Teilhard de Chardin: 
Science, Theology, and the Medieval Synthesis

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Abstract

Questions of cosmology and human identity are among the most pressing and fascinating areas of inquiry, and they are shared by people in all times and cultures. Perhaps the two most influential approaches to these questions in the Christian West are those of Catholic theology and modern science. These two perspectives offer answers that appear to be very different, and by the beginning of the twentieth century widespread belief had developed that the two approaches were incompatible, if not mutually exclusive.

Jesuit priest and paleontologist Pierre Teilhard de Chardin (1881-1955) did not agree that the approaches and conclusions of science and theology were incompatible on the issue of cosmology. In The Human Phenomenon (written 1938-40; French publication 1955; English publication 1959) and other works, Teilhard laid out a bold vision for reconciling scientific and theological perspectives.

Though Teilhard’s thought was labeled dangerous and rejected by the Catholic Church during his lifetime, his work actually displays considerable resemblance to ancient and celebrated patterns of theology: specifically, the perspectives of medieval theology. In this thesis I will argue that in his effort to resolve the contemporary debate between theological and scientific cosmological and epistemological paradigms, Teilhard looked back beyond the Enlightenment to a time when religion and science were part of a unified worldview, and modeled his synthesis upon elements of this pre-modern perspective.

Using Teilhard’s treatment of human origins as a focal point, I will break down the argument presented in The Human Phenomenon, analyze its constituent parts, and explain the continuities and discontinuities of his thought with the perspectives of modern science, contemporary theology, and medieval theology and cosmology. In this way I will attempt to
understand the methodology and the sources that underlie Teilhard’s creative solution to the dilemma between religious and scientific modes of inquiry and knowledge.

Teilhard’s work has exerted a significant effect upon the development of modern scientific and theological thought, and identifying its roots in the medieval perspective not only gives valuable insight into present-day science and Christianity, but also underlines the constructive potential of medieval thought and the history of theology as sources for solutions to the problems of the modern world.
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Dedication

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To my friends and family: past, present, and future.

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Introduction

What makes a human being a human being? What is the role and significance of humanity in the universe? Such fundamental questions of identity are among the most pressing and fascinating areas of inquiry, and they are shared by people in all times and cultures. In the Christian West, the traditional answers to these questions have been philosophical and theological, with the most influential approach provided by Catholic theology. Theology argues that the human is the center of the material universe, created uniquely by God in His image for a specific purpose and separated by a firm line from the animal world. After the Enlightenment and especially during the nineteenth century with the growing influence of Darwinian evolutionary theory, modern science would state in contrast that the human is merely one of many kinds of animal, formed by blind chance, and descended through a violent history from an apelike ancestor and before that from organisms so simple as to be barely recognizable as living. By the beginning of the twentieth century, these two perspectives stood in stark disagreement on almost every detail. The hostile stances taken on both sides contributed to the widespread belief that theology and science were not simply incompatible, but even mutually exclusive.

This stand-off presented a particular dilemma for Pierre Teilhard de Chardin (1881-1955). As both a Jesuit priest and a paleontologist, Teilhard could not agree that the approaches and conclusions of science and theology were incompatible on the questions of cosmology and human identity.¹ He saw the stand-off between theology and science not as a battleground where one or the other would eventually prevail, but rather as an opportunity for constructive synthesis. He thought that both perspectives had a great deal to contribute and were indeed both necessary.

¹Catholic theology holds that it is impossible for scientific knowledge to contradict theological knowledge, as both come from God. Any apparent contradiction must be the result of misinterpretation of scripture or of improperly conducted science (Heinrich Denzinger, The Sources of Catholic Dogma, trans. Roy Deferrari [Fitzwilliam, NH: Loreto Publications, 1955], 1797).
for a comprehensive understanding of the nature and purpose of human existence. Between World War I (where he served as a stretcher-bearer) and his death in 1955, Teilhard laid out his vision for reconciling scientific and theological perspectives in a number of highly original works. These works, which range from scientific articles to spiritual manifestos and everything in between, would eventually play a significant role in the shaping of modern science and Catholic theology. During his lifetime, however, Teilhard’s thought was not seen favorably by the ecclesiastical authorities, with the result that he was forbidden to publish and forced to leave France. Teilhard spent the greater part of the period from 1922 until his death in 1955 in exile in China, conducting paleontological research and producing many of his most important works including *The Divine Milieu* (1926-27) and *The Human Phenomenon* (1938-40).2

The Catholic Church’s action to repress Teilhard’s work was part of its larger struggle against “Modernism,” a collective term for modern ideas seen as threatening to Catholic orthodoxy, such as evolutionary theory and new critical methods of approach to the Bible.3 Perceiving Catholicism to be under attack, the response of the ecclesiastical authorities to these modern ideas was to adopt a conservative stance and preserve traditional doctrine in the face of rapid societal and intellectual change. Teilhard’s bold synthesis did not fit into this zeitgeist; in fact, he consciously separated himself from this conservative and rigid stance. Furthermore, like the Modernists, Teilhard based his thought upon the fact of evolution4 and upon creative

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2 Publication of Teilhard’s works began in 1955 with the publication of *The Human Phenomenon* in France, where it became the best-selling nonfiction work of the year. It appeared in English translation in 1959 (and has since been translated into 20 other languages), followed by the appearance of his other works throughout the 1960’s. Teilhard’s thought was received with great scholarly and popular interest, which peaked in the middle of the 1960’s before rapidly declining in the 1970’s.


4 Teilhard vigorously believed in the truth and cosmological significance of evolution. He describes it as a “general condition to which all theories, all hypotheses, all systems must bow and which they must henceforward satisfy if they are to be thinkable and true. Evolution is a light illuminating all facts, a curve
methods of biblical interpretation. As such, many Catholics viewed (and continue to view) his work with suspicion and hostility, even though his Catholic faith and trust in the Church remained strong throughout his life.

Though Teilhard’s thought may initially resemble Modernism, closer analysis of his work reveals that his approach was actually firmly based in Catholic theological perspectives. However, he drew primarily not from the dominant approaches of contemporary Catholicism, but rather from older and neglected strains of theology. Teilhard’s synthesis of scientific and religious worldviews displays strong continuity with patristic and especially medieval theological perspectives. In other words, Teilhard looked back beyond the Enlightenment to a time when science and religion were part of a unified worldview, and tried to integrate elements of this pre-modern perspective into contemporary theology and science.

This foundation in medieval theology is especially apparent in *The Human Phenomenon*, Teilhard’s best-known work and probably the most complete and coherent presentation of his cosmological thought. It is an ambitious work that redefines cosmology, drawing generously from science, philosophy, and theology, and written in a poetic and evocative style. In a dense account of a little more than two hundred pages, Teilhard defends and applies his ideas in a tightly argued analysis of the twinned development of matter (the realm of science) and psyche (the realm of theology) through the prehistory and history of life. He completes this wide-ranging account with some thoughts on the next step for humanity, and looks toward the final goal of the universal evolution whose progress he has tracked: a point of maximum complexity that all lines must follow” (Thomas M. King, “Teilhard’s Unity of Knowledge,” in *Teilhard in the 21st Century: The Emerging Spirit of Earth*, ed. Arthur Fabel and Donald St. John [Maryknoll, NY: Orbis Books, 2003], 33-34).

Teilhard’s approach had little in common, however, with the textual and literary-historical methods that characterized Modernist exegesis. As I will explain in Chapter 4, rather than adopt new approaches, Teilhard looked to the history of biblical exegesis, and utilized methods developed in the late antique and especially medieval periods.
and consciousness which Teilhard calls Omega and associates with the Christian God and specifically with Christ. In *The Human Phenomenon*, Teilhard succeeds in resolving the profound incompatibility between religious and rationalistic forms of knowledge that he had inherited, in a way that was both creative and seminal for later thinkers, scientists as well as theologians.

This thesis is an attempt to unpack this complex text and to document and analyze the continuity of Teilhard’s perspective with elements of medieval philosophy and theology. In this process I was aided by a number of secondary works. These include literature on Teilhard’s thought such as Siôn Cowell’s *Teilhard Lexicon* and Henri de Lubac’s thorough apologetic treatments of Teilhard, works on Catholic doctrine such as Karl Rahner’s *Humanisation*, and literature on medieval theology and cosmology, such as E.A. Burtt’s *The Metaphysical Foundations of Modern Physical Science* and M.D. Chenu’s *Nature, Man, and Society in the Twelfth Century*.

To my knowledge, however, there are no existing treatments of Teilhard’s thought that explicitly connect his work to the medieval theological tradition, and therefore my argument will be based principally upon analysis of *The Human Phenomenon*. I will try to trace the sources and process of Teilhard’s thought as he worked to reconcile theological perspectives with an evolutionary model of the universe founded upon modern scientific discoveries. As a true critical understanding of Teilhard’s synthesis of scientific and theological cosmologies is impossible without a definite focal point of analysis, I have chosen to focus on one small part of his larger system: his treatment of human origins. The human is the center of Teilhard’s project, and providing answers to the questions of human identity and human purpose is Teilhard’s primary

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6 Though here again I found it more effective to turn to primary sources, including the Bible, Denzinger’s *Sources of Catholic Dogma*, and papal encyclicals.
goal. Furthermore, the origins of humanity had long been the crux of the struggle that forms the backdrop to Teilhard’s dilemma. Focusing on his solution to the problem of human origins allows insight into the sources, methods, and imperatives that informed his greater synthesis.

To support my thesis that Teilhard’s novel synthesis was grounded in the medieval perspective, I will break down the complex argument presented in *The Human Phenomenon*, analyze its constituent parts, and explain the continuities and discontinuities of his thought with the perspectives of modern science, contemporary theology, and medieval philosophy and theology. My analysis will follow the structure of Teilhard’s argument in *The Human Phenomenon*, and will be organized around the focal point of human origins. Although Teilhard combines all of these topics into a seamless whole, I have broken it down into smaller parts. First, I will present the fundamentals of his argument—his inclusion of psyche into rational cosmology, his great organizing principle of complexity and consciousness, and his theistic, teleological view of evolution—in the context of the history of Western epistemological and cosmological thought. Then, I will trace Teilhard’s argument from the early history of the Earth through the birth and proliferation of life, analyze the doctrine of hierarchical spheres and the idea of directed chance that underlie his cosmology, and explore his particular methodology. Next, I will explore Teilhard’s treatment of human origins, including his argument on the distinction between humans and animals, his idea of a critical point of human origins, and his approach to non-rational modes of knowledge, such as experiential knowledge and revelation. Finally, and too briefly, I will touch on the role of humans in the divine project of universal evolution, and Teilhard’s cosmic extension of elements of Catholic theology.

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In this way I will work to understand the methodology and the sources that underlie Teilhard’s creative solution to the dilemma between religious and scientific modes of knowledge. I will place his synthesis in the context of the history of Western thought, and discern the continuity of his argument with medieval theological perspectives. Teilhard’s work has exerted a significant effect upon the development of modern scientific and theological thought, and isolating its roots in medieval thought not only gives valuable insight into present-day science and Christianity, but also underlines the constructive potential of medieval thought and the history of theology as sources for solutions to the problems of the modern world.
Chapter I: General Considerations and Context

Probably the most crucial and creative step Teilhard took in *The Human Phenomenon* was his decision to include the inside of things—what he called their psychic dimension, or consciousness—into his scientific appraisal of the universe. The question of psyche and its relationship to matter was a crucial one in the debate between theological and scientific cosmological and epistemological paradigms that characterized the Catholic Church’s struggle against Modernism and formed the background and justification for *The Human Phenomenon*. Teilhard’s solution demonstrates his method of bringing together rational and non-rational perspectives, and enables his larger synthesis of theological and scientific paradigms on the medieval model.

Before Teilhard wrote, the traditional idea of humans as fundamentally spiritual beings more at home in heaven than on Earth was sharply challenged by a new scientific outlook that placed humans as fully and totally part of the natural, material world. The result was bitter debate between those who asserted the fundamental transcendence and supreme importance of humanity, and those who treated of humans as simply the most recent iteration of the primate family of animals. This debate involved other, closely related battles over the existence, importance, and nature of consciousness or spirit. Catholic theology holds that spirit exists as truly as matter, is of primary importance in the universal order, and is the defining characteristic of human beings. The upstart scientific perspective, however, placed little trust in what it could

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8 Teilhard explains that he uses the term “consciousness” in its broadest sense to “designate every kind of psyche, from the most rudimentary forms of interior perception conceivable to the human phenomenon of reflective consciousness” (Ibid., 25n). He also uses the word “spirit” to describe this essential concept.

9 For the purposes of this thesis, I will understand the theological perspective to be based upon experiential and revealed forms of knowledge, and the scientific perspective upon pure rational inquiry. The medieval theological perspective, in contrast, included all three types of knowledge: experience, revelation, and rationality. I will explore this scheme in depth later on.
not empirically verify, and by the early end of the nineteenth century had largely eliminated consciousness from its conceptions of the universe. This banishing of psyche was done explicitly in the case of non-human creatures and especially of inert matter, but also, in the form of a prevalent philosophical materialism, in the case of human beings themselves.\textsuperscript{10} Elimination of psyche from the arena of scientific investigation was justified on the pretexts of consciousness’ apparent limitation to the higher organisms, and of its opacity to rigorous experimental study. As a result, consciousness was branded “a bizarre exception, an aberrant function, an epiphenomenon,”\textsuperscript{11} and never again approached by reputable scientists.

This modern scientific perspective represents the logical conclusion of a process of rationalization of inquiry that began in the West with the reintroduction of Aristotle in the twelfth century from the Islamic world. Before then, early medieval thought had depended upon non-rational forms of knowledge, such as experience, revelation, and tradition. The integration of Aristotelian empiricism transformed medieval thought, resulting in the establishment of a constructive balance between rationality and experiential and revealed modes of knowledge that would characterize epistemology and cosmology for over 300 years. This medieval synthesis was the inspiration and the source material for Teilhard’s solution to the contemporary dilemma. However, this medieval balance was eventually upset by the progressive advance of rationalism and the accompanying disenfranchisement of non-rational epistemology, developments that rapidly accelerated in the Enlightenment and reached full expression in the modern scientific perspective.

\textsuperscript{10} Teilhard found this banishment of psyche from human beings especially troubling, as he thought that it would damage the effort to establish morality or find meaning in human life (Ibid., 6-7). These concerns were shared by most ecclesiastical authorities. Later I will explore in more detail the moral element of Catholic theology’s response to evolutionism and the modern scientific perspective.

\textsuperscript{11} Ibid., 24.
Two parallel processes contributed to the gradual collapse of the medieval synthesis and the formation of the contemporary dilemma, and are visibly reversed in Teilhard’s work. The first was the systematization of rational inquiry over time, epitomized by the development of the modern scientific method, with its strict focus on the empirical, physical world, beginning in the early seventeenth century under Francis Bacon and others. This self-contained investigative framework laid the foundations for a scientific cosmology in which psychic phenomena, immune to direct, systematic inquiry, had no place. This perspective developed into the philosophical materialism articulated in the Modernist movement. Teilhard’s emphatic inclusion of psyche into his cosmology represents a clear rejection of this distillation of rational inquiry.

The second process was the influence of Cartesian dualism upon theological perspectives. By drawing a hard line between matter and psyche, Cartesian dualism undermined the investigation of matter through psychic or non-empirical means such as experience and revelation, and the entire project of approaching the physical world as a source of knowledge about psyche or spirit. This turn towards dualism was responsible in part for the stubborn refusal of many contemporary Christians to move beyond “a kind of solitary introspection” and acknowledge the findings of science (including especially the fact of evolution) that so frustrated Teilhard. This new dualistic perspective also undermined the parallel investigation of psyche through empirical means, and supported the nascent scientific method and its single-minded focus on the physical world. Teilhard rejects this dualism, and utilizes a method in the *Human*
Phenomenon that consciously synthesizes empirical and non-empirical modes of knowledge and physical and psychic subject material.

Cartesian dualism may be understood as the contradictory twin of philosophical materialism. Both processes represent departures from the medieval balance between dualistic and monistic tendencies, each to its own logical extreme. Medieval epistemology and cosmology were characterized by the synthesis and equilibrium of these conflicting perspectives. The upsetting of this balance led directly to Teilhard’s dilemma, by causing the evacuation of meaning from the rational cosmology of contemporary science as well as the turn from nature and evolution towards human history and personal experience that characterized contemporary theological inquiry. Teilhard’s perspective may be understood as a return to the medieval synthesis. Both Teilhard’s argument and the medieval perspective represent reconciliation of seemingly incompatible epistemological and cosmological claims, and both place the human at the center of cosmology while balancing spiritual and rational modes of knowledge. The Human Phenomenon represents an attempt to solve the dilemma posed by the incompatibility of contemporary theology with scientific findings, and to provide meaning, purpose, and hope for an increasingly rationalistic world. It accomplishes these goals by turning to the perspectives of the Middle Ages: the last time rationality and spirituality were able to coexist in a coherent epistemology and cosmology.

Teilhard begins his solution to the standoff between theological and scientific perspectives with the inclusion of consciousness into a scientific cosmology characterized by evolution of many varieties: astral, geological, chemical, biological, and finally psychological. He then extends this psychic layer to underlie the entirety of the physical universe. Against the

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limitation or banishment of consciousness, Teilhard argues that “half-seen in this single flash of light [of human consciousness, psyche] has cosmic extension and as such takes on an aura of indefinite spatial and temporal prolongations.”\(^\text{16}\) His position is thus that the structure of the universe is bifacial, containing throughout an inside, or psychic dimension, coextensive with its outside, or material dimension.\(^\text{17}\) From this rationally derived and articulated argument, Teilhard concludes that consciousness is a widespread, even universal, phenomenon and therefore deserves systematic, scientific attention. In contrast to the modern scientific perspective, Teilhard’s “phenomenology or generalized physics”\(^\text{18}\) treats consciousness not as an epiphenomenon but rather as an essential phenomenon in its own right. He places it on par with the outside, material aspect of the universe, or even above it in significance.\(^\text{19}\)

Teilhard defines psyche in two ways. Firstly, he identifies it as range of choice, or freedom from the determinism of matter. In fact, he describes “inside, consciousness, and spontaneity [as] three expressions of one and the same thing.”\(^\text{20}\) This contrast between freedom and matter is also found in traditional Catholic theology, in which humans are described as

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\(^{16}\) Teilhard de Chardin, *The Human Phenomenon*, 24. Here he argues that since consciousness undeniably occurs in the human, it also must be present to some degree and in some form at every point in the material universe. If human consciousness is the result of electrical interactions in the brain, then it follows that electrical interactions (of the sort inevitably provoked by any material organization, whether animal nervous system or zinc alloy) will always result in some kind of psyche. In other words, no matter how diffuse, disorganized, or ephemeral, psyche must inevitably exist everywhere there is organized matter. In Chapter 4 I will explain how this universal extension of consciousness involved a complementary extension of theology, the discipline most intimately associated with spirit as Teilhard conceives of it.

\(^{17}\) Ibid., 24.

\(^{18}\) Ibid., 22.

\(^{19}\) As I will argue below, evolution in Teilhard’s scheme may be understood as the rise and development of consciousness, giving psyche a unique significance in the universe. As in the theological model, Teilhard’s cosmology grants precedence to spirit over matter, especially after the appearance of humans, the first primarily psychic beings to exist on the Earth.

\(^{20}\) Ibid., 25.
having lost the capacity to give full expression to their freedom by reason of the Fall and their corporeal nature.\textsuperscript{21}

Secondly, Teilhard uses the term psyche refers to the quality of organization around a unifying center, which he relates to the ultimate transcendent center of psychic organization, Omega or Christ.\textsuperscript{22} In other words, greater psyche is that which is more consolidated and similar to Christ-Omega. Understanding psyche and soul in terms of similarity to God has a long tradition in theology, but Teilhard takes the novel step of mapping this framework onto the physical world, by connecting the perfection or Christlikeness of psyche to the complexity of the matter it inhabits. This step directly contradicts the perspective of Cartesian dualism, and displays continuity with medieval approaches. Teilhard argues that better-organized matter corresponds to deeper and more perfected consciousness,\textsuperscript{23} and in this way produces an organizing principle that will prove very useful in his attempt to reconcile theology and modern science.

\textsuperscript{21} Karl Rahner, \textit{Homanisation}, trans. W.J. O’Hara (New York: Herder and Herder, 1965), 104. Teilhard’s argument that rationality alone is insufficient to provide a complete picture of the universe hinges upon this understanding of psyche. As rational inquiry is limited to the comprehension of logical, causal relationships, and causality is incompatible with genuine freedom, rational approaches are unable to grasp the existence or nature of freedom (Louis Dupre, “Transcendence and Immanence as Theological Categories,” \textit{Proceedings of the Catholic Theological Society of America} 31 [1976]: 6). For Teilhard, psyche is equated with freedom, and therefore rationality is inadequate to provide an understanding of the presence and action of psyche—including the ultimate psyche of Omega—in the world. As a comprehensive cosmology requires treatment of psyche as well as matter, it must incorporate non-rational approaches as well as rational ones.

\textsuperscript{22} Teilhard de Chardin. \textit{The Human Phenomenon}, 112. This identification of degree of organization with degree of perfection in psyche is traceable to Plato, who near the end of his \textit{Timaeus} argues in so many words that the “well-being of the…soul consists in its being well ordered” (Donald Zeyl, “Plato’s \textit{Timaeus},” \textit{The Stanford Encyclopedia of Philosophy}, ed. Edward Zalta, http://plato.stanford.edu/archives/spr2014/entries/plato-timaeus/).

Next, Teilhard applies this idea to the evolving universe that science has revealed. He argues, based on analysis of the phylogenetic tree and the emergence of humans, that it is a general characteristic of the universe for matter and psyche to progress together toward greater organization and depth. Teilhard frames this as a universal law: the great law of complexity and consciousness. It follows from this that evolution is not a random, purposeless process, as science holds, but rather has a definite, explicable direction, and an axis by which its progression can be measured. Teilhard theorizes that this progression will culminate in Omega, a point of ultimate complexity and consciousness. This outcome of convergence with the divine is very different from and more meaningful than the ultimate state of the universe as predicted by previous scientific accounts. What Teilhard has done here is insert both a system of value and teleology—two hallmarks of traditional theological cosmologies—into the scientific picture of the universe, which had formerly had neither. Moreover, Teilhard argues that this Christ-Omega is not only the most perfect embodiment of psyche in matter and the end point of evolution, but also the force driving and directing that process, the “interior principle of movement” necessary

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24 The phylogenetic or evolutionary tree is a visualization of the development and branchings of the biological world through the course of time.
25 As a leading paleontologist, specializing in the evolutionary development of humans, Teilhard was uniquely well-situated to make such a claim.
27 In this way he maps the medieval certainty that “progressive assimilation to God” was the highest goal and purpose of existence onto the evolutionary cosmology produced by modern science (Marie-Dominique Chenu, “The Platonisms of the Twelfth Century,” in *Nature, Man, and Society in the 12th Century: Essays on New Theological Perspectives in the Latin West*, ed. And trans. Jerome Taylor and Lester Little [Chicago: University of Chicago Press, 1968], 51).
28 Physics predicts that entropy will cause the universe to come to an eternal rest in the infinite diffusion of cold matter and energy. Teilhard describes the place of life in such a scheme as that of “a rocket that rises following the arrow of time and bursts open only to be extinguished—an eddy rising in the midst of a current that descends” (Teilhard de Chardin, *The Human Phenomenon*, 20-21). Teilhard has a much grander future in mind for life and humanity than this.
29 Just as in traditional Catholic theology, Christ-Omega is understood to be the Logos Incarnate, or the Word made flesh (John 1:14).
to animate “[the world’s] irreversible advance toward a higher psyche.”\textsuperscript{30} This is a radically different perspective from that of mainstream science, which held that evolution was fully explicable in terms of natural forces, such as blind chance of errors in reproduction or competition for limited resources, and the nuclear chemistry taking place in the cores of stars.\textsuperscript{31}

In this way Teilhard reinterprets tenets of traditional theology, such as the guiding role of God, a universal scale of good and evil based upon degree of organization and consciousness,\textsuperscript{32} and a teleology. He provides a rational and convincing argument that manages to integrate elements of theology into the contemporary scientific worldview.

These features of Teilhard’s argument lay the foundation for a cosmology capable of offering satisfying and truthful answers to the questions of human identity and purpose that opened this thesis. The elements draw from both scientific and theological methods and conclusions, and provide a preliminary illustration of his success in synthesizing these perspectives on the medieval model. However, these general considerations are only the beginning of Teilhard’s detailed and complex cosmology, and can only offer a glimpse of his creativity and resourcefulness in drawing from medieval and contemporary source material. His full achievement is discernible only through analysis of the specifics of his argument as applied to the natural history of the Earth, and especially of his treatment of human origins, that fault line between scientific and theological perspectives.

\textsuperscript{30} Teilhard de Chardin, \textit{The Human Phenomenon}, 97.

\textsuperscript{31} In fact, what theologians found perhaps most threatening in evolutionism was the apparent ability of its processes to function perfectly well without the guidance, or even existence, of God. Evolution was interpreted by many on both sides of the theological vs. scientific knowledge debate as a foundation for a materialist worldview. This natural alliance between evolutionism and materialism was at the core of the Modernist movement.

\textsuperscript{32} In Chapter 4, I will examine Teilhard’s cosmic reinterpretation of the theological principles of love and sin in terms of complexity and consciousness.
Chapter II: The Birth of Life and Biological Evolution

Upon the general foundations outlined above, Teilhard builds a cohesive and thorough argument on the evolutionary development of matter and psyche, beginning before the birth of life and concluding with the contemporary Earth and the modern human situation. Humanity is unquestionably the focus of his argument, and human origins is the hinge. However, Teilhard’s treatment of the history of life before human origins is crucial to an understanding of that critical point and of Teilhard’s treatment of human life generally. In this chapter, I will explore specific elements of Teilhard’s argument that are important to his greater cosmology and to his claims about human nature and purpose, such as his scheme of hierarchical spheres and his conception of directed chance. I will also analyze his methodology and again identify places of continuity and discontinuity between his thought and the approaches of contemporary theology, modern science, and medieval thought. In this way I will shed additional light on Teilhard’s significant achievement and its place in Western cosmological and epistemological thought.

Teilhard begins his grand survey of life before human origins with a description of the ‘outside’ or material dimension of the early Earth. He explains how cosmic evolution slowly progressed through crystallization of minerals and by extension and polymerization of organic molecules. Contemporaneously with this activity, the ‘inside’ of the planet, or its conscious aspect, was steadily developing and gaining in strength. However, due to the curvature or enclosure of the Earth, the inside, the consciousness, was unable to diffuse as it otherwise would, and had before that curvature was formed. Constrained, the psychic layer was forced to bend back upon itself and continue to swell amid rising pressure. Finally, this psychic energy or pressure reached a critical point and a singular event occurred—“a maturation, a transformation,
a threshold, a crisis of the first magnitude: the beginning of a new order—a crisis of the first magnitude: the beginning of a new order—\textsuperscript{33} \textsuperscript{33}—the birth of life. Teilhard likens this event to a change of state.\textsuperscript{34} Though he recognizes that matter everywhere follows the same laws, Teilhard argues for the existence of distinct “states” or “spheres” in which matter may consist: for example, mineral, organic chemical, biological, etc. He explains, “in the unity of nature there are different types of spheres (or levels) for our experience, each one characterized by the dominance of certain factors that become imperceptible or insignificant at the neighboring sphere or level.”\textsuperscript{35}

This is a crucial step in Teilhard’s argument. It represents an attempt to subdivide a cosmology that had been unifying under the principle of uniformitarianism, the belief that the same natural laws have applied always and everywhere in the universe, since at least the beginning of the nineteenth century.\textsuperscript{36} However, this attempt in itself is not altogether incredible or reactionary: around the same time as Teilhard was writing \textit{The Human Phenomenon}, findings in physics demonstrated that matter behaves very differently at incredibly high speed and on sub-atomic scales. These discoveries appear to support Teilhard’s argument that the world is characterized by division into spheres. However, the arrangement of these spheres into a

\textsuperscript{33} Ibid., 42.
\textsuperscript{34} This application of scientific conceptions of pressure and changes of state to explain psychic development in the early earth may or may not be logically defensible, but it does draw on a long tradition in cosmology of consistent application of the same principles to the physical and the spiritual worlds, especially evident in medieval perspectives (E.A. Burtt, \textit{The Metaphysical Foundations of Modern Physical Science}, 2\textsuperscript{nd} ed. [Garden City, NY: Doubleday Anchor Books, 1955], 26). Later, I will show how this medieval perspective was applied in biblical exegesis, and how Teilhard’s methodology resembles these varieties of scriptural interpretation.
\textsuperscript{35} Teilhard de Chardin, \textit{The Human Phenomenon}, 23.
\textsuperscript{36} The specific scientific term was popularized in 1830 by the geologist Charles Lyell, but the concept had been developing since at least the time of Newton (Burtt, \textit{Metaphysical Foundations}, 219). Compare this perspective to the cosmology of medieval theologian Thomas Aquinas, who argued that only the regions below the moon were susceptible to rational investigation, and that everything beyond was beyond the reach of human reason or even knowledge (Marie-Dominique Chenu, “Nature and Man—The Renaissance of the Twelfth Century,” in \textit{Nature, Man and Society in the 12\textsuperscript{th} Century}, ed. and trans. Jerome Taylor and Lester Little [Chicago: University of Chicago Press, 1968], 15).
hierarchy, let alone one determined by degree of psychic development, is an entirely new development in modern science, and one that draws heavily on ancient and medieval philosophy.

Ideas of hierarchy, commonly expressed in terms of a ‘great chain of being’ stretching from God all the way through inanimate matter, dominated medieval cosmology. They supported medieval conceptions of a divinely ordered universe by assigning to every form of being “a particular position and an appropriate function.”\(^{37}\) Like much of medieval thought, these ideas had deep roots in classical philosophy, especially in the thought of Plato and Aristotle. Briefly, Platonic idealism introduced the concept of perfection descending from pure, immaterial forms, and ranked by correspondence to those forms. Aristotle further developed this foundation by organizing the natural world according to degree of perfection. Medieval philosophy overlaid this hierarchical conception onto the contents of scripture, and produced a coherent chain stretching from God and the angelic hierarchy all the way through to disorganized matter—in some formulations, beyond matter to the circles of hell. Teilhard’s use of this hierarchical construction to inform his thinking about the structure of the universe allowed him to advance a theory of cosmic discontinuity that opposed and complemented the dominant scientific conception of continuity and uniformity. In Chapters 3 and 4, I will show how he used this argument to argue for a significant distinction between humans and animals, and as the foundation for his cosmic extension of theological principles including sin, love, and Creation.

In Teilhard’s argument, the spheres of existence are distinguished most importantly by the degree of depth and refinement of interior consciousness displayed within them.\(^{38}\) The

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\(^{38}\) This same reasoning was displayed by medieval thinkers, who arranged the spheres by degree of spiritual perfection, and before them in Platonic and Neoplatonic philosophy, in which the perfection of a thing was measured in terms of its correspondence to a purely psychic archetype. However, whereas
significant psychic disparity between the biological sphere and the organic chemical sphere from which it arose was a direct result of the emergence of cellular organization of matter. In other words, the main achievement of the cell and by extension of life in general is its novel capacity for incorporating a larger mass of matter into a unified whole. In this way, the advent of life enabled radically increased complexity and consciousness, and thereby relieved the building psychic pressure. The cellular strategy allows for new heights of physical complexity and parallel heights of psychic development\textsuperscript{39}—in short, all of the developments of biological evolution, including its climax in the appearance of humanity.

Following the birth of life, Teilhard turns his attention to biological evolution, and all of the forms of non-human living thing that exist or have existed. Teilhard uses the term “tree of life” to describe this proliferation of forms. This is a significant choice. The “Tree of Life” features prominently in the Hebrew Bible and in Jewish and Christian exegesis, and these historical uses lend Teilhard’s usage of the term additional shades of meaning. Among these is the association of the tree of life with wisdom, most readily apparent from its appearance in Proverbs,\textsuperscript{40} and the common description of the Torah itself as the tree of life. For Teilhard’s argument, this connection points to the idea that the scientific evidence provided by biology and paleontology may in turn lead to significant cosmological and spiritual knowledge. As explained before, Teilhard arrived at perhaps the most important and unique element of his cosmology, the

\textsuperscript{39} It is not lost on Teilhard that the curvature of the Earth is mirrored in the cell, replicating the conditions that produced such an excess of psychic pressure and eventually the arrival of life. Indeed, Teilhard understands all such critical points (or creations of new spheres of existence) to follow the same formula. In Chapter 4, I will trace this typologizing perspective through Teilhard’s work, and identify its roots in medieval theology.

\textsuperscript{40} Prov. 3:13-18. “Blessed are those who find wisdom….she is a tree of life to those who take hold of her; those who hold her fast will be bless.”
law of complexity and consciousness, by means of analysis of the biological world. His method of transformation of insights derived from study of the natural world into a coherent cosmology mirrors those of two distinct systems of inquiry and knowledge: natural theology and modern science.

Natural theology refers to the long tradition in Christian thought of searching for an “intelligible relationship between divine action on the one hand and specific features of the universe and life on the other.”¹⁴¹ This approach draws considerably from Aristotelian modes of inquiry, from its systematic character to its concern with nature, a concern that was largely absent from the Neoplatonic idealism dominant in Western Europe before the rediscovery of Aristotle in the twelfth century. However, as natural theology represents attempts to identify relationships between eternal, spiritual truths and to understand and experience the relationship of God with creation, it also draws from Neoplatonic and Judeo-Christian perspectives, respectively. As medieval thought is also a synthesis of Neoplatonic, Aristotelian, and Judeo-Christian approaches, natural theology may be understood as a quintessentially medieval discipline.⁴² Also linking natural theology to the medieval perspective is the balance it displays between rational and non-rational methods and sources of knowledge. As natural theology seeks to connect specific, natural phenomena to the action of an eternal God, it requires the simultaneous use of rationality, experiential knowledge, and scripture.⁴³ To devise a coherent cosmology, as was a primary goal of natural theologians, these diverse approaches needed to be

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⁴² Another aspect of natural theology that reflects its medieval origins was the confidence of natural theologians that the relationship between God and nature was indeed intelligible and that there was some fundamental correspondence between the spiritual and physical realms. Faith that God’s action in the natural world is intelligible is at the heart of Teilhard’s endeavor in the Human Phenomenon, and ideas of cosmic correspondence also play an important role in his methodology, which I will explore in Chapter 5.
⁴³ Rationality is well-suited to investigation of the physical universe, but inadequate to investigation of God or psyche generally, which requires non-rational modes of inquiry such as revelation and experience.
integrated into one method, and the boundaries between them loosened. The result was a synthesis of these three modes of knowledge, in which rational organization was applied to mystical insight, contemplative knowledge of nature was incorporated into cosmology, and scriptural insights were extrapolated to the physical universe. As it also seeks to open the physical world to non-rational investigation and the psychic world to scientific examination, Teilhard’s argument displays a great deal of similarity to this natural theological perspective.

Modern science, in contrast, attempts to craft a cosmology using only information derived through empirical study. It is rational inquiry stripped of concern for non-physical phenomena, and of other, non-rational modes of knowledge. As such, it distills the turn towards rationalism begun in the West with the reintroduction of Aristotle.

The situation of late nineteenth and early twentieth century theology confronted with the hyper-rational perspectives of modern science is strikingly similar to that of early medieval theology confronted with Aristotelian rationalism. The Modernists could be understood just as accurately as the medieval Aristotelians as having “claim[ed] to interpret with the resources of reason what [contemporary theologians] thought should have been simply received.” In the medieval period, these conflicting perspectives were reconciled in the emergence of natural theology. Teilhard’s project reconciled these same two approaches in the contemporary milieu.

There is thus significant resonance between natural theology and Teilhard’s perspective: another link between his work and medieval theological thought. Like the natural theologians of

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44 I will explore the manifestation of this natural theological perspective in medieval biblical exegesis, specifically, in Chapter 4.
45 To be clear, Aristotelianism did not directly bring about the hyper-rationalization of inquiry that culminated in the modern scientific perspective. Indeed, it was a crucial facet of the medieval balance between rationalism and non-rational perspectives. However, the reintroduction of Aristotle marked the beginning of rationality in Western Europe and therefore of the processes that led to the purification of rational inquiry and the collapse of that medieval balance.
the Middle Ages, Teilhard valued the contributions of reason, but attempted to keep rationality from extending beyond its proper place or shedding the other approaches that complement it, such as experience and revelation. His perspective represents a return to the medieval epistemological balance. Teilhard’s success in solving the dilemma between theology and science proves that synthesizing rational and non-rational approaches on the medieval model is not only feasible, but perhaps even necessary for the stability of a cosmology.  

Teilhard approaches the biological world with this same natural theological perspective, and is immediately greeted with success. His application of the law of complexity and consciousness to the history of life, focusing specifically on the complexity of the nervous system, transforms the tree of life from a bewildering mass to a coherent and ordered whole. This simple step provides to the biological world structure bearing “a depth, a sharpness of feature, and an impetus in which it is impossible not to see the sign of truth.”

Teilhard argues the law of complexity and consciousness is followed in the biological world through the principle of orthogenesis, or directed chance. As he firmly believed in the principle of trial and error as the method by which matter and especially non-human life progressed, Teilhard was in accord with the position of mainstream contemporary science. However, in a serious break from scientific orthodoxy, he did not conceive of evolution as

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47 This is despite the fact that such a perspective directly contradicts the materialistic and Cartesian dualistic worldviews that have dominated since the Enlightenment. The fact that neither post-Enlightenment theology and philosophy nor modern science have succeeded in devising a cosmology as coherent and complete as the medieval and Teilhardian cosmologies is strong evidence for the utility of the natural theological perspective.

48 This focus makes sense, as physical complexity is concentrated in the nervous system, and perfection of the brain is most clearly correlated with deepening of psyche.

49 Teilhard de Chardin, *The Human Phenomenon*, 94. It is worth taking a quick aside to discuss the meaning of “truth” for Teilhard. He describes it as that which provides the greatest degree of consistency and order (Ibid., 61; 119). This perspective demonstrates his indebtedness to the scientific method, in that the truthful explanation is taken to be that which most effectively accounts for all of the facts. It also demonstrates his steadfast faith in the ultimate coherence and intelligibility of the universe: a view central to both modern scientific and medieval theological perspectives.
random in its direction. Teilhard describes his idea of directed trial and error as the process in which “the blind fantasy of large numbers and the precise orientation of a pursued goal are combined. Not simply chance, as we often think, but directed chance.” What he means is that the very existence of a possible goal renders trial and error a directed process, over sufficient time: each step in the right direction is conserved and built upon, while missteps see no further progress or are immediately erased. In the case of Teilhard’s law of complexity and consciousness, successful transformations are generally those that lead towards greater complexity of the nervous system.

The use of the word “generally” is significant, and indicative of an important difference between Teilhard’s method and the mainstream scientific approach. In his prominent defense of Teilhard’s work, the evolutionary biologist Theodosius Dobzhansky makes a distinction between “particular” and “general” approaches to evolution. The former refers to the relatively small-scale inquiry overwhelmingly practiced by modern scientists, such as investigation of wing structure or protein expression in ladybugs, while the latter refers to attempts to examine the universe and evolution as a whole. Teilhard falls squarely into the second camp. The breadth of his inquiry in comparison to those of mainstream science allows him to detect trends that would be missed by more specialized inquiry. Foremost among these is the foundation of Teilhard’s

50 Ibid., 66. An example of this directed trial and error: if there is a short-necked variety of animal and abundant food high in trees, mutations affecting neck length will generally only prove successful if they lengthen it. The animal’s evolution may therefore be said to be directed towards a longer neck.


52 It also allowed him to produce a more complete, holistic cosmology. As mainstream scientists usually focus their attention on very specific areas of inquiry, they are ill-equipped to produce comprehensive cosmologies. This fractured state of scientific knowledge leads to an uncertain and disjointed sense of the universe and the place of humanity within it. Teilhard included all of the facets of nature (including its psychic dimension) into a cosmology that, drawing from the approaches of antiquity and the Middle Ages, was “conceived and represented as an organic whole” (Antoine Fauvre, “Nature: Religious and Philosophical Speculations,” in *Encyclopedia of Religion*, ed. Lindsay Jones [Farmington Hills, MI: Thomson Gale, 2005], 6432). This method allowed him to restore coherence to scientific cosmology.
cosmology, the “law” of complexity and consciousness, which fails to hold true exactly and in and in every case as scientific laws are expected to do, and is therefore much more difficult to detect with more focused modes of inquiry.

Teilhard’s general, inclusive approach allowed him to detect the large-scale pattern of evolution towards higher complexity, and his idea of directed trial and error allowed his theory of evolution to satisfy the requirements of both scientific and theological thought. The concept of directed chance, on the one hand, is able to respect scientific orthodoxy on the randomness with which mutations occur and the role of random mutation and natural selection in determining the course of evolution in the short term. On the other hand, this concept is also able to preserve the directional and guided quality that is the hallmark of Christian cosmology. Since Teilhard theorized that evolution progresses due to the transcendent influence of Omega, or the Cosmic Christ, he was even able to expand his argument about the spiritually progressive nature of evolution to include a Creator who is both benevolent and active in the world.  

This is the Christian God of scripture, reinterpreted to fit a dynamic universe. This incredibly creative solution to an aspect of the apparent irreconcilability of science and theology leads us directly through the tangled branches of the tree of life to a singular event in which the “entire curve of life reappear[s], summarized and clarified:” the arrival of humankind.

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53 In other words, not only in human history and personal experience (the focal points of contemporary theology), but also in nature and cosmology. This identification of God’s benevolence and activity in the world represents a return to the natural theological and medieval perspectives.

54 Teilhard de Chardin, *The Human Phenomenon*, 111.
Chapter III: Human Origins

Human origins occupy an essential place in Teilhard’s argument. The beginning of humanity is the fulfillment of biological evolution, for Teilhard, and our very existence is proof for him that evolution has a direction. Human origins are at the center of Teilhard’s attempt to reconcile the critical importance of humans central to Catholic theology and apparent insignificance of humans in scientific models, and of his argument on the distinction between the human and the animal realms. Human origins marks the beginning of only of a new, reflective configuration of psyche, but also of an entirely new mode of evolution to match: noogenesis, and its newly established domain, the noosphere. The question of human origins also underlies Teilhard’s understanding of the modern human situation, and is a crucial foundation of his argument regarding the ultimate end of evolution. Analysis of Teilhard’s treatment of human origins affords insight into his particular synthesis of rational and non-rational perspectives, and locates his thought within the debate over human origins, which was perhaps the bitterest front in the contemporary struggle between theological and scientific paradigms.

Teilhard presents the appearance of humanity as analogous in many ways to the beginning of life on earth. In the same way that growing psychic energy constrained by the

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55 Ibid., 110. These words, referring to the phase of evolution characterized by the development of human psyche, and the sphere of thought, respectively, are derived from the Greek word nous, which means soul, mind, or intelligence.

Nous is also the name given by Plato to the Demiurge, the creator of the universe and the maintainer of cosmic order (Stephen Menn, “Aristotle and Plato on God as Nous and as the Good,” The Review of Metaphysics, 45.3 [March, 1992]: 546). As Omega is in The Human Phenomenon ultimate psyche (soul) and the cause of universal evolution (complexification or progressive ordering), there is a significant resonance between Omega and the Demiurge of Platonic cosmology. As Platonic cosmology exerted a strong influence upon medieval cosmology, this may be taken as another link between medieval thought and Teilhard’s argument.
The curvature of the earth gave rise to the first cells,\textsuperscript{56} the rise of psychic energy had concentrated in the primates by the end of the tertiary.\textsuperscript{57} This concentration reached the point at which it began to outstrip the capacity of instinctive animal consciousness. This prompted another “radical transformation,” namely, the transformation of instinct into true, reflective thought. Again mirroring his treatment of the birth of life, Teilhard explains this leap in psychic centeredness and flexibility as a curving or folding back upon itself, and calls it “reflection.”\textsuperscript{58} Teilhard defines reflection as “the power acquired by a consciousness of turning in on itself and taking possession of itself as an object endowed with its own particular consistency and value: no longer only to know something—but to know itself; no longer only to know, but to know that it knows.”\textsuperscript{59} This is a fascinating step in his argument. It hinges the entire sphere of what has been traditionally considered the domain of humanity alone—“a world of abstraction, logic, systematic choice and invention, of mathematics, art, calculated perception of space and duration, of anxieties and dreams of love”\textsuperscript{60}—on this one specific and explicable phenomenon of reflection.

Perhaps the most important consequence of the reflection event was that it bestowed a degree of individuality and personality never before seen in the animal world. Teilhard describes the individual animal as:

\textsuperscript{56} Or more accurately, the first cells were formed by chance and then “immediately used and recast into something naturally directed” (Teilhard de Chardin, \textit{The Human Phenomenon}, 38) by this psychic pressure.

\textsuperscript{57} Approximately two million years ago.

\textsuperscript{58} This is a well-chosen term in that it captures the physical sense of bending back—more obviously in its French and British spelling of ‘reflexion’ (Ibid., 255)—while also resonating with the contemplative practice so important to the Jesuit spirituality that underlies Teilhard’s work and the mystical character of the reflection event.

\textsuperscript{59} Ibid., 110.

\textsuperscript{60} Ibid., 111.
…so strictly a slave to the [species] that its own individuality could have seemed secondary and sacrificed…caught in the chain of generations, the animal seemed to have no right to live, and it had no apparent value in itself—except as a fleeting toehold for a race that passed over it, unaware of its existence. Life, once again, more real than lives.  

In this view, the powers of the animal are tied inextricably to the collective process of evolution. A single animal is merely a component of a larger, evolving whole—the species—much as the individual cell is merely a component of an organism. The animal’s individual agency beyond its species’ shared instinctive will to survive is minimal, and its individual value is similarly little. Teilhard’s perspective in this regard mirrors that of modern science. However, Teilhard breaks from the scientific consensus with his claim that, in contrast to the animal, the human individual is unique. His or her freedom and value relative to that of the species is dramatically greater than that of the animal. Reflection has bestowed human beings with creative powers and a degree of choice never before seen in living forms. According to Teilhard, the abilities and freedom that characterize humanity are traits that before our arrival were only found in the theoretical driver of cosmic evolution, Christ-Omega. Since Teilhard equates psyche with freedom from determinism and ultimate psyche with Christ, freedom in this scheme is a divine attribute, along with creativity, reason, and capacity to love. In this argument, humans are made in the image of God, just as Genesis 1:27 describes. This perceived similarity between humans and God, founded directly on the unique abilities of

61 Ibid., 116.
62 As I will explain in Chapter 4, for Teilhard the unique share of humanity in the divine nature entails a share in the divine project of cosmic evolution toward Omega.
63 Human freedom of choice is also a foundational tenet of Christian morality, and one at the heart of the debate between Catholicism and Modernism. The concern of ecclesiastical authorities over evolutionary theory was rooted largely in the tendency of some materialistic readings of Darwinism to elide human choice in favor of blind chance, which would completely undermine all of religious ethics, and perhaps morality as a whole.
64 Gen. 1:27 “So God created mankind in his own image, in the image of God he created them; male and female he created them.”
humans, has deep roots in medieval thought, which conceived of “an eternal Reason and Love…with whom Man as a reasoning and loving being was essentially akin.”

When Teilhard based the distinction between human and animal psyche upon individuality, creativity, and freedom, he drew explicitly on ideas with a long history in Catholic theology. This is most clearly apparent in the traditional threefold conception of humanity as spirit, soul, and body. Catholic theology has since at least the time of Aquinas accepted the fact that animals possess souls, insofar as the soul is considered the generic term for spiritual principle of life, or psyche. Animals, after all, are described as having received the breath of life as well as humans. They do not, however, possess the higher spiritual faculties reserved for humans that are crucial for Teilhard’s argument. They are not rational, lack free will and individuality, and entirely cease to exist upon dying. In this scheme, animals have souls but not spirits: the spirit, or the rational mind, is the unique product of reflection. In Catholic terms, the creation of Adam represents the origin of the human spirit. Teilhard’s theory of reflection in this way allowed him to affirm the Catholic precepts of the identity in substance of animal and human psyche and the unique status and powers of the human soul.

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66 Though this formula appears in the Bible (1 Thess. 5:23; Heb. 4:12) and into the patristic period, notably and most influentially in Augustine’s *Faith and Creed*, its distinction between soul and spirit was struck down as heretical in the ninth century (Denzinger, *Sources of Catholic Dogma*, 338). This endorsement of a unified soul was made to stress the unity of substance shared by the “principle of the spiritual mental life,” unique to humans, and the “principle of the corporeal (vegetative and sensitive) life, shared by all living things (Ibid., 1655). However, the terms “spirit” and “soul” have nonetheless continued to be used to designate the higher and lower faculties of the soul, without implying an ontological distinction between the two (Ludwig Ott, *Fundamentals of Catholic Dogma*, trans. Patrick Lynch and James Bastible [St. Louis: Herder and Herder, 1955], 97).
67 Gen. 1:29.
68 Teilhard’s position on the distinction between instinctive and reflective psyche owes a great deal to the influence of Henri Bergson, who wrote at length on the dual nature of the human psyche and attempted to design a philosophical method based around instinct, or intuition (Henri Bergson, *An Introduction to Metaphysics*, trans. T.E. Hulme [New York: G.P. Putnam’s Sons, 1912]). Bergson, however, insists on the absolute heterogeneity of the two functions, while Teilhard holds fast to the theological tenet of their
him to theorize a simultaneous continuity and discontinuity of the animal and human. This synthesis allowed Teilhard to solve a crucial issue in the debate between religious and scientific modes of knowledge.

As we have seen, theology privileges humans as unique, fundamentally spiritual beings who represent the most significant aspect of the material universe. Crucial to this status is the idea that the human race simultaneously transcends and is part of the biological order. Mainstream scientific thought, in contrast, did not recognize any human transcendence, largely because the phenomenon of reflection, and psyche generally, is invisible when looking at the human from a purely external perspective. Accordingly, traditional scientific accounts fail to recognize the supreme importance of humanity in the history of the universe. Teilhard’s theory of reflection functions as a means to restore humanity back to its medieval place at the center of the universe, while also respecting the findings of contemporary science that humans are biologically nothing more than the latest additions to the primate family.

Teilhard’s conception of the simultaneous continuity and discontinuity of humans with the biological order depends upon his argument that human origins was a critical point, rather than a gradual process as mainstream science held. Analysis of Teilhard’s treatment of the discrete reflection event provides insight into his methodology, and places his thought within the medieval perspective.

69 Since the early 1990’s, however, a significant bloc of anthropologists has held the position that there actually was a critical period of a few thousand years—not a discrete event as Teilhard argues, but a period so short as to be just an instant on evolutionary timescales—in which early humans demonstrated sudden and dramatic advances in intelligence and complexity of behavior (Jared Diamond, “The Great Leap Forward,” Discover 10 [May, 1989]). Though this theory places the critical period at around 40,000 years ago, rather than the approximately two million proposed by Teilhard, it still represents important scientific support for a core tenet of the argument presented in The Human Phenomenon.
After its significance as a foundation for Teilhard’s argument that a hard line separates animals and humans, the next most important consequence of conceiving of human origins as a critical point is the way in which it protects human origins from scientific study. As a discrete event with no detectable immediate effects, located in the distant past, the precise character of the reflection event is sheltered from rational investigation in a way that a slow and gradual development would not be. Teilhard argues that as there is no way to examine the mechanism of reflection scientifically, investigation of human origins is not an appropriate use for scientific inquiry.  

This underlines a pivot point in the debate between theological and modern scientific approaches: the opacity of phenomena to scientific investigation. The mainstream position of science is that the universe is solely composed of matter, and that the scientific method is theoretically capable of providing a full understanding of the workings of matter. It follows that rationalists have faith in the capacity of scientific inquiry to explain the entire universe. By contrast, theological approaches assert the existence of psyche or spirit, which is not accessible to rational inquiry. Christians therefore believe that modern science cannot provide a complete description of the universe and that it therefore must be completed by experiential and revealed sources of knowledge. Teilhard leans heavily towards the latter position. Though he clearly values the input of scientific knowledge, he also values experiential and revealed knowledge, and is comfortable with abandoning rational epistemology when empirical data is not

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70 Teilhard de Chardin, *The Human Phenomenon*, 116. Furthermore, he argues that even if human origins were accessible to a scientific understanding, this would not solve the “human problem,” nor would it provide a comprehensive understanding of what humanity actually is (Ibid., 129). To do that requires examination of the “unfolding” of humanity, and its psychic character. Here Teilhard again holds the position that empirical, external science is unable on its own to produce a complete cosmology.


72 Teilhard argues in fact that Catholic faith must be “nourished [by] a steady flow of new scientific information (Haught, "Darwin and Catholicism,” 492).
forthcoming or feasible. For Teilhard, more subjective alternatives to rational inquiry are not only acceptable, but also even necessary components of a comprehensive epistemology. In this way, his position again mirrors that of medieval theological perspectives after the integration of Aristotelian rationalism into the Neoplatonic and Judeo-Christian mixture of experiential, scriptural, and traditional modes of knowledge that had previously dominated.

Teilhard’s willingness to explore non-empirical modes of inquiry is demonstrated in the case of human origins. Concerning reflection, Teilhard writes that “the greatest resource we have to guide us is contemplating the awakening of intelligence in the child.” It is notable that even in the absence of scientific methodology Teilhard privileges experiential knowledge, such as that gained through contemplation, over scripture. This is indicative of how Teilhard approached scripture and Catholic tradition: not as authoritative sources of fact but rather as points of departure—the beginning of analysis, not its end. His project was to fit scriptural interpretation to scientific fact, and not vice versa. Teilhard believed in the truth of Catholic dogma. However, in the spiritual or allegorical modes of interpretation long favored by Catholic tradition for use in cosmology, the purpose of scripture is not to transmit factual information but rather to transform the listener. Therefore, scriptural truth is open to interpretation while scientific fact achieved through rigorous application of the scientific method is not.

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74 Catholic theology had supported allegorical rather than literal readings of Genesis, specifically, since at least the time of Augustine, who held that approaching Genesis as a record of historical fact would obscure its deeper, spiritual meaning (Augustine, *The Literal Meaning of Genesis*, trans. John H. Taylor [New York: Newman Press, 1982]). The position that scripture should not be used as a source for scientific information was reaffirmed by Pope Leo XIII in 1893 (Leo XIII, *Providentissimus Deus*). I will address Teilhard’s use of allegorical approaches to scripture in more detail later on.
75 This approach is explained by Teilhard’s close friend and apologist Henri de Lubac in his canonical *Medieval Exegesis: The Four Senses of Scripture* as consideration of “the truth of faith not as a brute given fact, but as an assimilating force that transforms the very intelligence” (de Lubac, *Medieval Exegesis*, xvi). Dobzhansky in his defense of Teilhard adopts a similar position and contrasts scientific “spectator” language with religious “participant” language (Dobzhansky, “Teilhard de Chardin and the Orientation of Evolution,” 244-245).
With that said, Teilhard was not against drawing from scripture when both scientific inquiry and personal experience fail to provide a complete picture. On the inability of science or experiential knowledge to completely explain the phenomenon of reflection, for example, he writes: “we can see no further, and our argument must cease…except in the case of the Christian who, drawing upon an added source of knowledge, may advance yet another step.”\textsuperscript{76}

In the next chapter, I will explore Teilhard’s approach to scripture, its precedents in medieval theology, and the role of revelation in his greater epistemology and cosmology. Teilhard’s treatment of human origins demonstrates that his faith in rational inquiry is matched by faith in the epistemological value of experiential knowledge and the truth of Christian revelation. This perspective places Teilhard firmly within the medieval theological paradigm.

\textsuperscript{76} Henri de Lubac, \textit{The Religion of Teilhard de Chardin}, trans. René Hague (London: Collins, 1967), 12. In the case of human origins, this openness to theology as a source manifests most significantly as flexibility towards the proposition of a “creative operation” or “special [divine] intervention” to fill the gap left by a scientific analysis (Teilhard de Chardin, \textit{The Human Phenomenon}, 114n), and of a “unique couple” in whom reflection occurred and from whom the human race has descended, an obvious nod to the Genesis account of Adam and Eve (Ibid., 127n).
Chapter 4: Human Evolution and Catholic Dogma

As Teilhard points out, investigation of human origins is not sufficient to provide a complete picture of the nature and purpose of humans in the world.\textsuperscript{77} To truly solve the dilemma between Catholicism and modern science and provide satisfactory answers to the important questions of cosmology and human identity, it was necessary for Teilhard to extend his account beyond the point of human origins, to the modern day and even to the realization of Omega in the far future.\textsuperscript{78} It is equally necessary now that the project of identifying the medieval and synthetic elements of Teilhard’s argument follow him. Analysis of Teilhard’s treatment of humanity and the world after reflection allows further insight into his approach to ethics and to Christian revelation, and concludes my argument that Teilhard’s synthesis of scientific and religious paradigms displays clear similarity to its medieval counterpart.

As briefly mentioned at the beginning of Chapter 3, Teilhard understood human origins to mark the beginning of a new sphere of existence and a new mode of evolution to match.\textsuperscript{79} This novel variety of evolution, in contrast to those which came before, is primarily psychic and primarily convergent.

As humans are the first embodied beings in whom the freedom of psyche outweighs the determinism of matter,\textsuperscript{80} after human origins psyche is given a preeminence in the world which it

\textsuperscript{77} Ibid., 129.

\textsuperscript{78} As Teilhard’s primary goal was to provide a spiritual guide for the modern era, this turn from the past to the present and future makes sense. On his treatment of human origins and history, Teilhard writes: Early Man, for me, is only the gate leading to ‘Future Man’—the existence of such a ‘Future Man’ being, in my opinion, the strongest foundation on which to build the new faith in God which is so urgently needed by the Man of today” (Ursula King, \textit{Spirit and Fire: The Life and Vision of Teilhard de Chardin} (Maryknoll, NY: Orbis Books, 1996), 217-218).

\textsuperscript{79} The noosphere and noogenesis, respectively.

\textsuperscript{80} Ibid., 119. This characteristic enables, and in fact even enshrines in Teilhard’s cosmology, the free will so important to theological accounts. Before Teilhard, the last Catholic thinker to devote such effort to integrating free will into their cosmology was Thomas Aquinas: the medieval theologian who, perhaps
had previously lacked. By dividing history at the point of reflection, Teilhard is able to agree with science that matter and material interactions are the most crucial phenomena in the universe (before human origins) and with theology that psyche and psychic phenomena are the most important phenomena in the universe (after human origins).\textsuperscript{81} His resolution to the debate over the relative significance of matter and psyche follows the medieval model of subdividing cosmology to prevent conflict.\textsuperscript{82}

This new predominance of psyche also changes the structure of cosmic evolution from the divergence that characterizes mineral and biological evolution to a pattern of convergence towards the Omega point. This shift can be investigated most easily and fruitfully through analysis of Teilhard’s argument regarding human responsibility for the progression of noogenesis and the achievement of Omega.

Teilhard argues that the unique status and powers of humanity, described in Chapter 3,\textsuperscript{83} bring with them significant responsibility in terms of advancing the divine endeavor of cosmic development and convergence towards Omega. As Omega is a point of maximum centeredness and therefore unification, it can only be reached through the universal convergence of psyche.

\begin{itemize}
\item more than any other figure, epitomized the medieval synthesis of rational and non-rational modes of knowledge (Rahner, \textit{Homanisation}, 103).
\item To clarify, as Teilhard equates Omega with ultimate psyche, and characterizes cosmic evolution generally as a psychic process, in his argument psyche is the most important phenomenon in the universe throughout history. However, before human origins, matter played a determining role in the progression of evolution, whereas afterward psyche plays that determining role. It is in this sense of determination that I talk about the relative importance of matter and psyche.
\item This model was also shown in Chapter 2 to inform Teilhard’s doctrine of hierarchical spheres. His division of cosmology at the point of human origins mirrors the medieval conception that the universe is divided into sublunar and superlunary spheres (meaning below and above the moon, respectively). In that scheme, the sublunary spheres included all material, changeable things, followed generalizable laws, and yielded to rational inquiry, while the superlunary spheres were comprised of eternal, spiritual truths. This conception helped to prevent conflict between rational and non-rational modes of knowledge and inquiry until the collapse of the medieval synthesis, and Teilhard’s similar system works to achieve the same balance.
\item Including free choice, individuality, reason, creativity, and capacity to love.
\end{itemize}
This means that in order for the divine design for creation to be fulfilled, humans must use their unique free will and capacity to love in order to come together in perfect unity.

This emphasis upon unity is shared by Christian theology, where it appears numerous times in the Bible and in the official pronouncements of the church. Indeed, human unification even plays a role in traditional Catholic eschatology, as evidenced by references to the “armies of heaven” composed of all believers who fight for God at Armageddon, and the fact that only the unified Church is resurrected and/or Raptured to join Christ in heaven.

The social implications of the perspectives of unity shared by Teilhard and traditional theology stands in stark contrast to the racist and often colonialist or militaristic readings of evolutionary theory common at the time. This social Darwinism replaced Christian ideas of universal brotherhood with a worldview based on competition between individuals or races, and was widely seen as inseparable from the scientific theory of natural selection itself. Teilhard, however, saw social Darwinism as misapplication of a legitimate biological principle. Drawing

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84 One particularly telling instance may be reproduced here: John 17:22-23, in which Jesus says, “I have given them the glory that You gave me, that they may be one as We are one—I in them and You in me—so that they may be perfected in unity.” This passage demonstrates the correspondence between the unity of God and the unity of the Church, and indicates the importance of unity to the achievement of perfection.

85 Denzinger, Sources of Catholic Dogma, 246-247; 468; 1685; 1954; 2199; 2280.

86 Apoc. 19:14

87 1 Thess. 4:16-17. There are, however, many obvious differences between traditional Catholic and Teilhardian eschatologies. Probably most significant among these is that Teilhard’s gives humans an important and even crucial role in the arrival of the New Jerusalem, while traditional theology stresses divine action and judgment in a final and inevitable cataclysmic event. Teilhard argued that any theology that does not assert a crucial active role for humanity in the redemption of the world was incapable of inspiring the action and love necessary to get us through the difficult and pivotal modern age.

Teilhard’s vision also lacks the emphasis on destruction, chaos, and judgment that fill most traditional accounts. Indeed, Teilhard seems to entirely skip over most of Revelation, probably because the contents of that book do not offer much in terms of material for a constructive theology capable of inspiring love and action.

88 The association of evolutionary theory with such doctrines contributed to the concern, mentioned above, that acceptance of evolutionism would lead necessarily to the disintegration of morality. It was therefore an important factor in the reluctance of Catholic authorities to accept the fact of Darwinian evolution, or even consider Teilhard’s theistic evolutionism.
again from his doctrine of hierarchical spheres, he argued that the utility of competition and selfishness was limited to the biological sphere, and that in fact human progress depends on the extent to which we can transcend that competitive drive. \(^{89}\)

For Teilhard, in other words, to progress to Omega human psyche must overcome the tendency of matter to diverge. This tendency is demonstrated on a small scale by the selfishness demonstrated in the biological world, and on a large by the obvious divergence of the structure of the tree of life, and by the infinite diffusion of matter and energy predicted by mainstream science to be the fate of the universe. \(^{90}\) Due of its unique powers, humanity has the ability to function as a force of aggregation to overcome this divergent force and enable further psychic synthesis towards Omega. Teilhard has framed humans as “co-creators with the Creator”\(^{91}\) and thus reaffirmed Catholic teachings about the special role of humans and about our relationship with the world. This argument demonstrates Teilhard’s unique combination of theology and evolutionary theory, a synthesis made explicit by his identification of theological concepts as major participants in the cosmic process of evolution.

In Teilhard’s scheme, divergence, in the forms of entropy, \(^{92}\) morphological divergence in the animal world, and social and individual disharmony in the human world, is described under the familiar theological term of “sin.” As divergence represents a departure from the divine design of complexification and convergence, his approach displays continuity with traditional

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\(^{89}\) In this way he again uses the medieval scheme of hierarchical spheres to defend the uniqueness of humanity, and exempt it from the reductionist generalizations of modern science. As I explained above, Teilhard felt that a purified rational epistemology such as modern science was incapable of providing complete or meaningful answers to the questions of human nature and purpose, and, by vigorously denying the existence of psyche and the value of non-rational modes of knowledge and inquiry, might even impede the development of such answers from other sources. Teilhard’s defense of human exceptionalism is a critical piece of his argument, and one that clearly draws from medieval thought. \(^{90}\) Ibid., 20-21.

\(^{91}\) Cowell, *The Teilhard Lexicon*, 7.

\(^{92}\) The identification of entropy as the ultimate enemy is not unique to Teilhard’s thought. It appears sporadically in science fiction, as well, notably in Isaac Asimov’s *The Last Question*. 
approaches to sin. Indeed, such a conception of sin as divergence appears in scripture, as a significant share of sinful phenomena represent threats to unity, and confession, forgiveness, and reconciliation pivot upon the restoration of an individual into the unity of the Church. However, Teilhard’s cosmic extension of sin, and its destabilizing effect upon the contemporary understanding of Original Sin, was too radical for the Catholic authorities, and it became the focal point of their censure of his work.

This “cosmicization” of sin in Teilhard is matched by extension of its opposite: love, or the universal force of aggregation. By defining sin and love as fundamental characteristics of matter, appearing in somewhat different but recognizable form in each of the spheres of existence, Teilhard is able to put the concepts of good and evil on an objective, scientific foundation. The human is thus placed at the center, or perhaps in the vanguard, of a universal struggle between two rationally defined opposing forces. Teilhard has again returned humanity to the center of cosmology, and a position of similarity to God (as Omega) in both powers and purpose. He has restored humans to the place they enjoyed in medieval visions of the universal order, and now also provided an objective basis for their moral sense.

Teilhard’s cosmic extension of theology, though it may appear radical and did so to many ecclesiastical authorities, displays continuity with medieval currents of scriptural exegesis.

93 Teilhard’s recognition of divergence or disorganization as one of the fundamental traits of existence displays continuity with the Platonic scheme of creation so influential in medieval thought. In the Timaeus, chaos is seen as a basic characteristic of matter, and one that continues to assert itself even after the imposition of order upon the primordial, disorganized matter by the demiurge at the creation of the universe. Plato sees this chaos as wholly opposed to beauty and perfection (Zeyl, “Plato’s Timaeus”).
94 For instance, Gal. 5:19-21 prominently includes “hatred, discord, jealousy, fits of rage, selfish ambition, dissensions, factions, and envy” in its list of sinful acts.
95 As in Matt. 18:15-17, where refusal to confess is shown to entail expulsion from the Church.
96 Rather than merely as states of the human soul, as traditional theology holds.
Specifically, when Teilhard sets up sin, love, and creation\(^97\) as universal phenomena, with common blueprints but differing in specific expression according to their sphere, he is drawing heavily upon typological and anagogical methods of biblical interpretation. Teilhard’s approach to scripture represents a synthesis of these two methods.

Typological exegesis attempts to establish a relationship of prediction and fulfillment between the Old Testament and the New. For instance, and to return to a familiar example, there exists a tradition in Christian exegesis of understanding the Tree of Life in the Hebrew Bible to prefigure and be fulfilled by the Cross of Christ in the New Testament. This technique served to connect the two Testaments into a coherent theological text “reverberating with the same revelations,”\(^98\) and appealed to the medieval desire for consistency and order. In contrast, the anagogical sense relates the events of the Bible to their eternal spiritual significance. In such a sense, both the Tree of Life and Christ’s Cross are only symbols of some greater and inclusive universal truth.

Teilhard’s approach may be understood as a synthesis of these two modes of interpretation. First, he takes typology to its logical conclusion by expanding it far beyond the Bible to include the natural world. This transforms the spheres of existence themselves into a “coherent theological text,” adding another layer of order and intelligibility to the universe. In such a scheme, human reflective love is prefigured by animal instinctive attachment, and before that by chemical and physical attractive forces. Teilhard’s use of typology draws heavily from the tradition of natural theology, and reflects the “Two Books” doctrine of the Middle Ages, which held that “the book of nature reveals God as creator and the book of Scripture reveals God

\(^{97}\) Teilhard treats human origins, as well as the birth of life, as Creation events (Teilhard de Chardin, *The Human Phenomenon*, 124), related in allegorical form in the Genesis narrative, and following the general pattern described above of psychic pressure and release with the emergence of a new sphere.

as redeemer.” Teilhard’s extension of typology to the natural world represents an attempt to find continuity between the Two Books of nature and theology, and in that manner to restore coherent meaning to the world on medieval terms.

Teilhard then draws on the tradition of anagogical interpretation to identify the fundamental spiritual truths signified by the “types” appearing throughout scripture and the spheres of nature. This is where his “cosmicization” of theological elements comes into play: sin is not chemical, animal or human divergence, but is instead the essential principle of divergence: a natural law that applies in its own way to every sphere. In this scheme, the Tree of Life of the Hebrew Bible and the biological world is found again in Christ’s Cross and in the striving of human culture and personality towards Omega, but its true significance includes and transcends all of these, and may be described as the principle of matter’s eternal struggle towards God.

Teilhard’s cosmic extension of theological elements is based in a long tradition of allegorical exegesis that reached its peak in the Middle Ages. Indeed, even his synthesis of typological and anagogical modes is grounded in traditional approaches to scripture, since the two senses were not distinguished until the twelfth century by Hugh of St. Victor in his De scripturis et scriptoribus sacris. Teilhard’s strategy allows him to reconcile the claim of Modernist exegetes that theological truths are “not absolute and unchanging but are affected by historical conditions and circumstances” with the claim of traditional theology that they are indeed eternal and absolute. Teilhard recognized that the contemporary era and the rise of

100 Teilhard writes that the Cross symbolizes for him “not just the expiation of sin, but the upward and laborious rise of all creation” (Robert L. Faricy, “Teilhard de Chardin’s Theology of Redemption,” Theological Studies 27 (1966): 554).
historical biblical criticism threatened to limit the Bible’s significance to its period, and take away its status as “mirror of eternal truth.” He was determined not to let that happen, and was frustrated by the dominant “pedestrian and unimaginative” patterns of contemporary exegesis that he saw as insufficient to prevent it. His solution to the challenges he perceived as facing contemporary Catholicism was to return to its sources, especially medieval theology. The Human Phenomenon represents a reconciliation of medieval and theological perspectives with the modern, scientifically informed worldview. Teilhard searched the history of Western spiritual thought for strains that were capable of tempering and fulfilling the findings of science, and succeeded in synthesizing them into a coherent and persuasive doctrine that preserves the integrity of both theology and science.

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103 De Lubac, Medieval Exegesis, xv.
105 This project is itself rooted in the theology of the Middle Ages, as evidenced by the familiar medieval refrain of “ad fontes!” or “to the sources!”
Conclusion

In his synthesis of modern scientific and medieval theological perspectives, Teilhard sought to complete the materialist cosmology produced by science, and to rescue it from meaninglessness and existential despair. To accomplish this, he turned to some of the most creative and versatile strains of Catholic thought, the principal repository of almost 2000 years of spiritual insight. By drawing from the perspective dominant at the last point in Western thought when rationality and spirituality were able to constructively coexist—the medieval theological perspective—Teilhard was able to resolve the dilemma posed by the incompatibility of contemporary scientific and religious epistemology and cosmology.

Ironically, this significant achievement of reconciliation proved immediately polarizing among audiences both secular and religious. In the scientific community, The Human Phenomenon was received with attitudes ranging from guarded enthusiasm to outright scorn. The crux of many of these opinions, positive as well as negative, was the methodology of the work, and the genre into which it should be placed. Commentators from the scientific world agreed nearly unanimously that The Human Phenomenon was not a scientific work, as Teilhard describes it. From scientists who generally supported his work, this appeared as regret that Teilhard failed to “separate clearly his scientific generalizations from his mystical insights” and (perhaps condescending) tolerance for his “gallant attempt to reconcile the supernatural elements of Christianity with the facts and implications of evolution, [which] in no way detracts

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106 Teilhard de Chardin, The Human Phenomenon, 1. “The book I present here must not be read as a metaphysical work, still less as some kind of theological essay, but solely and exclusively as a scientific study.”

from the positive value of his naturalistic general approach.”¹⁰⁸ To those who did not support his project, Teilhard’s work was “anti-scientific, “nonsense,” “a feeble argument, abominably expressed,” and only managed to provide the illusion of actual content through its “all but totally unintelligible style [which was] construed as prima-facie evidence of profundity.”¹⁰⁹ Though presented with varying degrees of vitriol, what these opinions display is a lack of faith in Teilhard’s method of integrating experiential and revealed knowledge into a rational perspective, combined with a desire to preserve the integrity of modern science. Unlike Teilhard and the medieval theological perspective, these scientists seem not to recognize the necessity of complementary approaches to comprehensive inquiry, or any limitation upon the domain of rationality. Their perspective displays continuity with rationalism’s demonstrated pattern of abandoning experience and revelation, which began with the dissolution of the medieval epistemological balance. Some scientist-commentators even disputed the meaninglessness and existential angst Teilhard argued to be produced by the dominant scientific cosmologies, often returning to the familiar narrative of continual progress driven by science:¹¹⁰ a narrative to which even Teilhard largely subscribes. The consensus position of modern science faced with *The Human Phenomenon* was that science must be kept separate from mysticism and scripture and that rationality is fully equipped to solve all problems with which humanity is faced. This

¹⁰⁸ Julian Huxley, Introduction to *The Phenomenon of Man*, by Pierre Teilhard de Chardin (New York: Harper & Row, 1961), 19. Julian Huxley, famous evolutionary biologist and perhaps the most significant supporter of Teilhard in the scientific world, provided the introduction to the *Human Phenomenon*. Huxley’s support for Teilhard’s work, as well as his opinion regarding its supernatural aspects, are interesting in comparison to the statement of his grandfather, Thomas Henry Huxley, early and pugnacious supporter of Darwinism, the “one of [evolutionary theory’s] greatest merits, in my eyes, is the fact that it occupies a position of complete and irreconcilable antagonism to that vigorous and consistent enemy of mankind—the Catholic Church” (Leo J. O’Donovan, “Was Vatican II Evolutionary? A Note on Conciliar Language.” *Theological Studies* 36 [1975]: 500).

¹⁰⁹ Peter Medawar, “Review of Teilhard de Chardin’s *The Phenomenon of Man*,” *Mind* 70 (1961). Tellingly, Medawar refers broadly to the tradition of natural philosophy of which Teilhard’s work is a part as “a philosophical indoor pastime…which does not seem even by accident to have contributed anything of permanent value to the storehouse of human thought.”

¹¹⁰ Ibid.
response may be read as a vigorous vote of confidence in the status quo. This majority position has largely persisted in the decades since the publication of Teilhard’s work.

The reception of Teilhard’s work in the religious arena was markedly different. Firstly, his thought has proved foundational outside the Catholic Church in the development of ecological and New Age spiritual movements; Teilhard is in fact the most commonly cited influence upon New Age leaders.\footnote{David H. Lane, \textit{The Phenomenon of Teilhard: Prophet for a New Age} (Macon, GA: Mercer University Press, 1996): ix.} Secondly, his influence upon Catholic thought has been profound, despite the initial resistance to his work. This influence is most easily visible in the reforms decided upon at the Second Vatican Council, which spanned the period 1962-1965. Many of the most important voices at the council were either explicitly supporters of Teilhard, like Henri de Lubac, whom I cite frequently above, and Joseph Ratzinger (the future Pope Benedict XVI\footnote{Though Ratzinger in his later life was known as a traditionalist, in his earlier years he was a passionate and even radical reformer.}), or were otherwise invested in the renewal of theology through engagement with the findings of science (e.g. Karl Rahner) or return to patristic and medieval perspectives (e.g. Yves Congar, Marie-Dominique Chenu, de Lubac). It is now widely accepted that Teilhard’s thought played a guiding role at Vatican II, most obviously in reference to the “irreversible commitment” of Catholic thought to dialogue with evolutionism that began at that Council.\footnote{O’Donovan, “Was Vatican II Evolutionary?” 493.} Changing attitudes towards evolutionary theory had become evident by 1950, with the circulation of Pius XII’s encyclical \textit{Humani generis}, which clarified the dangers of some readings of evolutionary theory,\footnote{Including association with monism, pantheism, and the dialectical materialism of the communists (Pius XII, \textit{Humani Generis}, 1950).} but allowed that a moderate evolutionism may be reconcilable with Catholic dogma—paving the way for projects like Teilhard’s to achieve orthodoxy.

However, by popular consensus it was Teilhard more than any other thinker who brought
evolutionism into the theological conversation and dictated the tone of Catholic engagement with evolution, a tone of optimism, love for all of creation, and inclusion of all forms of spirituality.\textsuperscript{115} Though it is not often explicitly stated, Teilhard was a major influence upon the development of Catholic thought in the twentieth century, and aspects of his thought and method are clearly visible in modern theology. There remains resistance to his thought,\textsuperscript{116} but there also remains resistance to the reforms of Vatican II in general. Change happens slowly in the Catholic Church, but it seems safe to assume that Teilhard’s thought is on its way towards complete rehabilitation.

In the end, then, Teilhard and his project of renewing the medieval synthesis had a far greater impact on theology than on modern science. Just as it did when Teilhard wrote, scientific rationalism largely continues to ignore the contributions of experiential and scriptural knowledge. His message of epistemological balance on the medieval model is as relevant as it ever was, and his work—and now also the strains of Catholic thought that bear his influence—have a great deal to contribute to the complicated task of building a coherent epistemology and cosmology for the modern world.

\textsuperscript{115} O’Donovan, “Was Vatican II Evolutionary?” 494.
\textsuperscript{116} One noteworthy recent example is a recent article in Vatican newspaper \textit{L’Osservatore Romano} that spoke positively of Teilhard’s thinking on the subjects of globalization and racial and cultural convergence, which provoked a great deal of anger and even speculation regarding the “Modernist agenda” of the Catholic leadership, over 100 years after the initial condemnation of the Modernist movement by Pope Pius X (“\textit{L’Osservatore Romano} Praises Teilhard for Predicting [sic] the World’s Socialization.” \textit{Tradition in Action}. http://www.traditioninaction.org/ProgressivistDoc/A_165_Teilhard.html/)
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