacy both scientifically and publicly. Julian Huxley has given this scientific achievement the name "The Modern Synthesis."[143] Yet, the stability of the theory seems to betray its fundamental premise of evolving by a naturally selected process, especially in lieu of the dramatic changes that have occurred in the historical, cultural, and intellectual environments since the post-World War I 1920s. The theory has evolved little. Proponents of evolutionary theory would likely counter at this point by saying that the inherent stability of the theory demonstrates its strength in explaining scientific data. Here, however, it is important and helpful to remember that history tends to demonstrate repeatedly that scientific theories eventually adapt according to their time-bound context. In this sense, evolution may be understood not uniquely as a scientific theory, but as an idea embracing the present zeitgeist. From an historical perspective, there likely will come a day when Darwin's theory seems just as contextualized and time-bound as the earth-centered image of the universe once was. This classic example of using the Copernican revolution against creationists may just as feasibly be invoked against evolutionists at some point in the

[143] Julian Huxley, *Evolution: The Modern Synthesis* (London: Unwin Hyman, 1975).

future.[144]

Without question, however, at the present time the theory of evolution has gained the upper hand throughout western culture and likely throughout much of eastern cultures as well with the free exchange of ideas that occurs within a digitally-connected academia. Yet, the theory's position of cultural dominance has not come immediately or easily. A long, hard struggle for existence has taken place, occurring predominantly in the United States and spreading to those other places which have proved favorable to the idea. Indeed, Darwin has descended to the present, having been naturally selected by a dynamic process consisting of a host of cultural influences that have favored it. Additionally, not only has Darwin's theory descended through an ideologically based process of natural selection, it has also been fossilized through a stultifying program of litigation. Surely Darwin's descent not only includes what he inherits intellectually and his subsequent struggle to make sense of that inheritance but also the pangs involved in the transmission of his idea to the present day. His idea of natural selection has survived, but in doing so it has endured an arduous legal process. This struggle for legal legitimacy reveals the deeper struggle for cultural acceptance. Having been essentially immobilized on both the legal and cultural fronts regarding Darwin's theory, the Christian church has failed to respond adequately to it. This has culminated in nearly seven generations of people in the western hemisphere being steeped in Darwinism without an adequate theological framework to make sense of its powerful worldview. Understanding the historical, legal facets of this descent proves helpful in providing the Christian church a new way forward for the future.

An alternative and less flattering way of describing Darwin's descent to the present day is to say that since *Tennessee vs. Scopes* the church has slowly been flat-lining in her response to the theory of evolution by natural selection. Similar to the symptoms that eventually lead to a

[144] Those espousing the theory of evolution often maintain that creationists resemble those who opposed Copernicus's idea. Thus, in the current context creationists become the equivalent of those who believed that the sun revolved around the earth. It is a pejorative move in the contentious debate concerning the theory of evolution.

heart attack, Darwin's descent at first is barely noticeable but ultimately sends the Christian church into severe arrhythmia, leaving her to grasp for life wherever she can find it. Because Darwinism has offered a scientifically accepted, alternative worldview, and therefore in the present age, a culturally validated worldview, many people have abandoned the Christian worldview completely or have attempted to accommodate it with Darwin's. Ever so slowly, God has been replaced by the god of descent, leaving people more comfortable with the status quo of their lives because they are precisely the chance and selected accumulation of an infinite number of possibilities. With God scientifically severed from the lives of people, the church has witnessed droves of people abandoning her message. Other factors like biblical higher criticism have undoubtedly also contributed to this process, but Edward J. Larson rightly recalls the words of William Bell Riley who early in the controversy over evolution in the 1920s recognizes the power of Darwinism. "'When the Fundamentals [sic] movement was originally formed, it was supposed that our particular foe was the so-called *higher-criticism*,' Riley later recalled, 'but in the onward going affairs, we discovered that basal to the many forms of modern infidelity is the philosophy of evolution.'"[145] Riley's ominous recognition of evolutionary theory's subversive power, however, fails to translate into an effective response from the Christian church. Instead of freshly articulating a new biblical worldview that accounts for scientific advancement, the church in Riley's time (1910s-1920s) either completely capitulates to Darwin's theory or engages in apologetic endeavors that eventually prove unconvincing to most people. Before discussing these endeavors, though, two observations regarding the church's response to evolutionary theory prove beneficial in understanding how Darwinism eventually survives at the expense of creationism.

Although avant garde thinkers like those who contribute to *Essays and Reviews* and the

[145] Edward J. Larson, *Trial and Error: The American Controversy over Creation and Evolution* (New York: Oxford University Press, 1989), 44-45.

Harvard Christian scholar Asa Gray quickly attempt to wrestle intellectually with the ideas posited by Darwin, few within mainstream Christianity anticipate the tsunami effect the theory would have on theology as well as biology. To be fair, ideas at the turn of the twentieth century do not penetrate the general population as rapidly as they now do. That being said, however, Darwin's theory publicly ignites in 1859 and soon thereafter spreads steadily into one of the most powerful ideas in the modern era. The *Tennessee vs. Scopes* trial of 1925 marks the first public, concerted effort to grapple with evolutionary thinking; but as will be discussed subsequently, history has shown that this attempt fails miserably. From a historical theology perspective the question of why there was such a long delay immediately arises. Sixty-six years is an immense amount of time for the nurturing of an idea without a substantive response from the Christian church. It is too convenient to justify this delay by suggesting that most Christians simply are unaware of Darwin due to slow information transmission. Larson supports this argument by writing:

> Evolutionary ideas quickly leaped from the writings of Darwin to the beliefs of most American scientists and from there into the content of public education. ... Following the lead of scientific opinion, science educators began adding evolutionary concepts to high-school textbooks almost immediately, and had fully incorporated the doctrine into biology teaching materials by the turn of the century.[146]

If young high school students are aware of Darwin at the beginning of the twentieth century, there is little room to justify the silence from the church on the issue of evolution. Instead, the charge of intellectual negligence may be levied based on the evidence to date. That few, if any, substantive challenges emerge in the six decades following the publication of *Origin* gives the impression that the church at this time is intellectually and theologically disconnected from the scientific environment shaping much of Europe and America at this time. As a result of the church's marginalization in responding to the theory of evolution by natural selection, two

[146] Ibid., 8-9.

generations of high school students are left to sort through its implications without any theological orientation. Larson puts the problem in perspective when he states that "... by 1890 this figure [high school enrollment] stood at only 202,963 pupils, representing 3.8 percent of the 14 to 17 age group. This statistic doubled every decade during the rest of the period, jumping to 519,251 pupils in 1900, to 915,085 pupils in 1910, and to 1,851, 968 pupils in 1920."[147] With evolutionary theory gaining such an upper hand in its dissemination and sanction through high school curricula during these early years of its genesis, the struggle over the next eight decades (ca. 1925-present) to counter its sociological impact would be immense. Indeed, early intellectual and cultural disconnection has cost the church dearly in her dealings with the world of science since and, consequently, with the world in general.

Disconnection is only half of the story, though. The second observation correlates directly with the church's intellectual negligence in failing to grasp the magnitude of Darwin's theory. That the Christian church chooses to remain disconnected intellectually stems from an attitude rooted in a privileged cultural status. Ironically, whether or not this status actually exists in the history of Christianity is debatable, at least in light of modern historical scholarship. Nonetheless, in the phrase coined by Steven Ozment, a veneer of Christianity still barely covers the cultural context of both Europe and America at the time of Darwin.[148] However, as Owen Chadwick points out, the legacy of the Enlightenment begins to crack dramatically this facade.[149] And with Darwin's theory the veneer is thoroughly destroyed. Yet, the centuries-old, privileged cultural status of the church causes her to underestimate the intellectual and cultural force of Darwin's theory. The fact that most Christian intellectuals during Darwin's day barely raise their voices or lift their pens to issue a firm Christian apology in response to natural selection

[147] Ibid., 26.
[148] Steven Ozment, *The Age of Reform 1250-1550: An Intellectual and Religious History of Late Medieval and Reformation Europe* (New Haven: Yale University Press, 1986).
[149] Owen Chadwick, *The Secularization of the European Mind in the Nineteenth Century* (Cambridge: Cambridge University Press, 1990).

suggests that most of the church is sedated by its privileged status in Europe and America.

This is not insinuating that the church of the late nineteenth or early twentieth century is doing nothing. Rather, the charge of privileged cultural status relates specifically and directly to Darwin's theory. Either the theory is easily incorporated into the doctrine of creation, or it is dismissed as another fleeting theory of science. No one during Darwin's day and the generation that follows expects it to become one of the key fundamental challenges against the church as it has in the latter twentieth century and into the twenty-first. The available historical evidence leads to the conclusion that the church of Darwin's day believes she would outlast this alternative worldview as she had when other alternative worldviews arose during her history. To be sure, the biblical teaching that the church will prevail is unquestionable because God has made this promise. It does not mean, however, that Christians should have simply ignored challenges to their beliefs based on privileged cultural status. This seems to be just the case, though, for the many Christians who read the early copies and subsequent editions of Darwin's *Origin*. As the number of people who read it begin to realize its full implications, however, Darwin's idea begins to call into question everything the church teaches. The legal proceedings of the trial known as *Tennessee vs. Scopes* demonstrate this. Even the leaders of the small town of Dayton, Tennessee, in which it is held realize it, too, as they concoct a legal case to increase the number of visitors coming for the trial—a boost to the local economy. The controversy would lure tourists to the town. That the church, the repository of the Holy Scriptures, fails to recognize the looming danger is more than historical intrigue. It is, rather, a demonstration of the inherent dangers of relying on privileged cultural status to survive the challenges of the present.

With the Christian church intellectually negligent in its early response to the theory of evolution and complacent in relying solely on her privileged status to outlast its impact, slowly but powerfully Darwin's ideas about human life, nature, and God begin to diffuse rapidly

throughout western culture during the sixty-five years between the publication of *Origin* and the *Tennessee vs. Scopes* trial. Thus, historically there exists an inverse relationship between the two worldviews: as Darwinism spreads rapidly throughout the intellectual landscape, the biblical worldview withdraws and becomes an academic liability. Larson demonstrates this by analyzing biology textbook material during this period. His logic for doing so is that some of the greatest biological thinkers at the turn of the twentieth century are responsible for the textbooks' content. He writes, "To the extent that textual content was an indication of teaching, public high schools were teaching evolution decades before the anti-evolution crusade, with the presentation seeming to grow more dogmatically Darwinian in time."[150] Like a crack that begins as a small fissure in a foundation, the theory of evolution eventually leads to the crumbling of an intellectually defensible, biblical worldview within the academy. Larson then goes on to note the powerful role public education plays in this process. "The rapid expansion of secondary education thus gave new immediacy to the danger."[151] In stark contrast, because of her marginalization on account of failing to respond to the theory of evolution, the church remains completely impotent to counter the pending danger. Failing to use her intellectually rich doctrinal history that has sustained her through other challenges, the church's only recourse in the mid-1920s is to place her hope in the American legal system. This marks the beginning of playing the wrong game which much of the church is still doing. In attempting to deal legally with Darwin's descent, the church from the beginning assumes a defensive position based on cultural inferiority. No longer would she establish her defense against evolution on the Word of God, but on the legal words of men, hoping to coerce others through legislation to believe in the fallacy of evolution. Darwin's slow, gradual, but ultimately overwhelming descent catches the church off-guard. Her last-minute, knee-jerk response is to tap into American populism, "which can be viewed as the first

[150] Larson, *Trial and Error*, 22.
[151] Ibid., 27.

progressive reform movement," according to Larson.[152]

One of the many ironies in Darwin's descent to the present day includes the teaming up of anti-evolution crusaders with the progressive reformers of the 1920s. Concern for children forges this unusual pairing. However, the history of the evolution controversy clearly demonstrates that the antievolution position is considered by most as anything but progressive in the traditional sense of the term. Nonetheless, as Larson maintains, the growing interest in adolescent development in the 1920s leads to the awkward relationship.

> The changing conception of youth generated a host of progressive reform movements aimed at protecting and nurturing adolescent development. These included movements for compulsory school attendance, secondary education, child-labor laws, separative juvenile-justice systems, playgrounds, industrial education, foster homes for orphans, and widows' pensions. These movements concerned with adolescent development drew in many future antievolution crusaders.[153]

The chief means of achieving these progressive reforms for adolescents becomes legislative action. Through the law the population would voice its opinion against the social foes of the day, evolution being one of them. Larson writes, "'The thirty-seven antievolution bills that were introduced into twenty state legislatures between 1921 and 1929,' historian Lawrence Leven concluded, 'were products of the American faith that legislative action can bring into being pure morals, right thinking, and patriotic action.'"[154] The only way for the population to progress is to protect the next generation from the oppressive and questionable ideas of the intelligentsia. The law becomes *the* means for progress on behalf of the people. In this case, progress only comes by restricting the teaching of evolution. Larson notes, "During the following decade [ca. 1922-1932], forty-five such bills [anti-evolution bills] surfaced in twenty different states."[155] Interestingly, each of these bills seeks to limit the promulgation of evolutionary teaching on the

[152] Ibid., 29.
[153] Ibid., 137.
[154] Ibid., 39.
[155] Ibid., 48.

technicality of the law, not on the theory's legitimacy. This legal move proves to be historically indispensable as it would become the backbone of the anti-evolution crusade. By never addressing the fundamental differences between the theory of evolution and the theological doctrine of creation, however, the debate has festered to this day. In doing so, the real substantive issues have been obscured and the theory of evolution has gained the upper hand in the academy while anti-evolution crusaders have floundered in the courts. This should surprise no one, though, for it has been the way since the controversy began. In *Tennessee vs. Scopes* the precedent of countering the theory of evolution and its teaching on legal technicality is established. Legally that practice has not changed. Practically, that practice has cost the Christian church dearly in losing the hearts and minds of many people. There is more than little irony in this.

A cursory review of the *Tennessee vs. Scopes* trial from the perspective of the twenty-first century reveals that the tactic of incorporating anti-evolution legislation as part of the larger political effort of progressive reform involves a desperate attempt in the name of Christianity to counter the mounting scientific evidence supporting the theory of evolution. By 1925 the belief in the indisputable facts of science has penetrated much of western culture; it is believed at this time that the power of science holds unforeseen potential which gives people hope for the future. Paradoxically, though, long-cherished beliefs related to the biblical creation story are still held by many within America and Europe. The Tennessee legislature attempts to relieve the tension caused by this paradox in worldviews by passing its anti-evolution law on March 23, 1925. With the law representing the will of the people, the tension is tentatively absorbed and alleviated by the comfort taken within a majority position. However, such comfort is short-lived, as the newly-founded (1920) American Civil Liberties Union (ACLU) challenges the Tennessee legislation. Almost immediately the goal of the ACLU becomes to challenge the

statute on the premise of academic freedom. Larson claims, "With this star-studded defense team, the ACLU prepared to use the trial to promote public acceptance of academic freedom for evolutionary teaching."[156] To counter the prosecution's invocation of academic freedom, the state of Tennessee bases its defense on the right of its sovereign people to choose what is taught in public schools. Larson continues, "After toying with the idea of attacking evolutionary teaching head on at trial to justify the statute, the prosecution opted to stand on the basic proposition that the legislature has the right to control the content of public-school instruction."[157] By pursuing this course, the famous orator and prosecution lawyer, William Jennings Bryan, seeks to predicate the legality of the antievolution legislation on the democratic principle which grants victory to the majority of people in favor of it. Never does the prosecution anticipate that the position of the majority of the population could change, and, thereby undermine the rationale of the legislation. History clearly reveals such a shift in public opinion, however, to favor the worldview proposed by the defense—evolution. Thus, the practice of challenging the theory of evolution on a legal basis is undermined in 1925. Yet this continues to be the general rationale of those seeking legal recourse against the theory of evolution.

Abandoning her game of theology, the church has failed tragically in her attempt to play the legal game against the theory of evolution. She has tried to play a game that is not her own. Perhaps the Tennessee Supreme Court inherently if not overtly recognizes this in its reversal of John T. Scopes's conviction. Although the state Supreme Court bases its decision on the lower court's failing to follow proper sentencing guidelines, the underlying motive seems to suggest that the whole premise of the prosecution's case against Scopes is legally unsubstantiated. Bryan and his Fundamentalist supporters attempt to make an essentially theological argument by employing the laws established through the American democratic process. They play the wrong game.

[156] Ibid., 63.
[157] Ibid., 63.

Larson describes:

> 'Scopes was found guilty of teaching evolution,' George M. Marsden added in his 1980 history of Fundamentalism. 'But in the trial of public opinion and the press, it was clear that the twentieth century, the cities, and the universities had won a resounding victory, and that the country, the South, and the fundamentalists were guilty as charged.'[158]

Sadly, the wrong game has continued since the *Tennessee vs. Scopes* trial. By playing the wrong game, the church has obscured the real issues at stake in defending the theological doctrine of creation against the theory of evolution and has isolated herself further from an increasingly educated public. Caught in this desperate position, the church has utilized increasingly more drastic measures ever since.

Whereas the prosecution's plan in *Tennessee vs. Scopes* seeks to enforce the antievolution statue by appealing to the democratic will of the people as manifested in legislation, the intervening seventy-five years exhibit a dramatic tactical shift on the part of those opposed to evolution to outlaw its teaching based on scientific evidence. This shift becomes necessary as the scientific community during this period begins to influence public opinion more in areas that traditionally were influenced mostly by the Christian church. Larson writes:

> Public receptiveness to scientific opinion increased during the lull in antievolution activity [1925-1960]. More than anything else, this change paved the way for evolution to re-enter the classroom. ... This disregard for scientific opinion changed somewhat as the American scientific community gained size and public support during the thirty-five years following *Scopes*.[159]

The pursuit of pure science does not solely drive this cultural change. More practical and sobering historical factors thrust science to the forefront of American thought. According to Larson:

> Fear of Soviet science drove the American public to heed scientific opinion in reforming domestic science education. These reforms included the biological sciences, especially after the National Science Foundation began funding the Biological Sciences Curriculum

[158] Ibid., 74.
[159] Ibid., 88-89.

> Study (BSCS) in 1959. Like its counterpart in physics, the BSCS set about rewriting high-school textbooks, and the leading biologists serving on the study (which included Herman Muller) boldly embraced evolution. The appearance of the BSCS texts in the early sixties shattered the thirty-year truce in legal activities enveloping the antievolution issue.[160]

With the Cold War weighing heavily on the public psyche, more public funds become earmarked for scientific endeavors. Only superior science, including the latest teaching regarding evolutionary theory, would save the United States from the ominous threat of the Soviet Union. Larson outlines the scenario:

> Where Hoover had estimated that the total public and private funds spent for pure science during the 1920s was less than $10,000,000 a year, that figure approached two billion dollars by the 1960s. This federal largess began spilling over into high-school science education during the 1950s, reflecting growing public concern for better scientific training in schools.[161]

Evolution becomes a permanent component in the subsequently developed classroom curriculums. As it does, religion is further marginalized in the name of freedom. "A new environment [the 1960s] of heightened popular responsiveness to scientific opinion and judicial sensitivity to religious freedom gave pro-evolutionary partisans a decided edge in this renewed conflict."[162] All of these factors reveal profound cultural changes favoring a scientific and evolutionary worldview over that of a biblical one.

A few, scientifically-oriented Christians begin to recognize this and attempt to frame the biblical message accordingly. The outcome of this endeavor has spawned what is called Creation Science. Unable to rely on the law of the land as a means of warding off evolution as in *Scopes*, many Christian scientists opposed to the theory seek to counter it on its own scientific premises. Although this move seems appealing and even logical, it has proved to be disastrous because of its perceived disingenuousness within most of the scientific community. Creation Science may

[160] Ibid., 91.
[161] Ibid., 91.
[162] Ibid., 92.

allay the anxieties of Christians living in an increasingly scientific age by appearing to give legitimacy to their beliefs, but that is the extent of its beneficial effects. Stated more crassly, for most scientists Creation Science is not considered science at all; essentially, it seems that the only people who believe that Creation Science is science are already Christians. Within the scientific community, Creation Science is considered religious propaganda. No respected and influential scientist in the contemporary science academy has abandoned the evolutionary worldview as a result of the claims of Creation Science. Just as playing the legal game does not work for the Christian church in *Scopes*, neither does the scientific game succeed in Creation Science.

Summarizing the approach of Creation Science, Larson writes:

> Creationists struck first on both legislative and judicial fronts. Cornell University sociologist Dorothy Nelkin gave her explanation of these events in testimony against creationism laws at the 1982 Arkansas trial. 'I found that one of the reasons underlying the whole of their activities were concerns about the growing secularism in society and a concern that this was going to cut down on the[ir] constituency [and] would destroy the values of their young,' Nelkin testified. Responding to this concern, she noted, creationists were 'using science as a kind of political resource to legitimize and give credibility to their own views concerning the literal interpretation of the Bible.' Nelkin went on to explain, 'They want people to believe their definition of reality. And in order to do that, they really felt it was incumbent upon them in today's age to call into question scientific ideas and to give their own ideas a sense of scientific credibility.'[163]

Nelkin's assessment as portrayed by Larson succinctly exposes the poorly matched goals and means of Creation Science. She rightly identifies the church's concern about the rise of secularism and its influence upon the lives of Christians everywhere. Moreover, she justifiably maintains that Christians have as a goal the conversion of all people to a particular and specific view of reality. Finally, her assertion that creationists have pursued these goals by attempting to validate them through the socially expected scientific proofs is crushing. It is this third observation by Nelkin that completely discredits Creation Science within the scientific academy and the general public. The attempt to disguise the promulgation of Christianity in scientific

[163] Ibid., 127.

dress utterly eviscerates the church's message except to those who already believe that message.

In this way the two worlds of science and religion have grown increasingly apart, with each world placating itself by justifying its claims on reality through the publicly accepted truth of science. Revealed here is a great irony. The sincere attempt by many Christians to repair the rift between science and religion in the name of Creation Science has actually deepened it even more. At the present moment, it seems unfathomable that the two worlds could be separated any further. The Christian church would do well to reevaluate specifically its approach to the theory of evolution, and more generally, its means of integrating scientific progress within a theological context. The history of the relationship between Christianity and science suggests that neither legal nor scientific means provide a new way forward. Theology does. In sticking to her own game, the church has the opportunity to move beyond a defensive posture in relationship to science and public opinion and offer a worldview that comprehends both the biblical witness and the new discoveries of science.

CHAPTER 6

MAKING BID—LEARNING TO PLAY BRIDGE

The descent of Darwin to the present day through the seemingly endless legal proceedings teaches the Christian church several lessons. First and foremost, the ongoing controversy clearly reveals that the church has failed to make her bid in the attempt to answer the many questions that have arisen since Darwin originally conceived his theory of natural selection. This critical assessment aims to call the church to repentance so that a new relationship between theology and science may be forged in the future. With no immediate impediment and no a priori objection to an honest look at science and technology, Christians must continually strive to think anew in terms of theologically understanding scientific advancement. This is not to say that the cherished biblical confessions of the church need to change. Rather, recognizing that theology is a dynamic discipline of applying God's unchanging Word within a specific historical context, Christians are called to interpret scientific progress in the light of that Word. Important to realize in this endeavor is the unique character of both types of epistemologies, theological and scientific. God's Word is ultimate. Nothing more needs to be said to make it complete. It is the same yesterday, today, and tomorrow.[164] Science is penultimate; much is still incomplete, and thus the quest for better understanding continues every day. For Christians, then, science must always accommodate theology and not vice versa. The new discoveries of science must be comprehended according to the unchanging truths of the Bible. Within this frame of reference, theology is never static; instead, good theology compels Christians to reengage God's word amidst its historical contingencies, including science, in order to gain a deeper understanding of it.

One of the blessings the historical contingencies of science have bestowed upon theology is humility. God's word is too vast and deep for the church to have mastered its full meaning in

[164] cf. Heb.13:8 NRSV.

twenty-one centuries. An eternal God who manifests himself in his beloved Son is not perfectly knowable in a mere two thousand years. Much more is to be learned from his word. After playing the wrong game by appealing to desperate legal and specious scientific arguments, the Christian church would regain much credibility within western culture by attempting to articulate better the yet-to-be-fully-realized biblical worldview that includes a proper understanding of science. Indeed, evolutionary theory has posed a significant challenge to Christendom. Instead of retrenching into the familiar, defensive arguments of the past, the church needs to return to God's word once again in order to offer a new apologetic in response to the worldview offered by evolution. Just as a new bridge player continually learns the intricacies of the game by making mistakes, God has placed the church into a *kairos* moment to learn from her playing the wrong game in order that she may give a clearer biblical witness that takes seriously the challenges posed by the scientific community and responds to them in good faith. Pursuing this course allows the church to adapt to Darwin's descent by making it an asset instead of a liability.

The second lesson of Darwin's descent teaches the Christian church that her influence within western society has fallen dramatically behind that of the theory of evolution. The Christian church must assume from now on that people outside of Christ have incorporated in one way or another the general principles of Darwin's theory into their particular worldview. Although some of these people casually incorporate God into their belief systems, most often it is a self-conceived god filtered through the prism of Darwinism. This complex belief system makes sense because all people have a sense of God;[165] it is an inherent part of being his creature. Similarly, every human creature has a fundamental need to relate to and within the world around him.[166] In a world dominated by the theory of evolution, human creatures naturally try to make

[165] cf. Rom. 1:20 NRSV.

[166] In this regard, the opening chapters of the book of Genesis place people in their creature-context. First, they relate to the God who has made them. Next they relate to other men and women as the most cherished aspect of God's creation. Finally, they relate to the other creatures and the other inanimate elements of the creation (e.g., the ground, the sea, etc.) of which they are called to be stewards. These relationships are distorted through sin and are only reestablished perfectly through Jesus, who inaugurates the new creation (cf. Rev. 1:5 NRSV).

sense of it while still believing in God. Helping people to sort through this culturally derived worldview first requires the church to admit that its view of the world no longer is the dominant one held by most people. When the Christian church realizes her position of secondary cultural influence, only then will she be prepared to challenge seriously the worldview offered by Darwinism.

Finally, the descent of Darwin teaches the Christian church that she must intentionally emphasize the entire biblical worldview. To be sure, at the core of the biblical worldview is the death and resurrection of Jesus the Christ. All of Holy Scripture points to the events in the life of Jesus and from these events life is given to the church. That said, he full magnitude of what Jesus has done for the entire cosmos, including his church, is usually neglected. He not only forgives an individual's sin, he forgives the entire world's sin.[167] His is a cosmic salvation event. This means that Jesus, true man and true God, restores *all* that has ever gone wrong in the cosmos. Not only does he make the individual believer a new creation, but he will also create an entirely new creation upon his return. These cosmic elements of God's salvation given through Jesus have for too long been ignored. Focused more on the particular meaning of salvation for the individual believer, the church has failed to articulate a worldview that at least rivals an evolutionary one in scope. Many people outside of Christ sense this and have deliberately chosen evolution as the worldview which makes the most sense of the present world. After 145 years the time is right for the church to offer a worldview that not only challenges the one proposed by Darwin but also intuitively makes more sense for human creatures everywhere. It can do this based on scriptural passages humbly offered as a means to initiate discussion in which hopefully the entire church and then even the wider intellectual world eventually will participate.

[167] One of the strongest implications of the book of Revelation helps to offer a worldview that legitimately competes with evolution. It does so on the basis that it affirms the present creation by promising to remake it in its edenic perfection. The theology of the new heaven and earth is important to elucidate in this context (cf. Rev. 21:1 NRSV).

Four passages are integral in forming an alternative theological worldview that intentionally rivals that of theory of evolution: Genesis 3:1-19, John 12:24, 1 Corinthians 13:12, and Revelation 21:1. Like evolution, these passages offer insight into human origins, life in its present form, and human endings. Unlike evolution, however, these passages entail the qualitative judgment that something has gone deathly wrong at the cosmic level which only God can fix. It is this latter point that utterly vitiates the evolutionary worldview. If not on the level of theoretical science, then it certainly does so on a practical, everyday experiential level. Even the staunchest evolutionist would eventually concede that the world in its present form does not live up to the expectations for which people from all cultures hope. Stated differently and in more classical terms, the evil present in the world confronts the core of what it means to be a human creature and forces the question "Why?" Darwin's answer to the 'why?' question is to make evil a necessary component in life.[168] Darwinism readily comprehends evil under the more tactful phrase survival of the fittest. Evil becomes justified by the natural compulsion of every creature to pursue survival at any cost, even if that includes the destruction of other forms of life. Darwin insufficiently justifies this inevitable problem in his theory by maintaining in true Victorian fashion that people ultimately will surmount this tendency by recognizing that sometimes survival is promoted best through acts of kindness. Those following in his footsteps adopt the same rationale. However, the hard facts of history demonstrate this hope has failed, since human evil steadily continues in spite of the increase in many aspects of cultural progress for the benefit of all people. While evolution may be one theoretical means of understanding the complexities of the biological world, its limited ability to address other essential and fundamental facets of life rightly calls the theory's comprehensiveness and, therefore, legitimacy into question. A more thorough and honest understanding of life comes only from Holy Scripture.

The Genesis 3 passage lays the foundation for the biblical worldview which counters that

[168] In most cases, as noted earlier, he simply ignores the "why" question and focuses on the "what" question.

of evolution's by highlighting the notion of *curse*. In verses 14 and 17 YHWH curses both the serpent and the ground as a result of the serpent's temptation and the man's succumbing to that temptation. Traditionally, this curse is understood as the subsequent reason for the ouster of the man and woman from the garden. The curse indicates complete separation from YHWH. If the serpent represents the figure of Satan, this makes sense. YHWH and Satan are eternally separated. However, the second curse YHWH places on the ground so that the man shall eat of it in sorrow all the days of his life.[169] Important to notice is that YHWH does not curse the man but the *ground*. By means of the literary technique of synecdoche, the ground may represent all of creation. Thus, the *entire creation* is cursed as a result of the sin committed by the man and woman. This means that at a fundamental level, the creation as it is experienced unto this day does not function according to the same edenic principles that YHWH originally establishes. The creation continues to function under the curse. As a result of the curse which YHWH places on the ground, there is constant friction, conflict, obstruction, death, etc. In short, nothing in the creation works as it should. Pauline cosmology includes this theme in several places, never more so than in Romans 8:22: "We know that the whole creation has been groaning in labor pains until now."[170] One of the consequences resulting from the curse of YHWH is that true knowledge of how things really are is not possible in this distorted creation.[171] Hence, Paul writes in 1 Corinthians 13:12, "For now we see in a mirror, dimly, but then we will see face to face. Now I know only in part; then I will know fully, even as I have been fully known."[172] Because the knowledge human creatures may attain is limited as a result of the distorted creation caused by the curse, the claims of science are ultimately circumscribed from a biblical perspective. Science is curbed by a limited understanding of the cursed creation. Only upon the second coming of

[169] Gen. 3:17 NRSV.
[170] NRSV. Emphasis added.
[171] Undoubtedly, Paul has in mind knowing Jesus. Because of sin in this life, Jesus is comprehended only through faith. Faith clings to the biblical promises as realities still coming, even though in this distorted creation they may seem more like wishes.
[172] NRSV.

Christ will the distorted creation be reconstituted into its original, undistorted form. That is much of the meaning behind John's words in Revelation 21:1: "Then I saw a new heaven and a new earth; for the first heaven and the first earth had passed away, and the sea was no more."[173] Jesus tells us of the means which brings about this cosmic transition from distorted creation to one that is harmonized in its edenic form. "Very truly, I tell you, unless a grain of wheat falls into the earth and dies, it remains just a single grain; but if it dies, it bears much fruit."[174] Here Jesus uses a parable to tell his creation that only through his death and resurrection is the transition from distortion to clarity achieved. He is the firstfruits of the new creation; the remaining fruit (a symbol of new life) will come when he comes again to make all things new. By emphasizing this worldview, the church would play her own game and appeal to deeper human convictions that ultimately trump the claims of science.

Whereas the descent of Darwin through a particular worldview ultimately degenerates into a very hostile, if not more short-sighted approach to life, the biblical worldview seeks to create life around the attributes of repentance, forgiveness, hope, and love. The world can never hear enough of these purposes of the church. Tragically, though, it often hears from the church about everything but these indispensable qualities of being human. Only when the church deliberately sets out to make these attributes the hallmark of its worldview will she regain the ear of those to whom she wants to speak—those outside of Christ. Because the Biblical witness poignantly touches the core issues of what it means to be a human creature, the Christian church still has a transforming message to speak to a world becoming increasingly more scientific. Darwin's descent has drastically sidetracked this purpose of the church. Yet these oft-maligned postmodern times give the church the opportunity to reevaluate her role in the present scientific age.

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[173] Ibid.
[174] John 12:24 NRSV.

The church's role is not to compete with science in terms of forcing new scientific data into the biblical message. Nor is the church to accommodate scientific data by altering the biblical message. Such data will never mesh perfectly with what the Bible says. Instead, the role of the church is best understood within the context of what Martin Luther calls God's kingdom.[175] For Luther, God's kingdom means everything related to Jesus the Christ and what he gives his church. This kingdom is distinct from the earthly kingdom, which functions under rules and laws that seek to make sense out of the sinfully distorted creation in which all people live. The two kingdoms eventually meet in the lives of the believer. With the guidance of the Holy Spirit, the believer's task is always to discern in which kingdom he is. Is it the earthly kingdom where all of reality is distorted by sin and what knowledge is gained is completely contingent? Or is it God's kingdom in which Christ rules over the coming new creation and nothing is contingent? Because of his intellectual and spiritual descent, Darwin never asks these questions. This causes him to descend into the abyss of agnosticism. Much of western culture has descended with him. The Christian church has much to say theologically by emphasizing Luther's two kingdom worldview to a world confused by the theory of evolution by natural selection. The time to speak is now. She must play her own game!

At the end of a round of bridge the scores are tallied, and the person with the lowest score takes home none of the prize pool into which all players put a specified amount before playing begins. In this scenario the Christian church has walked away from the table with no winnings. Her loss to the theory of evolution over the last 145 years is attributable to her playing the wrong game. She has repeatedly employed non-theological arguments in the attempt to undermine Darwin's descent. Her loss in this effort has been so devastating that much of the population likely would consider her presence at the game table to be merely a vestige of antiquated thinking which society permits out of respect stemming from the motive of political

[175] Martin Luther, *Luther's Works*, ed. Helmut Lehman, vol. 41 (Minneapolis: Fortress Press, 1967) 226ff.

correctness. An elderly grandmother who does not hear nor see well has assumed the position belonging to the bride of Christ. For someone who has studied molecular biology as well as theology in the Lutheran tradition, this situation is alarming. The absence of any new theological apologetic in the name of Christ clearly indicts the present church. Just as the church in Darwin's day fails to respond adequately to his theory, so she continues to fail now. The casualties, though, are dramatically greater now because an entire arsenal of scientific data has been collected and interpreted in the past 145 years to reinforce Darwin's theory. Most of the carnage has occurred among the intelligentsia, leaving much of the Christian church sidelined in the effort to comprehend new scientific discoveries. The natural tendency for the faithful remaining in the church has been to find refuge within the densely insulated walls of intelligent design arguments which the scientific community mostly rejects. Within these shrinking, insulated walls the church knows that her worldview is losing its influence. This deep-rooted premonition of the church seems to have paralyzed her, leaving her to contemplate and cherish the more glorious days of the past. Perhaps hearing the scathing comments of Daniel Dennett will motivate her again to meet the challenge of evolution theologically rather than suffocating in its relentless influence.

In *Darwin's Dangerous Idea: Evolution and the Meanings of Life*, Dennett draws out the full implications of Darwin's theory of natural selection as they relate to the traditional doctrines of the Christian church. In doing so he arrives at a remarkable conclusion, one which many people would futilely contest and, therefore, ultimately concede because of its realistic basis in everyday life which all people, even Christians, experience. Dennett writes:

> Let me lay my cards on the table. If I were to give an award for the single best idea anyone has ever had, I'd give it to Darwin, ahead of Newton and Einstein and everyone else. In a single stroke, the idea of evolution by natural selection unifies the realm of life, meaning, and purpose with the realm of space and time, cause and effect, mechanism and

physical law. But it is not just a wonderful scientific idea. It is a dangerous idea.[176]

From such a statement one could reasonably assume that Dennett does not think too highly of thinkers like Martin Luther, even though Life magazine ranks him as the third most influential person of the last millennium. Based on the rest of his argument, Dennett seems predisposed to value scientific thinkers as fundamentally superior to all others. This predisposition, however, does not diminish the importance of Dennett's main thesis. In fact, as a scholar at a major institution, Tufts University, his predisposition supports much of this paper's present thesis that evolution has gained the upper hand in nearly all avenues of cultural influence. He prepares his readers by writing crassly early on in his book:

> The kindly God who lovingly fashioned each and every one of us (all creatures great and small) and sprinkled the sky with shining stars for our delight—that God is, like Santa Claus, a myth of childhood, not anything a sane, undiluted adult could literally believe in. That God must either be turned into a symbol for something less concrete or abandoned altogether.[177]

He predicates this statement on Darwin's theory. "Darwin's new perspective turns several traditional assumptions upside down, undermining our standard ideas about what ought to count as satisfying answers to this ancient and inescapable question [of origins]."[178] It would be easy to dismiss Dennett at this point by labeling him as a radical, dogmatic secularist, or even atheist. The problem arises, however, when that label now defines much of the population whom the church is trying to reach with her message; the problem has more to do with disbelief, which is a faith issue. The power of Dennett's thesis is not only in its originality but in its representation of how most people in western culture think. He is speaking for all true Darwinists. For more eclectic Darwinists who include other nonscientific elements in their worldview,[179] Dennett may

[176] Dennett, *Darwin's Dangerous Idea,* 21.
[177] Ibid., 18.
[178] Ibid., 21.
[179] Here we may include much of western

be somewhat extreme, but overall he is on target in his conclusion, and his ideas are theirs as well. In either case, he definitively articulates the challenge of the Darwinian worldview to the church. The church must muster some of its greatest thinkers to counter not only Dennett's thesis but the general convictions held by many which he vicariously expresses on their behalf.

According to Dennett, the danger in Darwin's idea arises because it reverses the entire cosmic pyramid or the "Great Chain of Being" which has been integral in shaping western thought in general and the church's own teachings specifically. "Darwin's inversion [of the cosmic pyramid or "Great Chain of Being"] suggests that we abandon that presumption and look for sorts of excellence, of worth and purpose, that can emerge, bubbling up out of 'mindless, purposeless forces.'"[180] In more polemical terms he asserts:

> Darwin's 'strange inversion' of reasoning was in fact a new and wonderful way of thinking, completely overturning the Mind-first way that John Locke 'proved' and David Hume could see no way around. ... But the idea of Mind as an effect rather than as a First Cause is too revolutionary for some—an 'awful stretcher' that their own minds cannot accommodate comfortably.[181]

Translation: like Darwin, Dennett sees the power of life slowly emerging from the yuck and muck of the cosmos which is omnipresent. This way of thinking puts to death the idea that life comes from God. In Dennett's scheme life does not result from the will of God but from what he calls the algorithmic process taking place in the yuck and muck: "According to Darwin, then, evolution is an algorithmic process."[182] Expounding what he means by this, Dennett continues:

> Here, then, is Darwin's dangerous idea: the algorithmic level is the level that best accounts for the speed of the antelope, the wing of the eagle, the shape of the orchid, the diversity of species, and all the other occasions for wonder in the world of nature. ... Can it really be the outcome of nothing but a cascade of algorithmic processes feeding on chance? And if so, who designed that cascade? Nobody. It is itself the product of a blind, algorithmic process. As Darwin himself put it, in a letter to the geologist Charles Lyell shortly after the publication of *Origin*, 'I would give absolutely nothing for the

[180] Dennett, 66.
[181] Ibid., 65-66.
[182] Ibid., 60.

> theory of Natural Selection, if it requires miraculous additions at any one stage of descent. ... If I were convinced that I required such additions to the theory of natural selection, I would reject it as rubbish.'[183]

Never does the idea end up on the trash heap; instead, it has become one of the most enthroned ideas of western thought.

Such enthronement of Darwin further substantiates the belief of Dennett and much of the current population in western civilization that life is a series of chance interactions which ultimately follow an algorithmic process which is itself the result of a previous algorithm. It is a law-bound, deterministic worldview that continually adapts to the ever-changing cosmic forces. Undeniably paradoxical, Dennett maintains that this worldview comprehends more extensively life in its present form than the biblical worldview does. An overwhelming majority of college educated people with no church affiliation apparently agree. According to a 1998 survey by Trinity University of San Antonio, Texas, approximately 95% of the college educated subgroup believes evolution best explains not only the origin of species but also of life.[184] The survey also shows that this percentage drops among those with less education. The obvious conclusion from this data indicates that for those holding college degrees evolution is the worldview of choice. Church affiliation plays into this trend in a mixed way, with people attending more liberal denominations accepting evolution as an adequate explanation of life and those opposed to evolution aligning themselves with conservative denominations. Dennett describes the process this way:

> Little did I realize that in a few years [in college] I would encounter an idea—Darwin's idea—bearing an unmistakable likeness to universal acid: it eats through just about every traditional concept, and leaves in its wake a revolutionized worldview, with most of the old landmarks still recognizable, but transformed in fundamental ways.[185]

That the universal acid is rapidly spreading calls for the church to return to its base game. Only a

[183] Ibid., 60.
[184] Internet: (http:// www.trinity.edu/mkearl/evolrelg.jpg).
[185] Dennett, *Darwin's Dangerous Idea*, 63.

staunch theological response is capable of neutralizing Darwin's descent through the theory of evolution by natural selection.

That a convincing theological apology against evolution has yet to appear after 145 years of the theory of natural selection reveals two internal problems within Christendom. The two problems are inseparably related. Just as single coin contains two faces pointing in opposite directions, the problems of integrating or ignoring scientific discovery within a theological worldview has lead the church down a forked pathway. To integrate scientific discovery into the biblical worldview often abuses the intent of the Holy Scriptures. The account of creation in Genesis was never intended to be an integral tool in the scientific probing of the origins of the universe. Yet this attempt at perfectly reconciling scientific data with the biblical text is pursued from both liberal and conservative theological standpoints. A liberal reading of the text incorporates the theory of evolution into the text.[186] In contrast, a conservative reading uses scientific data to bolster the claims of the text as it is.[187] Neither attempt is convincing. Some theologians have realized this and simply choose to ignore the claims of science, at least as they relate to the Bible. The Bible becomes untouchable in its exposition of eternal truth, regardless of the latest scientific theories. Christians of this frame of mind often seem completely disconnected with the reality of the world which surrounds them. Surely, long before Darwin, the church struggled with the role of reason in relationship to revelation. Darwin's theory, however, augments the scientific challenge to theology because it goes to the core of the relationship between God and human creatures.

The idea that people evolved from the lowest of microbes leads to the formation of a much different worldview than one which understands God to be an intimate creator of every

[186] cf. Harold Y. Vanderpool, *Darwin and Darwinism: Revolutionary Insights Concerning Man, Nature, Religion, and Society*, Problems in European Civilization, ed. John Ratte (Lexington, Massachusetts: D. C. Heath and Company, 1973). Vanderpool argues that a Christian can be an evolutionist.
[187] Henry Morris of the Institute for Creation Research has established an entire enterprise on this basis.

creature. The evolutionary worldview is predicated on a nebulous, cosmic force that somehow works for the good, whatever that is. It depends on adaptation and survival. The biblical worldview sees life as a gift from God who places all creatures in a beneficial relationship with him, other creatures, and all other aspects of his creation. It depends on good stewardship which recognizes that God has made a costly and "crossly" investment in sustaining this creation. The former view is selfish. The latter is selfless. Selfish behavior usually occurs in response to a feeling of desperation, and Darwin's desperation has been already outlined. As increasingly more people adopt an evolutionary worldview, the church has much work to accomplish in order to understand the desperation looming ominously over a growing number of people. When she deliberately engages in this empathetic endeavor, her frequent antagonistic caricatures of Darwin will cease. Rather than seeing him as her enemy, the church will recognize Darwin to be the definitive spokesman of an age that attempted to make sense of humankind's place in a scientific world. In playing the game of worldviews, the church must use Darwin in his unique historical context to her advantage by articulating a theology that is biblically faithful and culturally relevant. In doing so, the desperation of many may be relieved.

On the Sunday following the burial of Darwin the bishop of Carlisle, Harvey Goodwin, includes the following comment in his memorial sermon for Darwin:

> I think that the interment of the remains of Mr Darwin in Westminster Abbey is in accordance with the judgment of the wisest of his countrymen. ... It would have been unfortunate if anything had occurred to give weight and currency to the foolish notion which some have diligently propagated, but for which Mr Darwin was not responsible, that there is a necessary conflict between the knowledge of Nature and a belief in God.[188]

With this conviction, the relentless yet unnecessary battle between theology and evolution continues. The seemingly unquenchable need for the church to harmonize its beliefs with scientific evidence is strong in Darwin's day and continues to the present day. The burial of

[188] Internet: (http://www.westminster-abbey.org/library/burial/darwin.htm).

Charles Robert Darwin in Westminster Abbey on April 26, 1882, next to the eminent scientist Sir John Herschel and a few feet from Sir Isaac Newton is not simply a gracious recognition of Darwin's legacy by the Church of England but also represents historically a complete capitulation of Christendom to the world of science. Moreover, it reflects a moment in the Christian church's history when her theology is near one of its weakest points. That tickets for the funeral are issued demonstrates how not only the British but much of the world at that time are utterly enthralled with Darwin's theory. Desmond and Moore describe the situation:

> The thinking public would be able to honour the memory of a man who had 'set the stamp of his individual intellect on the age.' Professional gentlemen and their families would find it easy to obtain admission cards to the funeral. These, the papers said, could be collected from Banting's in St James Street during office hours on Tuesday. So many applied that the undertakers did not complete the preparations for the burial until early the next morning.[189]

With the success of his theory, what is historically astounding is not this overflowing funeral attendance but the fact that his many followers have worked so diligently to resurrect him in the present.

For those attending Darwin's funeral and the droves of his theory's adherents today, Darwin has unlocked the mystery of mysteries: human origins. The enthusiasm he ignites within the scientific community is nearly beyond description, as witnessed just recently on the National Public Radio program *Talk of the Nation: Science Friday*.[190] In this program two expert panelists, Tim White from the University of California at Berkeley and Svante Pääbo from the Max Planck Institute for Evolutionary Anthropology, pontificate about the supremacy of Darwin's theory as evidenced by the convergence of fossil and genetic evidence. In many ways the present scientific community speaks as though Darwin never died. For many scientists Darwin's theory represents a different kind of emancipation proclamation that continues to live

[189] Desmond and Moore, *The Life of a Tormented Evolutionist*, 672.
[190] Ira Flatow, National Public Radio's *Science Friday*, "Human Origins Update," March 19, 2004.

even though he has died. Just as President Lincoln issues his order to free slaves in 1863, Darwin frees science from the shackles of the Church with his theory of natural selection in 1859. Historic irony abounds here. Whereas the Church of England sees the burial of Darwin in Westminster Abbey as a public gesture to recognize the reconciliation between science and religion, the scientific community has come to understand his theory of natural selection as its deliverance from the tyranny of the church. Desmond and Moore note that on the day of the burial, "The weather was awful, drizzling rain, with temperatures in the forties. ... In this cold, sepulchral room, the feeling of death was overwhelming."[191] Such an image on the day of Darwin's funeral serves as an appropriate symbol to describe the church's struggle with his theory ever since. Never has she escaped the dark clouds of his theory. Perhaps a break in the sky is coming. Instead of a cold room filled with death, perhaps new life is dawning in the ongoing conversation between science and religion.

Although Darwin has sent the Christian church into a tailspin with his theory of evolution by natural selection, he may be considered one of the church's most unthreatening enemies. The impetus for this writing arises out of a personal angst that seems to resemble in large degree an angst of the present age. Darwin undoubtedly feels this angst. Most people remotely in tune with God and science do, too. Rather than bashing Darwin again, as many Christians have done, the goal here has been to understand him from a historical perspective that is keenly attentive to theology both in Darwin's day and in the present. Darwin does not just appear on the stage of history. He himself descends from a long tradition of evolutionary thinking which itself is embedded in a complex historical context. Moreover, key ideas emerge just before his intellectually fertile period that propel his thinking along the lines of natural selection. Understanding these historical dynamics which descend into Darwin has been a primary goal throughout this study. A second objective has been to consider the impact of these

[191] Desmond and Moore, *The Life of a Tormented Evolutionist*, 672.

dynamics as they literally cause Darwin to descend into an agnostic worldview. Thirdly, Darwin's descent to the present day through a unique worldview highlights the significant challenge the Christian church faces in speaking to a world that is increasingly accepting of his theory. The legal process that gives expression to Western society's struggle with his theory has also been outlined along with a new approach which the church may employ in her response to Darwin's theory. Throughout the metaphors of bridge and chess have been used to demonstrate that for so long the church has been playing the wrong game. Instead of making a theological bid to trump Darwin's evolutionary move, the church has played legal and quasi-scientific games which have caused severe damage in the public's perception of the church and the message she is to proclaim. Darwin's theory not only continues to live, it is thriving. His descent has unmistakably survived better than the church's response to his theory. The church must learn from her mistakes in playing the wrong game and adapt to the present time by articulating a new worldview that is deliberately theological in nature. Now may be the *kairos* moment for the church to forge a new understanding of the relationship between the theory of evolution by natural selection and Christian theology. In doing so, Darwin's descent may be understood less ominously and more beneficially by Christians as a period in history when the Lord has called his church to make boldly a theological confession of who he is. When the church does this, she will not only play the right game, but she will also make her bid!

PART V

CHAPTER 7

MORE THAN JUST GAMES—THIS IS REAL!

That the evolutionary worldview and the biblical worldview have clashed for so long does not bode well for the hope that some sort of reconciliation between the two outlooks awaits in the near future. It is much easier for each side to return to its own particular game and remain comfortable playing it, rather than attempting to learn how to comprehend and appreciate both games for their unique contributions to life. Ever the stirrer of controversy, though, Charles Darwin writes in chapter 24 of the *Origin*:

> It is interesting to contemplate an entangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us. These laws, taken in the largest sense, being Growth with Reproduction; Inheritance which is almost implied by reproduction; Variability from the indirect and direct action of the external conditions of life, and from use and disuse; a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing Divergence of Character and the Extinction of less-improved forms. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of higher animals, directly follows. There is a grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.[192]

In this statement the Christian church may hear not only Darwin pining for hope but also all evolutionists who honestly recognize the need which all living creatures share: to know that something better lies in wait on the other side of death. Even "the laws acting around us" can be

[192] Charles Darwin, "On the Origin of Species," in *The Essential Darwin*, ed. Kenneth Korey, Masters of Modern Science Series, gen. ed. Robert Jastrow (Boston: Little, Brown, and Company, 1984), 227-228.

reinterpreted within a biblical context that intuitively makes more sense to all human creatures. Here Darwin seems to reveal unwittingly his innermost conviction that life has an interconnectedness that makes little sense on the basis of chance, and that even as beautiful and wonderful as life may be, something more must exist on the other side of death.

No adamant evolutionist would concede this interpretation, but frequently the dogmatic interpretation of Darwin fails to understand him as a whole person. When Darwin uses terms like "growth," "variability," "inheritance," "reproduction," "divergence," he often abstracts them as if they have some inherent autonomy. He calls them laws. However, as his life develops, these laws become less understandable from a scientific perspective as sickness and death explode within his own life. The deaths of his mother and daughter, along with the general illness with which his family struggles, transform these laws into human experiences which cannot always be contained under the rubric of rational explanation. From this perspective, people adhering to a biblical worldview can willingly engage people holding an evolutionary one. When evolutionists use terms like "growth," "variability," "inheritance," "reproduction," "divergence," the person with a biblical worldview needs to hear not an attack on the biblical worldview but a gasping attempt to make sense of life without Christ. Each of these terms seeks to provide a little more hope against the inevitability of death. Glibly stated, evolutionary theory offers a worldview that believes everything will work out somehow. Christians need to listen attentively to this false hope. Instead of *somehow*, Christians know that it is *Someone* who brings real hope.

Finally, evolutionists and Christians may see a connection between their two worldviews when Darwin speaks of the war of nature leading to the production of higher animals. Where Darwin sees war, Christians also see war; however, Christians have the opportunity at this point to confess that this war is not the intention of creation. Rather, it is peace, or שָׁלוֹם in its full hebraic sense. Furthermore, where Darwin wants to see higher forms of animals, Christians may

redirect such a hope into the resurrection. What Darwin really yearns for when he uses the words "higher forms of animals" is that life will one day arrive at a better place than today. That sounds like new creation talk from a biblical perspective. Recognizing these fundamentally connected themes in both worldviews allows for a new conversation to take place between evolutionists and Christians. Ultimately, such a conversation will move into the fundamental difference between the two worldviews, the means of getting from the present state of life to the desired one. Whereas the evolutionist predicates hope on a nebulous force of cosmic improvement, the Christian has hope because of the loving Son of God who calls himself the Son of Man—Jesus. Jesus puts a face on the impersonal laws of evolution. As he does, the evolutionist encounters more than a theory. He or she encounters the Savior of this creation. Ultimately, the descent of Darwin matters little. It is the descent of Jesus to save his creation that truly matters.

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