THE GREAT WAR AND THE DEATH OF GOD: POSTWAR BREAKDOWN OF WESTERN CULTURE, RETREAT FROM REASON, AND RISE OF SCIENTIFIC MATERIALISM

A Thesis
submitted to the Faculty of
The School of Continuing Studies
and of
The Graduate School of Arts and Sciences
in partial fulfillment of the requirements for the degree of
Doctor of Liberal Studies

By

Charles A. O'Connor, III, J. D.

Georgetown University
Washington, D.C.
October 2012
THE GREAT WAR AND THE DEATH OF GOD: POSTWAR BREAKDOWN OF WESTERN CULTURE, RETREAT FROM REASON, AND RISE OF SCIENTIFIC MATERIALISM

Charles A. O'Connor, III, J. D.

DLS Chair: Terrence Reynolds, Ph. D.

ABSTRACT

Since World War I, scientific materialism has emerged as the dominant metaphysic of the 20th century, with its claim that reality is merely configurations of brute, mindless matter governed by indifferent physical laws having no underlying meaning or purpose. Scientific materialists present their metaphysic as scientific truth based upon their epistemological conviction, called scientism, that science is the only reliable source of genuine knowledge about reality. Although scientism and scientific materialism have accompanied the advance of science since the Enlightenment, they ascended to prominence only after World War I, the axial event in modern Western civilization. This thesis proposes that the war contributed significantly to the 20th century rise of scientism and scientific materialism by causing a broad Western cultural retreat from rational engagement with metaphysics, and then critiques their respective claims to objective truth and scientific certainty about the nature of the universe.

After examining the post-Enlightenment cultural engagement with scientism and scientific materialism which consistently mitigated their prewar influence, the thesis explores the effects of the war's cultural devastation, especially on those Western cultural institutions historically concerned with cosmic meaning and purpose, namely,
theology, philosophy, literature, and art. The war precipitated a generational revolt among Protestant Crisis theologians, led by Karl Barth, who rejected reason and advocated Scripture alone to understand God and the universe. The war inspired Pierre Teilhard de Chardin to align Christian thought with evolutionary science, but the Catholic hierarchy remained hostile to meaningful engagement with modern science.

The war profoundly influenced the philosophy of Ludwig Wittgenstein, Edmund Husserl, and Martin Heidegger with the result that European philosophy lost its remaining rationalist content and deferred metaphysical questions to the arts. Their thought fostered two postwar movements in philosophy: logical positivism, which supported scientism and rejected metaphysics, and existentialism, which disregarded metaphysics and focused on human authenticity. Literature primarily addressed the war's psychic toll, essentially deferred to science, and largely accepted an indifferent, materialist universe, exemplified in works by Ernest Hemingway, Franz Kafka, and Jean-Paul Sartre. In art, the war inspired Dadaism and its successor Surrealism, which savaged human reason as the cause of a disastrous war and celebrated man's unconscious in a mechanized postwar world and an indifferent universe.

Having shown that the war created a cultural vacuum which facilitated the rise of scientism and scientific materialism by causing a postwar loss of faith in human reason and disengagement from metaphysical concerns, the thesis undertakes a rationalist critique of three leading scientific materialists – Jacques Monod, Richard Dawkins, Daniel Dennett, and Stephen Hawking – by pointing out the limits of their inductive reasoning and the logical inconsistencies in their worldviews.
PREFACE

Hardly a week goes by that we do not see a new book, movie, or TV series on one of the two topics addressed in this thesis: World War I, or the Great War, as it became known; and Scientific Materialism, its neo-Darwinian counterpart Scientific Naturalism, or their mutual belief system Atheism. The coming centenary of the Great War has renewed interest in this seminal worldwide tragedy of the modern era and its dominant impact on Western civilization and culture. Simultaneously, exponential scientific progress from the Enlightenment to the present day has produced an increasingly vocal group of scientists and philosophers which advocates that science provides the sole access to objective truth and explains the entire universe in terms of matter, physics, and evolution. Consequently, they contend that traditional belief in a meaningful and purposeful universe or a providential God or a higher power is both indefensible and illusory. Despite the growing multimedia attention to the ongoing effects of the Great War and the increasing influence of Scientific Materialism, scholars have made little effort to understand the relationship between them. This thesis attempts to bridge that gap.


To John F. Haught for his thirty years of inspirational mentoring, my wife Susan F. Plaeger for her steady encouragement and critical analysis, and my brother-in-law Mark W. Plaeger for his editorial and technical support.
Contents

Copyright ii
Abstract iii
Preface v
Dedication vi

Chapter 1. Introduction 1
Scientism, Scientific Materialism, and the Rise of Modern Science 6
Rationalism, Empiricism, and Reason 11

Chapter 2. God, Science, and Reason in Prewar Western Culture 20
The 17th Century and God's Machine 22
The 18th Century and the Rationalism-Empiricism Debate 24
The 19th Century, Cultural Anarchy, and God 32
The Romantic Revolt against the Newtonian Machine 38
Darwinian Evolution and Vitalism 45

Chapter 3. The War and Cultural Disintegration 53
Fin De Siècle Civilization and Culture 54
The Shock, Euphoria, and History of the War 59
The Experience and Disillusionment of War 66
Postwar Disintegration of Civilization and Culture 71

Chapter 4. Postwar Christian Theology 83
Prewar Christian Theology 87
Barth's Neo-Orthodoxy 91
Teilhard's Evolutionary Theology 97
Barth, Teilhard, and Modern Science 104
Postwar Theology's Disengagement from Scientific Developments 106

Chapter 5. Postwar Western Philosophy 113
Ludwig Wittgenstein 116
Edmund Husserl 125
Martin Heidegger 135
Logical Positivism and Existentialism 144
Postwar Philosophy and Scientific Materialism 149
CHAPTER 6. POSTWAR WESTERN LITERATURE
Modern Science and the Role of Postwar Literature 154
Modernism and the British War Novel 158
American Novels of the Great War 167
The Postwar Continental Novel 174
Literature and Scientific Materialism 183

CHAPTER 7. POSTWAR WESTERN ART
The Prewar Avant-Garde – Cubism, Futurism, and Expressionism 190
The War in Cubist, Futurist, and Expressionist Art 192
Dadaism: Zürich, New York, Hanover, Berlin, Cologne, and Paris 196
From Dada to Surrealism 209
Dada, Surrealism, and Scientific Materialism 218

CHAPTER 8. POSTWAR SCIENTIFIC MATERIALISM
Scientific Reasoning: the Problems of Induction and Reductionism 229
Monod's Chance and Necessity – the DNA Explanation 230
Dawkins' Blind Watchmaker – the Neo-Darwinian Explanation 235
Hawking's Grand Design – the Gravity Explanation 248
The Inherent Contradictions of Scientific Materialism 258

CHAPTER 9. SUMMARY AND CONCLUSION

APPENDIX: WORKS OF ART
Figure 1. William Blake, Newton (1795)
Figure 2. Pablo Picasso, Les Demoiselles d'Avignon (1907)
Figure 3. Ludwig Kirchner, The Street (1913)
Figure 4. C. R. W. Nevinson, Returning to the Trenches (1914-15)
Figure 5. Vincent Van Gogh, A Pair of Shoes (1887)
Figure 6. Umberto Boccioni, Elasticity (1912)
Figure 7. Ludwig Meidner, Apocalyptic Landscape (1913)
Figure 8. Fernand Léger, Soldier Smoking (1916)
Figure 9. Fernand Léger, The Card Game (1917)
Figure 10. Christopher Nevinson, La Patrie (1916)
Figure 11. Ernst Ludwig Kirchner, Artillerymen in the Shower (1915)
Figure 12. Ernst Ludwig Kirchner, Self-Portrait as a Soldier (1915)
Figure 13. Otto Dix, Self-Portrait as a Soldier (1914)
Figure 14. Otto Dix, Self-Portrait as Shooting Target (1915)
Figure 15. Otto Dix, Skat Players (1920)
Figure 16. Hans (Jean) Arp, Untitled (Collage with Squares)
Arranged According to the Laws of Chance) (1916-1917)
Figure 17. Marcel Duchamp, Fountain (1917)
Figure 18. Marcel Duchamp, *The Bride Stripped Bare by her Bachelors, Even* (or *Large Glass*) (1915-23)

Figure 19. Kurt Schwitters, *Revolving* (1919)

Figure 20. George Grosz, *Daum marries her pedantic automaton ‘George’ in May 1920. John Heartfield is very glad of it* (1920)

Figure 21. Max Ernst, *Santa Conversazione* (Sacred Conversation) (1921)

Figure 22. Max Ernst, *Pieta or Revolution by Night* (1923)

NOTES 319

BIBLIOGRAPHY 401
CHAPTER 1

INTRODUCTION

O judgment! Thou art fled to brutish beasts,
And men have lost their reason.

– William Shakespeare, *Julius Caesar* (1599)

In the two decades between World Wars I and II a worldview, called scientific materialism, emerged and came to dominate the modern Western mind. In this worldview reality is merely inert matter moving in accordance with indifferent natural laws: complex gravitational laws alone caused the Big Bang which started it all, and neo-Darwinian evolution fully explains the emergence of life, mankind, and the human mind. Furthermore, scientific materialists contend that this fundamentally mindless, meaningless, and purposeless universe is a matter of scientific fact, and that further belief in a purposeful world, or a divine providence, or a higher power constitutes a lack of intellectual integrity and a delusional submission to outworn, disproven myths.

This thesis proposes that World War I, or the Great War as it became a known, contributed significantly to the 20th century rise of this atheistic cosmology and its claim to scientific truth by precipitating a broad cultural retreat from reasoned engagement with metaphysical questions. Although scientific materialism had accompanied the rise of science since the Enlightenment, prewar Western cultural institutions consistently mitigated its influence. During the three centuries leading up to the war, philosophy, theology, literature, and art actively advocated contrary metaphysics which characterized the universe as meaningful, purposeful, and divinely
inspired. Western culture also aggressively challenged scientific materialism's underlying theory of knowledge (called scientism) that empirical science is the only reliable source of objective truth. The Great War summarily ended this broad engagement by undermining confidence in man’s reason and shattering his cultural landscape – a shattered cultural landscape onto which scientism and scientific materialism marched largely unchallenged.

World War I (1914-18) was the axial event in modern Western civilization. It exploded the 19th century myth of unbounded progress, impugned Enlightenment confidence in human reason to direct mankind's affairs, and brought about the end of European bourgeois civilization. On August 3, 1914, the eve of Britain's declaration of war against Germany, British Foreign Secretary Sir Edward Grey foresaw the impending destruction of Western civilization: "The lamps are going out all over Europe. We shall not see them lit again in our time." By the war's end, Grey's dire prophecy had come true. In his Outline of History (1920), H. G. Wells declared that the war had altered the fixed ideas of the prewar world in a manner "unparalleled in all history." And in his England after War (1923), C.F.G. Masterman called the war "the greatest singular catastrophe which has tormented mankind since the fall of Rome," and he considered Europe "still uncertain whether civilization as we understood it will endure."

The Great War shocked and profoundly affected those intellectuals, artists, and writers throughout Europe who endured and survived it. In his comprehensive study of the war's effects on Europe's intellectual elite, historian Roland N. Stromberg
concludes: "the Western world would never quite recover from the shock; the mind's distrust of itself, of thought and expression and reason, was a permanent legacy, a legacy of skepticism and nihilism and cynicism found in all intellectual circles -- one is tempted to say -- ever since." H. G. Wells's biographer Warren Wagar added that "the war crushed hopes, raised fears of the futility of Western civilization, set off a revival of religious feeling, killed outright half a generation of European youth, and discredited much of the thought and many of the thinkers of the prewar generation."

With Western civilization in collapse, Western culture in search of new values, and human reason in self-doubt, one particular worldview strode confidently to the fore. Its proponents asserted that the scientific method was the only reliable source of objective truth and that scientific materialism was the only intellectually defensible worldview. For these intellectuals, the universe was simply the hurrying of matter in accordance with physical and natural laws, reality was basically meaningless and mindless, and God was dead.

This view of reality – impersonal, remorseless, and indifferent – is as old as Western civilization. It is the pre-philosophical world of Homer and the Greek tragedians: Necessity (Ananke) and Fate (Moira) governed the ancient world, gave order to reality, and even ruled the Olympian gods. For this reason, in 1925, Alfred North Whitehead (1861-1947) identified the Athenian tragedians, rather than the Greek philosophers, as the true fathers of this modern scientific viewpoint, which he called "scientific materialism." The crucial difference between the ancients and the moderns, however, was that the Greeks accepted the impersonal world of Necessity on faith,
whereas the scientific materialists proffered it as scientific fact. Scientific materialism emerged like Phoenix from the ashes of the Great War to become the reigning metaphysic of the 20th century to the present.¹⁰

British philosopher Bertrand Russell (1872-1970) typifies the basic convictions of scientific materialists in his following statement about science as the one reliable source of genuine knowledge of the world: "I cannot admit any method of arriving at truth except that of science . . ." and "what science cannot discover, mankind cannot know."¹¹ This epistemological position, called scientism, relies upon the experimental method to explain the basic facts of the universe. Those facts are essentially the physical matter available to our senses and the physical laws under which they operate.¹² From his epistemological premise, Russell derives his metaphysical conclusion: the universe lacks meaning and purpose, and contrary views like those of the monotheistic religions are intellectually indefensible and fundamentally false.¹³

Scientism and scientific materialism span today's Western academic disciplines. French biochemist and Nobel laureate Jacques Monod concludes that chance alone guides the universe and accounts for all living things, including man.¹⁴ British zoologist Richard Dawkins contends that blind chance, billions of years, and genetic adaptability and heritability fully account for the complexity and creativity in nature, adding that "Darwin made it possible to be an intellectually fulfilled atheist."¹⁵ American philosopher Daniel Dennett asserts that science's acceptance of DNA-based reproduction and evolution renders the Judeo-Christian God a demonstrable illusion – "that God is, like Santa Claus, a myth of childhood, not anything a sane, undeluded
adult could literally believe in. That God must either be turned into a symbol for something less concrete or abandoned altogether." And world renowned British physicist Stephen Hawking declares that gravity alone caused the Big Bang, creating the world out of nothing and eliminating the need for "intervention of some supernatural being or God."  

More than three decades before the war, but sensing that Western civilization was not yet ready for his message, Friedrich Nietzsche (1844–1900) issued his famous proclamation, "God is dead." This utterance by Nietzsche's madman, however, was intended not as a scientific but as a cultural critique, based upon Nietzsche's perception of a centuries-long erosion of Christian faith from its own inherent contradictions.

Furthermore, before the war, Christian thinkers generally construed, even embraced, Nietzsche's message as a call for spiritual renewal. Rather, it was after the war that philosophers, like Martin Heidegger, Karl Jaspers, and Jean-Paul Sartre, began to focus upon Nietzsche's Will to Power, the powerful "drive for distinction," which Nietzsche considered the ultimate motivating force of all reality, a law of necessity in the impersonal world of fate. Thus, Nietzsche's impersonal and godless metaphysics took hold in the postwar era, complementing the rise of scientific materialism.

Religion rests fundamentally upon the conviction that reality is ultimately trustworthy and transcendentally meaningful, despite its empirically inaccessible mystery. For theism, exemplified by Judaism, Christianity, and Islam, God is the deepest ground for this ultimate trust in reality and in life's meaningfulness. “Religion can get on with any sort of astronomy, geology, biology, physics,” writes philosopher
W. T. Stace, "but it cannot get on with the purposeless and meaningless universe." Consequently, with its claim to scientific truth and its view of reality as mindless and meaningless, scientific materialism poses a profound challenge to theism, religion, and their ethical value systems, calling into question their rational justification and intellectual integrity.

_Scientism, Scientific Materialism, and the Rise of Modern Science_

In focusing upon the war's impact on the rise of scientific materialism, this thesis, as a threshold matter, must come to grips with this term and its epistemological backbone, scientism, and their respective relationships to the rise of modern science. Philosopher John Wellmuth defines scientism as "the belief that science, in the modern sense of that term, and the scientific method as described by modern scientists, afford the only reliable natural means of acquiring such knowledge as may be available about whatever is real." In other words, the various natural sciences, like mathematics, physics, chemistry, and biology, constitute the entire field of available and authoritative knowledge about reality, and the scientific method constitutes the only reliable means of broadening and deepening accurate knowledge.

Scientism shadowed modern science almost from its Enlightenment origins, but grew rapidly during the Victorian era. Between the 1820s and 1880s, according to intellectual historian Franklin L. Baumer, scientism attempted "to answer all questions scientifically, to turn everything possible into a science, including in some respects even the humanities, and to apply the principles of science to the world of action." Auguste
Comte (1798-1857) embodied this trend by founding a scientifically oriented philosophy, called *positivism*. Positivism intended to reform philosophy and society by studying the observable facts and formulating the scientific laws governing relations among them.\(^{28}\) Comte's scientism was neither reductionist nor materialist, however, since he did not attempt to explain phenomena in terms of biology and chemistry.\(^{29}\) Following the theological and metaphysical stages of the human mind's historical evolution, positivism arose, for Comte, as the third and ideal stage, when man began to ask the "how" rather than the "why" questions.\(^{30}\) Claiming to be the founder of sociology, Comte thought positivism would transform society, bringing about an intellectual, social, and ethical ideal in which humanity itself would become God, the so-called Great Being.\(^{31}\)

Materialism gradually arose with scientism as a modern school of scientific thought. Whitehead labeled it "scientific materialism," which he defined as:

\[
\ldots \text{the fixed scientific cosmology which presupposes the ultimate fact of an irreducible brute matter, or material, spread throughout space in a flux of configurations. In itself such material is senseless, valueless, purposeless. It just does what it does do, following a fixed routine imposed by external relations which do not spring from the nature of its being.}\(^{32}\)
\]

Scientific materialism rules out the nonphysical in reality, and reduces all phenomena to their biological and chemical components. Some materialists leave room for spontaneous emergent complexity in nature, and, for this "softer" variant of scientific materialism, theologian John F. Haught uses the term "scientific naturalism."\(^{33}\) Still, scientific naturalism also explains life as the product of chemistry and mind as the product of Darwinian evolution, and it does not accept a non-naturalistic or theological
explanation for these emergent phenomena, including the human mind. Rather, scientific naturalism considers these emergent processes wholly explainable in terms of their antecedent physical components. Consequently, this thesis uses the more basic term, scientific materialism.

Scientism and scientific materialism trace their roots to the rise of modern science in the late 16th and early 17th centuries. Scientists like Galileo (1564-1642) and Francis Bacon (1561-1624) began separating orderly investigation and inductive evaluation of nature (natural philosophy) from the scientifically stifling atmosphere of pervasive medieval metaphysics and theology. Galileo focused on efficient causes as distinct from final causes, that is, how things happen rather than why they happen. At the same time, René Descartes (1596-1650) divided reality into mind and matter (thinking and extended substances), after eliminating doubt about his existence and about the products of his senses (cogito ergo sum). Thus, just as modern science began its great historic inquiry into the physics and mechanics of nature, Descartes' dualism effectively ejected mind from nature. In the 17th century, writes Baumer, nature had become "like a great machine or clock, made of dead matter, possessing fundamentally mathematical characteristics, functioning mechanistically rather than teleologically, obedient to invariant natural laws."

Empiricists appeared in the following generation of scientists. John Locke (1632-1704) undertook a philosophic analysis of human thought, Descartes's cogito. Locke considered the mind an essentially passive substance: ideas originate in sensations, and sensations have either primary qualities (measurable attributes, e.g.,
shape, motion, solidity, and length) or secondary qualities (subjective attributes, e.g., color, sound, smell, taste). The new mechanistic world of science gave priority to sensation's primary qualities, the measurable characteristics of matter, and ignored sensation's secondary qualities as scientifically irrelevant. By assuming a priori that these two types of human sensation represented fundamentally different and unrelated qualities, Locke bifurcated the ordinary human experience of nature. Life itself became a dull, quantitative affair; shape and mass supplanted the smell and redness of the rose.

Philosopher William Barrett points out the long-term philosophic implications of Locke's binary world of primary and secondary qualities. First, the disassociation of the two sensations implied "that the world of physics, the world of material science, gives us the real and basic truth, over against our human world." Such binary thinking planted the seeds of scientism. Second, the disassociation of the sensations of consciousness from consciousness itself implied that "this primary fact of self-consciousness somehow becomes dubious. Sensations seem such clear and distinct, hard and fast, objective data that the consciousness, or mind, by comparison, begins to look like a fleeting or unwarranted ghost." Consequently, mind became unreal, matter became concrete reality, and science became the source of the "really real." Scientism and materialism were becoming handmaidens.

In the next generation, David Hume (1711-76) further reduced Lockean sensations into distinct and disconnected sense impressions, and even doubted cause and effect among these atomistic impressions. Hume disputed that the regular repetition of a sequence proved either causation or even the probability of continued repetition –
one billiard ball striking another ball that subsequently moves does not show causation per se or necessarily prove that such motion will recur following another strike. For Hume, causation was merely an inference drawn from human habit; the most we can say about B following A is that they are conjoined, not causally related, facts. Suddenly, the mechanistic world began to look like a composite of disconnected material elements having little to do with one another.

If every effect is distinct from its cause, as Hume asserts, then every apparent causal relationship is entirely arbitrary and science itself becomes impossible. Science never questioned Hume's position on causation, however, leaving that issue for Immanuel Kant (1724-1804) as a purely philosophical matter. Instead, science and scientism continued to assume the underlying order of nature, deeply rooted in Western civilization. After the Great War, Ludwig Wittgenstein presented Hume's reductive and atomistic world in his *Tractatus Logico-Philosophicus* (1921), and the logical positivists adopted it as an accurate account of human experience.

Although Comtean positivism did not embrace it, materialism gained prominence in early 19th-century Germany, ironically the home of Hegelian idealism, which considered the real to be the rational. Scientific developments in atomic theory, chemistry, and energy indicated the persistence of matter and the constancy of energy, and tended to support a materialistic view of nature. Support for materialism grew especially in the second half of the 19th century with publication of Charles Darwin's *On the Origin of the Species* (1859). For example, Ernst Haeckel's *Riddle of the Universe* (1899) identifies matter alone as fundamental reality (the monism of matter),
using Darwin's theory to argue for life's evolutionary ascent from nonliving carbon compounds due to spontaneous generation.\textsuperscript{44} Darwin's great advocate Thomas Henry Huxley (1825-1895) denied he was a materialist, except when debating his religious opponents, because, like many positivists, Huxley was largely an agnostic, a term which he coined.\textsuperscript{45}

Baumer cautions against exaggerating materialism's prewar impact, however, since the idea of nature as mechanism was more central to 19th-century scientism than nature as essentially inert matter. Mechanism resonated with the industrial age and its interest in machines; it embodied man's perceived control over nature and his benign view of technology as a servant of mankind, for mankind's betterment.\textsuperscript{46} Materialism reached its zenith after the Great War, when reductionist thinking took hold.

\textit{Rationalism, Empiricism, and Reason}

Since this thesis places major responsibility for the postwar rise of scientific materialism upon the retreat from \textit{reason}, the term warrants up front explanation of its meaning and usage herein. Both rationalism and empiricism, of course, claimed to use reason as they separately undertook and eventually vied with one another to explain reality from the Enlightenment to the Great War. By definition, rationalism is "the philosophic view that emphasizes the ability of human reason to grasp fundamental truths about the world without the aid of sense impressions"; and empiricism is the philosophic view "that experience is the source of all knowledge, thereby denying that human beings possess inborn knowledge or that they can derive knowledge through the
exercise of reason alone.” In practice, these two philosophic viewpoints usually encroach on one another, as we see even in medieval scholasticism. Whereas St. Anselm (1033-1109) undertook his famous ontological argument for the existence of God entirely within the mind, St. Thomas Aquinas (1225-1274) based his five proofs of the existence of God on a rational understanding of objects within our ordinary experience.

The medieval mind was thoroughly rationalistic, convinced that the world was divinely created and supervised, and, therefore, completely intelligible. Whitehead maintained that this divinely ordered and intelligible world of medieval rationalism and theology made the greatest contribution to the scientific movement of the Enlightenment by conveying confidence in the possibilities of Western science. He attributed the historical revolt of the 17th century to three factors: "the rise of mathematics, the instinctive belief in the detailed order of nature, and the unbridled rationalism of the thought of the later Middle Ages."

By rationalism, Whitehead means "the belief that the avenue to truth was predominantly through a metaphysical analysis of the nature of things, which would thereby determine how things acted and functioned." He further explains that "the historical revolt was the definite abandonment of this method in favor of the study of empirical facts of antecedents and consequences. In religion, it meant the appeal to the origins of Christianity; and in science it meant the appeal to experiment and the inductive method of reasoning." By definition, induction means "proceeding from the observation of some particular facts to a generalization (or conclusion) concerning all
The inductive reasoning of the empiricists was the antithesis of the deductive rationalism of the scholastics. But, as Whitehead emphasizes, medieval rationalism gave science "the rational justification for this method of Induction." Rationalism is necessary to justify science's reliance upon the inductive method because induction depends upon a conviction that nature is ordered and intelligible. Unless the past affords knowledge of the future there is no basis for trusting induction. That trust, as Whitehead explains, requires the use of reason:

Induction presupposes metaphysics. In other words, it rests upon an antecedent rationalism. You cannot have a rational justification for your appeal to history till your metaphysics has assured you that there is a history to appeal to; and likewise your conjectures as to the future presupposes some basis of knowledge that there is a future already subjected to some determinations. The difficulty is to make sense of either of these ideas. But unless you have done so, you have made nonsense of induction.

Science justifiably reacted to the unbridled rationalism of the Middle Ages, but it never sought to justify its faith in induction, and even remained blithely indifferent to Hume's critique of causation.

Instead, science accepted Descartes's dualism between mind and matter, focused on Locke’s primary qualities, i.e., the measurable aspects of matter, like mass, force, and velocity, and developed a mechanistic theory of nature because it worked well in practice. The measurable aspects and spatial location of matter, however, are only abstract logical constructions; they are not concrete reality as we observe it. Whitehead calls the assumption that scientific abstractions constitute actual reality the "Fallacy of Misplaced Concreteness," and this fallacy forms the metaphysical basis of scientific materialism. "The enormous success of the scientific abstractions," writes Whitehead,
"yielding on the one hand matter with its simple location in space and time, on the other hand mind, perceiving, suffering, reasoning, but not interfering, has foisted onto philosophy the task of accepting them as the most concrete rendering of fact."\(^5\)

The abstractions by which scientific method organizes its research had become the conception of the universe. The inductive methodology of scientific investigation, writes theologian Ian Barbour, was "on its way to becoming an account of the world; a method was being turned into a metaphysic."\(^6\) Philosophy in any healthy society, says Whitehead, must be "the critic of abstractions. A civilization which cannot burst through its current abstractions is doomed to sterility after a very limited period of progress."\(^7\) In criticizing abstractions philosophers must apply reason, which Whitehead describes as making a "dispassionate observation by means of the bodily senses" and "comparing the various schemes of abstraction which are well-founded in our various types of experience."\(^8\) Scientific thought is too narrow for such metaphysical analysis; it requires application of one's full rational capacity to a broader empirical observation of the world. As Whitehead asserts: "we should have in our minds some conception of a wider field of abstraction, a more concrete analysis, which shall stand nearer to the complete concreteness of our intuitive experience."\(^9\)

As used in this thesis, then, reason means one's critical intelligence combined with a broad empiricism. Haught defines critical intelligence as consisting of four distinct acts, namely, (1) being attentive to some aspect of experience, (2) being intelligent about understanding that experience, (3) being critical in judging that experience, and (4) being responsible in decision-making. Importantly, reason requires
a worldview consistent with the confidence placed in one's critical intelligence and desire to understand the truth.\textsuperscript{63} Haught also identifies five primal fields of meaning through which critical intelligence must proceed in order to apprehend the truth of reality. These primal fields of meaning are: (1) affectivity, the subjective feeling or mood that stimulates rather than stifles the desire to know, (2) inter-subjectivity, the reality of other people's subjectivity that is lost to the world of scientific objectification, (3) narrativity, the historical or mythical stories that support our sense of reality, like the 16th and 17th century trust in the emerging and objectifying scientific method, (4) beauty, the aesthetic experience of knowing that has aligned beauty and truth from Plato to Keats but is rejected by scientific materialism, and (5) theory, the impersonal knowing of subject-object detachment that characterizes empirical science.\textsuperscript{64}

To summarize, critical intelligence engages the four distinct mental acts (being attentive, intelligent, critical, and responsible) characteristic of the mental imperative to seek the truth about reality, and critical intelligence proceeds through the five primal fields of meaning characteristic of our engagement with the world (feelings, aesthetics, interpersonal involvements, narratives about our place in the world, and the theoretic world of science). In its quest to arrive at truth critical intelligence considers and weighs the input from the five fields of meaning. By limiting critical intelligence to theoretic meaning alone, scientism and scientific materialism ignore these other rich sources of access to nature and inevitably narrow and prejudice their resultant analysis. Furthermore, their \textit{a priori} commitment to materialism fundamentally suppresses any
other ways of seeing nature except for the theoretic and narrowly empirical approach of science.

With its limited empirical and theoretic focus on objects rather than subjects, scientific materialism overlooks not only the primal ways of knowing but also the knower's own confidence in his mental capacity to understand reality. This human subjectivity, the investigator's critical intelligence in search of truth, is also an intrinsic part of reality, a part that science overlooks in its narrow empirical methodology. As applied here, then, reason seeks to undo Cartesian dualism of mind and matter, first, by considering the acts of critical intelligence an essential part of the natural world and, second, by including a wide empiricism that takes account of the affective, intersubjective, narrative, and aesthetic as well as theoretic modes of cognitive experience.

Medieval rationalism established the stable worldview that enabled science to emerge and grow during the Enlightenment. Enlightenment rationalism provided the counterweight to epistemological and metaphysical excesses of scientism and scientific materialism until the Great War. For David Hume's skeptical empiricism there was Immanuel Kant's rational idealism, for Auguste Comte's positivism there was Friedrich Schleiermacher's and William Wordsworth's romanticism, and for Charles Darwin's natural selection there was Henri Bergon's *elan vital*. The Great War changed all this, undoing the cultural balance and freeing scientism and scientific materialism to enter the postwar cultural vacuum without confronting their traditional critics.

The Great War drove Christian theology and Western philosophy away from reasoned inquiry into reality and drove literature and art toward a new emphasis on
human and existential irrationality – all subjects developed in the chapters that follow. In theology, Karl Barth (1886-1968) led a postwar generational revolt against 19th-century liberal Protestantism, rejecting reason in understanding God and advocating Scripture as the means of comprehending the world. Pierre Teilhard de Chardin (1881-1955) attempted unsuccessfully to unfreeze Catholicism's rigidified prewar doctrinal and philosophic positions and to align them with modern scientific developments. Following Ludwig Wittgenstein (1889-1951), Edmund Husserl (1859-1938), and Martin Heidegger (1889-1976), European philosophy separated itself altogether from metaphysical questions. While Husserl tried to save human reason from encroaching scientific positivism, he ultimately despaired of doing so. Wittgenstein and Heidegger effectively deferred questions about reality and the meaning of Being to the arts and to a new kind of non-philosophical, artistic thinking.

Dada artists arose during the Great War to confront the civilization responsible for an irrational war. Marcel Duchamp (1887-1968), Frances Picabia (1879-1953), and George Grosz (1893-1959) depicted humans as mindless machines, and Hans/Jean Arp (1886-1966) identified chance as governing the universe. Surrealism succeeded Dada, intent on putting Western culture in touch with man's irrational rather than his rational capacity. Major British and American writers like George Bernard Shaw (1856-1950) and Ezra Pound (1885-1972) lambasted the civilization responsible for the war, while others like T.S. Eliot (1888-1955) searched for new meaning in the postwar wasteland. Like art, however, literature turned inward to the human psyche. Virginia Woolf (1882-1941) explored the war's psychological damage to individuals in the postwar society.
Ernest Hemingway (1899-1961) emphasized the need for personal code to cope with a meaninglessness and absurd reality. And Franz Kafka (1883-1924) evoked a sense of personal shame, unworthiness, and anguish over cosmic homelessness.

In short, the postwar collapse of culture, eclipse of reason, and disengagement from metaphysical questions enabled the 20th century rise of scientism and scientific materialism to dominance. In this shattered postwar world scientific materialists could propagate their materialist metaphysics as objective scientific truth with little cultural opposition. While significant in itself, this historical development is especially troubling, given scientific materialism’s inherent methodological inconsistencies, pretentious truth claims, and ominous portent for traditional beliefs in a meaningful and purposeful reality.

Scientific materialists reduce all of reality to its physical constituents and assume that those constituents fully explain nature’s complexity; they consider their own cognitive intelligence a mere cultural artifact and not an intrinsic part of reality; they attribute the human mind entirely to a mindless evolutionary process; and yet they trust that same mind to arrive at truthful answers to mankind's profoundest metaphysical questions. If a blind, unconscious, and mindless universe were solely responsible for the human mind, why should that mind deserve the confidence which scientific materialists place in it to arrive at truth about reality?

After explaining how the Great War contributed to the rise of scientific materialism, this thesis will critique the materialist metaphysics of four prominent modern proponents – Jacques Monod, Richard Dawkins, Daniel Dennett, and David
Hawking. The critique will show that scientific materialism is itself a belief system and not a scientific truth and, furthermore, that it is inconsistent with the very confidence that scientific materialists place in their own minds to develop, justify, and promote their godless worldview.
CHAPTER 2

GOD, SCIENCE, AND REASON IN PREWAR WESTERN CULTURE

The year’s at the spring,
And day’s at the morn;
Mornings at seven;
The hillside’s dew-pearl’d;
The lark’s on the wing;
The snail’s on the thorn;
God’s in his heaven –
All’s right with the world!

– Robert Browning, *Pippa Passes* (1841) \(^1\)

Sweet is the lore which Nature brings;
Our meddling intellect
Mis-shapes the beauteous forms of things: –
We murder to dissect.

– William Wordsworth, *The Tables Turned* (1789) \(^2\)

During the three centuries from the Enlightenment to the Great War, scientism and scientific materialism shadowed the impressive advances in science and technology, and in the late 19th century increased their visibility with the emergence of Darwinian evolution. Throughout this centuries-long prewar period, however, a vibrant Western culture, especially in philosophy, theology, and the arts, actively addressed the questions of how and what we know about reality, leaving scientism and scientific materialism merely one voice in the conversation. This chapter briefly recounts the multi-century story of Western culture's engagement with the meaning and purpose of reality, which kept the movements of scientism and scientific materialism largely in the background until the Great War.

Briefly, in the 17th century, there was wide agreement based on faith that God unquestionably directed the cosmos. After dividing mind from matter, Descartes
supported both mind and matter in God, who underlies Descartes' entire rationalist universe as Infinite Substance. In the 18th century, when Hume questioned the limits of reason to understand reality and to prove God's existence, Kant countered with a new epistemology, a new foundation for morality in practical reason, and a new rational basis for postulating God and immortality. Thus, the universe generally retained its meaning and purpose throughout these two centuries.

The 19th century proved to be more chaotic, with Europeans showing increased confidence in science and technology, which seemed destined to lead Europe to endless progress. Yet Hegel relegated empirical science to a small niche in history's larger unfolding of God, as Absolute Spirit, and the Romantics rejected the positivist idea that science could explain the universe. The Romantics enlarged man's cognitive capability beyond science's narrow analytical mode of thought; they humanized and spiritualized nature as a living organism rather than a dead machine; and they found assurance in nature's presence and "faith in honest doubt."

In the last half of the 19th century, however, Darwinian evolution presented the greatest challenge yet to God's Providence by purporting to explain all of life, including man and human consciousness, as the product of natural selection over endless time. Even as evolutionary theory led Darwin and others to agnosticism, theology and philosophy undertook to harmonize it with Christian dogma, divine governance, and a purposeful universe. The following describes in more detail that three-century dialectic between Western culture and scientific materialism.
The 17th Century and God's Machine

Despite the emerging scientific view of nature as mechanism, God was still in his heaven during the 17th century. Francis Bacon (1561-1624) sought to separate natural philosophy from theology and God from nature, but Bacon had no doubt that God was the author of both. The rationalist René Descartes (1596-1650) even undertook his own ontological proof of God's existence as a product of pure thought, just as Anselm had done. Unlike Aquinas, Descartes could not start with the facts of experience since they remained in question until Descartes first resolved doubt concerning his own existence. Once having done so, however, Descartes contemplated his consuming idea of an infinite, omnipotent, and perfect Being, and concluded that it had to originate with God. Descartes' own imperfect self could not be its source. Furthermore, Descartes believed God would not deceive him about the surrounding world of his senses. Thus, as Infinite Substance, God provided assurance of reality and common ground for Descartes' dual reality of thinking and extended substances, mind and matter. Thereafter, scientists could study nature simply as matter without concern for metaphysics and final causes. Yet, metaphysics, theology, and science (natural philosophy) remained deeply connected because God, Creator of the universe, inspired them all.

The empiricist John Locke (1632-1704) found proof of God's existence in reason and the Bible, and he remained a confident Christian. In An Essay Concerning Human Understanding (1690), Locke reduced theology to certain fundamental truths and accepted scriptural revelation as above but never contrary to reason: "Reason must
be our last judge and guide in everything." Thus, the historical revolt of the 17th century raised no serious question about the existence of God, although it spurred much disagreement about God's nature, i.e., whether God was an absentee Creator who left the world on its own after setting it in motion, or a Providential Creator who remained omnipresent. Nevertheless, the 17th-century mind considered God immutable and, as Baumer emphasizes, "God's immutability guaranteed the dependability of nature (thought of as God's works) and therefore scientific certainty." Far from being hostile to faith, therefore, scientists of the 17th century considered science virtually a religious calling.

Isaac Newton (1642-1727) dominated this divinely ordained universe as the apogee of the scientific revolution, with pronouncements in physics, astronomy, mathematics, and optics that became dogma in his time and reigned for the next century and a half. In his *Principia* (1687), Newton produced a system of three laws based upon his concepts of velocity and acceleration affecting mass, inertia, and force. First, motion will continue in a straight line absent some countervailing force; second, the force acting on motion affects its rate of change; and third, two bodies experience an equal and opposite action and reaction. Newton maintained that these principles governed not just the world of nature but the entire universe, controlling the orbits of the planets around the sun and the moon around the earth. So famous and compelling were Newton's achievements, even in his own time, that his younger contemporary Alexander Pope (1688-1744) prepared a famous couplet intended as Newton's epitaph:

Nature and nature's laws lay hid in night;
God said, "Let Newton be!" And all was light.

Newton explained scientifically how the universe remained stable and orderly, and provided empirical evidence to complement Descartes' rational proof of a providential Creator.\textsuperscript{13}

By the end of the 17th-century, therefore, reason and sense perception seemed fully aligned in two different schools of thought, labeled rationalism and empiricism. Descartes had resolved his radical philosophical doubt about the potentially deceptive world of the senses and left empirical science to study nature secure in nature's essential intelligibility. Thereafter, each school of thought cooperated in the production of knowledge about reality under reason's authoritative direction as the final arbiter of conflicts over their respective claims of empirical truth and religious-moral truth. The 18th century, however, perturbed their initial detente.

\textit{The 18th Century and the Rationalism-Empiricism Debate}

In the 18th century, rationalism and empiricism drifted apart and developed in isolation from one another. Each fastened upon separate aspects of Cartesian philosophy, which eventually exposed the weaknesses in the Cartesian system.\textsuperscript{14} Empiricists took a separate path, independent of rationalists, based upon Locke's assertion that all knowledge ultimately proceeds from sense experience. Rationalists once again became suspicious of the senses, and empiricists begin to question the mind's ability alone to develop reliable knowledge of reality.\textsuperscript{15} Then David Hume (1711-1776) shook the common foundation of both schools of thought by questioning
the objective validity of causation, the idea underlying the rationalist proof of God and the empiricist faith in inductive reasoning.  

Hume contended that the idea of causation, like all ideas, must come from a sense impression, but causation is not an observable quality of objects. Instead, the idea of causation is a mere habit of association based upon the constant repetition and temporal order of objects (B repeatedly following A). If, as Hume asserts, causation lacks any observable impression or necessary connection, then, as Whitehead explains, cause and effect become "entirely arbitrary connections," which is characteristic of the materialist view of reality. Consequently, Barret concludes, "the whole edifice of science – that stunning edifice of the New Science, of which Hume's contemporaries stood in awe – becomes merely a highly formal expression of human habit."  

Hume also contended that substance has neither existence nor meaning since no one has any impression of substance. The five senses merely convey a collection of the object's qualities, not its substance. Finally, Hume denied that we can have any idea even of self since individuals have no single impression invariably identified with themselves. Rather, the self is just a collection of different impressions received over time, and from our memory of this bundle of different prior sense impressions we infer continuous identity.  

In short, Hume challenged both Cartesian thought and Lockean experience as reliable bases for knowledge of reality. In his analysis, moreover, Hume detached the acts of both thinking and experiencing from the individual self – thoughts and sensations became disembodied. Consequently, as Barrett points out, Hume has
succumbed to "the philosopher's temptation to take a purely spectator view of the mind, forgetting that he himself is a participant. He stands outside the self and looks for it as some kind of sensory datum, forgetting that he himself has launched the search and is involved in it throughout." Scientific materialists perpetuate Hume's oversight by abstracting man's critical intelligence as if it were not part of essential reality.

Armed with his new epistemology, Hume took aim at so-called "religious philosophers" to show that their proof of divine existence based upon order in nature is contrary to reason. We can infer no more about a cause than its effect, he argues; ten ounces raised on the scale proves the counterbalancing weight is more than ten ounces but proves nothing else about it. Consequently, any gods who are responsible for the existence and order of the universe possess only "that precise degree of power, intelligence, and benevolence, which appears in their workmanship," and anything more is pure speculation. Pointing to "evil and disorder" in the universe, Hume concludes at least on rationalist grounds that any inference of a perfect divine creator is palpably unjustified, as is any notion that Providence guides the universe and rewards good and punishes evil. They both lack support in human experience. At the end of An Inquiry Concerning Human Understanding (1748), Hume concludes that theological and metaphysical reasoning, which contains no quantitative and numerical facts, is "nothing but sophistry and illusion."

Although Hume's skepticism came down just as hard on empiricism as on rationalism, science remained indifferent to his challenge. Whitehead attributes science's indifference to its instinctive faith in the order of things and its fundamental
anti-rationalism. Instead of the empiricists, it was the rationalist Immanuel Kant (1724-1804) who picked up Hume's gauntlet to defend both empiricism and rationalism. On behalf of rationalism, Kant argued that philosophic knowledge requires some *a priori* judgments beyond the empirical generalizations from sense experience, and on behalf of empiricism, that innate ideas which overlook our sense experience are vacuous. For Kant, the mind actively shapes our perceptions of phenomena, and mental constructs that ignore experience lack genuine value.

Kant addressed Hume's critique by developing a new theory of knowledge, his self-styled "Copernican revolution" in epistemology that challenged the empiricist use of the scientific method to address transcendental questions about God and reality. Whereas Hume and Locke considered the mind a passive receptor of external stimuli (a *tabula rasa*), Kant considered mind an active albeit limited cognitive faculty. The mind actively shapes the material of sensory experience (*phenomena*) using synthetic conceptual forms, or *a priori* categories, like substance and causation. The concept of causation, for example, underlies the inductive method by which science confidently predicts future events based upon past experience. While such *a priori* categories determine our knowledge of *phenomena*, they can not apply to analysis of reality per se, which Kant calls *things-in-themselves* or *noumena*. The mind lacks the experiential and cognitive capacity for such metaphysical analysis.

Reason can produce "transcendental ideas," however, with important "regulative" value in guiding not only scientific inquiry but also human conduct. In Kant's new epistemology, reason can elucidate and direct moral conduct since ethics is a
matter of practical rather than conceptual understanding.\textsuperscript{30} For Kant, the moral law arises neither from empirical experience or pure reason, nor from church mandates or divine law. Rather, the moral law arises from practical human reason as a legislative principle, namely, the \textit{categorical imperative}.\textsuperscript{31} Whereas belief in God previously provided the grounds for traditional morality, Kant now says the converse – "it is reason, by means of its moral principles, that can first produce the concept of God," and it is "trust in the promise of the moral law" that constitutes religion.\textsuperscript{32} Thus, Kant's categorical imperative is not proof of God's existence but forms the basis for a postulate of God's existence and the soul's immortality.

In explaining his theory of knowledge, Kant shows how the human mind actually works (it accumulates, categorizes, and organizes sense impressions), whereas Hume pictures the mind as wholly responsive to bundles of sense impressions. Consequently, Kant's epistemology is more detailed and, one might conclude, more empirical than Hume's. Kant insists:

\begin{quote}
\ldots reason has insight into that only, which she herself produces on her own plan, and that she must move forward with the principles of her judgments, according to fixed law, and compel nature to answer questions, but not let herself be led by nature, as it were in leading strings, because otherwise accidental observations, made on no previously fixed plan, will never converge towards a necessary law, which is the only thing that reason seeks and requires.\textsuperscript{33}
\end{quote}

By emphasizing the organizing activity of mind with respect to human experience, Kant questions not only the empiricist idea that the mind is a \textit{tabula rasa}, a blank slate on which sensations imprint ideas, but also the materialist idea that the mind is merely the outcome of matter in motion. For Kant, the mind’s activity is creative; whereas God
creates the world of noumena, the human mind actively contributes to bringing the world of phenomena into existence.

Kant effectively shows that science's concepts about nature as well as its technology to investigate nature are mental constructs, man-made and not literal copies of nature. The scientific mind is not passive but active; science and technology have "put nature to the rack," in Francis Bacon's famous metaphor, compelling nature to provide answers to its questions. Thus, it is most ironic that modern science's active exploration of nature has led to scientific materialism, which accords the mind no intrinsic reality. For scientific materialists, as Barrett explains, "the mind becomes, in one way or another, merely the passive plaything of material forces. The offspring turns against its parent. We forget what we should have learned from Kant: that the imprint of mind is everywhere on the body of this science, and without the founding power of mind it would not exist."34

By characterizing the mind as an aggregation of atomistic sense impressions, Hume has divorced the mind from any wider concrete context, just as scientific materialists do currently. By contrast, Kant gives the human mind a cosmic setting, a moral individual seeking meaning as part of a larger whole. In accordance with the categorical imperative, everyone should "act only on the maxim whereby thou canst at the same time will that it should become a universal law," and everyone should "treat humanity, whether in thine own person or that of another, in every case as an end withal, never as a means."35 In other words, dutiful action must constitute a universal standard (not an exception to that standard); it must recognize and honor another’s
moral autonomy (the right to make his or her own moral decisions); and it must satisfy the objective test of fairness and justice.\textsuperscript{36} Thus, for Kant, moral duty is an aspect of man's overall ethical being and has significance within the larger universe. Our convictions about the universe, i.e., whether it is meaningful and purposeful or not, necessarily shape our morality, and the Kantian cosmos certainly is not indifferent to man's ethical struggles.\textsuperscript{37}

Kant even addresses man's sense of beauty from the perspective of a moral person since the moral person is drawn to cosmic beauty and wonder: "Two things fill the mind with ever new and increasing admiration and awe, the oftener and more steadily we reflect upon them," writes Kant, "the starry heavens above me and the moral law within me."\textsuperscript{38} The individual drawn to the beauty of nature, the divinely inspired universe, is likely to be a moral person. Here again, Kant is not attempting to use the aesthetic response to nature as a theological argument from cosmic design (concepts of God and essential reality transcend the bounds of finite human thought), but as an inherent aspect of man's being, pointing to the world around him. In summary, Kant has has accorded man’s critical intelligence a central place in reality and has employed a wide empiricism in viewing the cosmos, which he considers alive with meaning and beauty. He embraced and harmonized science, reason, morality, and aesthetics – all facets of his fundamentally purposeful, theistic world.

Kant's successor Georg Hegel (1770-1831) did not confront the materialist implications of science directly, like Kant, but instead he co-opted them as simply one of many theses in the unfolding historical dialectic. Hegel transformed Kant's rationalist
philosophy into what theologian Stephen D. Crites calls "a philosophy of reconciliation in which nature and history, religion, politics, and culture are integrated in a single vision of the truth."\textsuperscript{39} Hegel asserted that Kant's mental categories have objective being, that the real is the rational and the rational is the real, and that everything in the world is a product of mind and knowable, including Kant's thing-in-itself. In Hegel's dialectic view of history, all aspects of human thought, science included, are just part of the unfolding of Absolute Spirit (God).\textsuperscript{40} In effect, Hegel has subsumed scientism into his rationalist epistemology and incorporated scientific materialism into his overarching idealist metaphysics, which establishes history as a category of reality for which reason must accept responsibility.

Hegel's philosophical idealism "has swallowed the scientific scheme in its entirety as being the only rendering of the facts of nature," writes Whitehead, "and has then explained it as being an idea in the ultimate mentality. In the case of absolute idealism, the world of nature is just one of the ideas somehow differentiating the unity of the Absolute."\textsuperscript{41} Whitehead properly faults philosophic idealists, like Hegel, for having "conspicuously failed to connect, in any organic fashion, the fact of nature with their idealistic philosophies."\textsuperscript{42} In other words, Hegel's idealism fails to recast the scientific conception of nature in a manner consistent with his overall conception of reality, as, for example, Whitehead has done in his process philosophy. Whitehead constructs a view of the world as we apprehend it: organic and in flux, time interrelated with space, inherent transitoriness unified in percipient events, each event having value, and nature having an organic unity and aiming toward aesthetic value.\textsuperscript{43} Although
Hegel absorbed rather than engaged scientific materialism, he nevertheless provided a compelling, non-materialistic worldview of history, which man’s critical intelligence plays a major role in shaping. And Hegelianism remained the reigning philosophy at Oxford through the turn of the 20th century.  

The 19th Century, Cultural Anarchy, and God

The 19th century was a period of crisis or "anarchy," according to Matthew Arnold (1822-1888), and the most disunited in European history, according to Baumer. Indeed, Baumer considered Europe's anarchic state "one of the principal and most significant developments in nineteenth-century thought." In his essay "Literature and Science" (1882), Arnold identified the centrifugal and dispersive effect of scientific specialization and, consequently, the cultural necessity for study of the humanities in order to synthesize thought and "to relate the results of modern science to our need for conduct, our need for beauty." Despite the cultural anarchy, therefore, scientism and scientific materialism continued to face significant opposition from 19th century men of letters all over Europe.

Baumer breaks the 19th century down into four styles or worlds of thought: the Romantic Movement, the New Enlightenment, the Evolutionary World, and the Fin de Siècle. The Romantics re-examined basic philosophical questions, applying an enlarged cognitive capability that differed markedly from the 18th-century rational-empirical thought. The Romantics embraced the idea of nature as organism rather than mechanism and materialism. The New Enlightenment overlapped Romanticism until
mid-century and consisted of the following groups: English utilitarians, like John Stuart Mill (1806-1873) who sought to imitate the French *philosophes* with their criticism of religion and their optimism about history and human nature; French positivists, like Auguste Comte (1798-1857) who attempted to answer all questions scientifically and to deify humanity; German Young Hegelians, like Ludwig Feuerbach (1804-1872) who criticized Hegel for elevating thought over human experience and for overlooking man's own self-alienation; and finally artistic realists, like the painter Gustave Courbet (1819-1877) and the novelist Charles Dickens (1812-1870) who portrayed concrete individuals in the real world as these artists actually observed it.\(^49\) The most optimistic of the 19th century worlds of thought, the New Enlightenment rejected metaphysics and religion, embraced scientism, though not necessarily materialism, and, by contrast with Romanticism, considered science to be man's primary means and hope for an ordered and a better world.\(^50\)

Darwinian Evolution, the third world of thought, effectively constituted a second phase of the New Enlightenment, picturing nature as a mindless mechanism and generating an age of agnosticism. Darwinism, according to Baumer, contributed to the heightened disunity of the fourth world of thought, the *Fin de Siècle* period. During the *Fin de Siècle* Nietzschean doubts about God and positivist characterizations of nature vied with forces opposed to positivism and disillusioned with science.\(^51\) For purposes of this thesis, the worlds of Romanticism and Darwinian Evolution addressed below are the most important. But before reaching them, however, the 19th century crisis of faith in God, which arose quite independently of scientific materialism, warrants discussion.
Throughout the 19th century, religious faith was challenged from within and without, and Hegelianism generally provided the primary point of attack. Søren Kierkegaard (1813-1855), a Danish Christian writer, sought to unmask and defeat all forms of rational theology, both the moral idealism of Kant and the rational idealism of Hegel, and to awaken belief in a more authentic Christianity.\(^{52}\) Hegel had found concordance between religion and philosophy: Christ's death and resurrection began the dialectical process by which Absolute Spirit expresses itself in history and thereafter human reason could discover the ultimate truths reposing in the dialectical process.\(^{53}\)

Kierkegaard disputed Hegel by showing that the mind is incapable of objectively proving the existence of God, either from Christ's miraculous works, or from the universe’s apparent order, or from self-knowledge.\(^{54}\) Rather, it requires "a leap of faith." Indeed, Kierkegaard concludes that Hegel's dialectical method for determining the past and prophesying the future is a foolish tautology, since history results from freely acting causes – not from necessity.\(^{55}\) Christian revelation focuses on the Moment of Incarnation when God became man – an Absolute Paradox beyond rational proofs, a matter of faith, and a personal experience of the divine. Therefore, the Hegelian project of speculative idealism – ascertaining ultimate truth by applying reason to history's dialectical processes – is logically flawed and, moreover, fundamentally incompatible with Christian orthodoxy.\(^{56}\) Kierkegaard's influence remained negligible outside of Denmark, however, until after World War I, when he profoundly affected Karl Barth and the Crisis Theologians.
Ludwig Feuerbach (1804-1872), a student and critic of Hegel, believed that Hegel's religious speculations about God essentially revealed man's own self-alienation. In *The Essence of Christianity* (1841), Feuerbach contends that Hegel's speculative idealism elevated thought over human experience, tied philosophy excessively to theology, and overlooked the psychological nature of man's alienation. Standing Hegel's speculative idealism on its head, Feuerbach argued that man is really God and man's thoughts about God effectively reveal man's own nature and self-knowledge. Because religion must be understood anthropologically, Feuerbach advocated a new religion focused not on God but on man in order to address man's alienated self.

For Feuerbach, Christianity represented man's consciousness at work, disclosing his hopes and fears, his awareness of the infinite and his own finitude; and God represented man's projection of his idealized self, a project that saps man's creative energies. Such understanding of Christianity, however, enabled man to recognize his ideals and his true self. Thus, Feuerbach, and the other "left-wing" or "young" Hegelians, divinized man and created a new religion of humanity, but remained focused on faith rather than metaphysical questions. By contrast, the "right-wing" or "center" Hegelians (neo-Hegelians, in Britain) considered Hegel's speculative idealism the appropriate tool for restructuring Christianity to accord with modern experience. For his part, Kierkegaard rejected Hegelian idealism altogether in his focus upon the Christian ideal – whether man could become a "knight of faith," and place himself "in an absolute relation to the absolute." Kierkegaard considered that genuine Christianity "is the
absurd, held fast in the passion of the infinite." In summary, the 19th Century philosophical debates over Hegel represented a humanistic concern about the meaning and nature of Christianity. They did not concern materialism or the nature of the cosmos.

The questioning and consequent erosion of faith, moreover, extended beyond realm of philosophy and entered the world of letters. In his poem "Dover Beach" (1851), Matthew Arnold described his isolation, loneliness, and despair over the receding Sea of Faith, which he hears "Retreating, to the breath/ Of the night-wind, down the vast edges drear/ And naked shingles of the world." His final stanza is a desperate portrait of the human condition:

Ah, love, let us be true
To one another! for the world, which seems
To lie before us like a land of dreams,
So various, so beautiful, so new,
Hath really neither joy, nor love, nor light,
No certitude, nor peace, nor help for pain;
And we are here as on the darkling plain
Swept with confused alarms of struggle and flight,
Where ignorant armies clash by night.

Arnold found himself in a spiritual limbo, "wandering between two worlds, the one dead,/ The other powerless to be born." In his poem In Memoriam A.H.H. (1850), composed over a period of 16 years, Alfred, Lord Tennyson (1809-1892) lamented the death of his closest friend and sister's fiancé Arthur Hallam at the age of 22. In Memoriam expresses his religious doubts as
well as the doubts of his era. The poem begins in solid faith:

   Strong Son of God, immortal Love,
   Who we, that have not seen thy face,
   By faith, and faith alone, embrace,
   Believing where we cannot prove...\

But at midpoint the poet descends into dark despair, like "An infant crying in the night," questioning the apparently wanton loss of life in a world where God and Nature seem at strife and Nature is "red in tooth and claw." He tries to regain that initial faith:

   I stretch lame hands of faith, and grope,
   And gather dust and chaff, and call
   To what I feel is Lord of all,
   And faintly trust the larger hope.

Toward the end Tennyson comes to accept his loss and reaffirm his faith:

   There lives more faith in honest doubt,
   Believe me, than in half the creeds.

   Spiritual tension was not limited to the lay poets, but also extended to religious poets like the Jesuit priest Gerard Manley Hopkins (1844-1889). In his early poetry, Hopkins celebrated spiritual intensity in "The Windhover" (1877), divine providence in "God's Grandeur" (1877), and divine presence in "Felix Randal" (1880). But in his late poems (the "terrible sonnets"), Hopkins experienced his dark night of the soul, a solipsistic despair of knowing anything but himself. Ultimately, Hopkins' romantic focus on his own creative imagination left him feeling alone, isolated, and estranged from the world that previously had revealed God's grandeur.

   At the opposite extreme is the godless, materialist world of Thomas Hardy (1840-1928). In his novels, Hardy's characters suffer at the whim of an indifferent
universe that manipulates their lives and thwarts their aspirations. Similarly, in his poems like "Hap" (1866), Hardy asserts that chance rules the universe – not a vengeful God whom we could stoically endure, but "Crass Casualty" and "dicing Time," which kill both our joys and hopes. Unlike Hopkins, Hardy finds no romantic inspiration in nature; even the thrush's caroling offers no "blessed Hope."²⁴

In "Channel Firing" (1914), written presciently just four months before the outbreak of the Great War, Hardy depicts an ironic God, speaking to skeletons in a church graveyard. Aroused from the dead by naval gunnery practice in the channel, the skeletons confuse the gunfire for the trumpets heralding judgment day. God assures them that the world has not changed, men are no better, and nations still gird for bloody war: "The world is as it used to be:/ All nations striving strong to make/ Red war yet redder."²⁵ Hardy and the Young Hegelians notwithstanding, God was still in his heaven for most people, though all was not well in the chaotic 19th century European world. Except for unusual cases like Hardy, however, the cause of spiritual doubt and anguish about Christianity that persisted through the entire century was personal or least anthropocentric, rather than materialist or cosmological in origin.

The Romantic Revolt against the Newtonian Machine

For the first half of the 19th century, the dominant response to the epistemology of scientism and the metaphysics of scientific materialism came from the Romantics.²⁶ They had answers to the leading questions of how the mind comes to understand objective reality and of how mechanistic is nature and the universe.²⁷ The Romantics
rejected empirical science as too crabbed a viewpoint and, accordingly, they broadened man's cognitive engagement with the world to encompass the full range of human experience. The Romantics also rejected science's mechanistic model as a myopic and devalued conception of the world. Instead, the Romantics gave full rein to every aspect of human nature – rational, emotional, and unconscious alike. They considered nature as organic rather than mechanistic, and as imbued with intrinsic aesthetic and spiritual value rather than reduced to mindless and valueless matter. Theology and poetry led the romantic revolt.

Friedrich Schleiermacher (1768-1834) set Protestant theology on an entirely new foundation in personal experience by redefining religion as a personal response and surrender to the immensity of the Universe. In his *Second Speech, The Nature Of Religion* (1799), Schleiermacher separated religion both from metaphysics and ethics and also from scientific knowledge and theories about God's relationship to man. Instead, Schleiermacher called religion both an active quest and feeling for the Infinite within the world itself and also a passive surrender to the whole of existence. For Schleiermacher, "true science is complete vision; true practice is culture and art self-produced; true religion is sense and taste for the Infinite." Both the intuition and feeling for the "unity and difference of religion, science and art," according to Schleiermacher, required that "you must know how to listen to yourselves before your own consciousness."

For Schleiermacher, human life consisted of three interrelated faculties: perception, activity, and feeling, which "are not identical and yet are inseparable"; and
religion resides in the sphere of conscious feeling. He equated religion, feeling, and piety. Piety is "the result of the operation of God in you by means of the operation of the world upon you," and it consists "purely of sensations and the influence of all that lives and moves around, which accompanies them and conditions them." Since mankind is part of the universe, moreover, "the religious man must first, in love, and through love, have found humanity"; and man's love for humanity is necessary to receive the life of the World-Spirit. This sense of oneness with all humanity engenders an "unaffected humility," an intuition of "fellowship with others," and an experience whereby a "single nature embraces all human nature."

Schleiermacher created a Copernican revolution in theology that dominated liberal Protestantism until Karl Barth's rebellion after World War I. Schleiermacher redirected the Enlightenment focus on religion away from rational proofs of God's existence and its empiricist rebuttals, away from debate over the authenticity of miracles and the importance of ecclesiastical dogma and ritual, and away from Kantian concern for duty and its derivative postulates about God and immortality. Instead, he pointed toward a new personal response to the mystery of Creation. Schleiermacher's pious individual experiences an aesthetic feeling about the Universe, which romantic poet William Blake (1757-1827) captures beautifully in his "Auguries of Innocence":

To see a world in a grain of sand
And a heaven in a wildflower,
Hold infinity in the palm of your hand
And eternity in an hour.
Schleiermacher gave religion new meaning by stressing the spiritual impact of the Universe on the individual, by redefining religion as feeling – the personal response and surrender to the God-infused and God-directed Universe – and by recognizing the mutual responsibility of one person to another in fostering such piety. Schleiermacher emphasized the fellowship of knowledge and feeling, contemplation and intuition, self-consciousness and human empathy, and God's operation "in you by means of the operation of the world upon you" rather than "the pure impulse to know." For Schleiermacher, therefore, genuine reason does not limit itself to theoretic understanding of science but extends to the other primal fields of meaning, like feeling, aesthetics, and interpersonal involvements. By employing this wide empiricism, reason perceives and embraces reality as a living, organic, meaningful, and purposeful God-given wonder.

Romantics, like Schleiermacher and Blake, reacted against an epistemology that limited human knowledge to empirical generalization from measurable sense experience and against a scientific metaphysic that viewed the universe as merely a giant machine. For Blake, Isaac Newton symbolized narrow scientific theorizing that mechanized reality and demeaned human life. In his watercolor print *Newton* (1795), Blake pictures Newton sitting in the center on an algae-covered rock outcropping, at the bottom of the sea (Figure 1). With his back to nature's flora and fauna, Newton is bending over, looking down, and drawing with a compass upon a scroll, apparently trying to fathom the whole of reality solely by means of instrumental measurement and inductive reasoning.
In Newton, Blake graphically rejected such narrow empirical reasoning and its mechanistic reality. In his poem Jerusalem (1804), Blake does so explicitly:

I turn my eyes to the Schools & Universities of Europe
And there behold the Loom of Locke whose Woof rages dire
Washd by the Water-wheels of Newton. black the cloth
In heavy wreathes folds over every Nation; cruel Works
Of many Wheels I view, wheel without wheel, with cogs tyrannic
Moving by compulsion each other: not as those in Eden: which
Wheel within Wheel in freedom revolve in harmony & peace. 88

Rejecting scientism and a mechanistic view of nature, Romantics like Blake reached for the infinite and had a penchant for synthesis. They wanted "to put the world together again if they could," writes Baumer, "to join subject and object, the ideal and the real, spirit and matter, after a century, as they believed, of putting asunder. Individuals, they felt, merely particularized a greater Whole, Spirit, or Universe." 89 Subjectivity was intrinsic to the Romantics' larger reality, which contained meaning, purpose, and beauty.

Whitehead credited the Romantic poets, especially William Wordsworth (1770-1850), Percy Bysshe Shelley (1792-1822), and Alfred, Lord Tennyson (1809-1892), for perceiving nature as it impresses itself upon human consciousness. 90 They looked upon nature not as scientific abstractions but as concrete forms, not as mechanism but as organism. In "The Tables Turned" (1798), Wordsworth admonishes, "Enough of Science and of Art"; "Let Nature be your Teacher":

Sweet is the lore which Nature brings;
Our meddling intellect
Mis-shapes the beauteous forms of things: –
We murder to dissect. 91
Wordsworth claimed that "all good poetry is the spontaneous overflow of powerful feelings," and in *Tintern Abbey* (1798), he expresses his powerful feelings about nature and nature's God:

```
And I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of man:
A motion and a spirit, that impels
All thinking things, all objects of all thought,
And rolls through all things."^{92}
```

Nature was "all in all" to Wordsworth, who was "A worshiper of nature" which "never did betray/ The heart that loved her."^{93} As Whitehead observed, Wordsworth "always grasps the whole of nature as involved in the tonality of the particular instance" and "expresses the concrete facts of our apprehension, facts which are distorted in the scientific analysis."^{94}

Whereas Wordsworth found God in nature and distrusted science, Shelley was a skeptical empiricist and delighted in science. Yet Shelley retained his appreciation of nature's secondary qualities and organismic character.^{95} In *Mont Blanc* (1817), Shelley reversed Wordsworth's approach first by posing philosophic questions about mind's relationship to matter and about the nature and source of causation, and then by seeking answers to these philosophic questions in nature. He searched for those answers in *Mont Blanc*, while viewing the Alpine mountain scene in southeastern France from a bridge
over the Arve River:

The everlasting universe of things
Flows through the mind, and rolls its rapid waves,
Now dark – now glittering – now reflecting gloom –
Now lending splendour, where from secret springs
The source of human thought its tribute brings
Of waters, – with a sound but half its own.
Such as a feeble brook will often assume
In the wild woods, among the mountains lone,
Where waterfalls around it leap for ever,
Where woods and winds contend, and a vast river
Over its rocks ceaselessly bursts and raves.\(^{96}\)

Shelley's mind engaged with "the clear universe of things around" in search of answers, but causation is a power "remote, serene, and inaccessible," the noumenal world of Kantian essences beyond the mind's finite capability.\(^{97}\)

In his "Ode to the West Wind" (1820), Shelley calls the wind, "breath of Autumn's being." The west wind drives dead leaves, "like ghosts from an enchanter fleeing," which become the "winged seeds" for rebirth in spring. "O Wind," he asks, "If Winter comes, can Spring be far behind?"\(^{98}\) Shelley and Wordsworth emphasized change and endurance in nature. Furthermore, as Whitehead points out, they bear "witness to the discord between the aesthetic intuitions of mankind and the mechanism of science," and to the fact "that nature cannot be divorced from its aesthetic values."\(^{99}\) Most importantly, for Whitehead, "the nature-poetry of the romantic revival was a protest on behalf of the organic view of nature, and also a protest against the exclusion of value from the essence of matter-of-fact."\(^{100}\)

In their reaction to the world of nature, the Romantics valued human consciousness as an intrinsic part of reality and applied reason through its primal fields
of meaning: for Schleiermacher, his deep feelings toward the wonder of creation and brotherhood of man; and for Wordsworth and Shelley, their aesthetic response to the beauty of nature and their sense of man's place in a meaningful and purposeful universe. Hume took a spectator view of human consciousness, disassociating the individual from his sense impressions; and even Kant failed to fully grasp the concrete person in his critique of Hume, overlooking consciousness as substance.\textsuperscript{101} By contrast, the Romantics made human consciousness the centerpiece of their worldview. Subjectivity was an intrinsic part of reality, for the Romantics, and that reality was alive with meaning, value, and purpose.

\textit{Darwinian Evolution and Vitalism}

Before Charles Darwin (1809-1882) published his seminal work \textit{On the Origin of Species} (1859), the Newtonian view of nature as ordered and static fit neatly with the religious view of God as Designer, made famous by William Paley’s analogy to the Divine Watchmaker in \textit{Natural Theology} (1802) ("There cannot be design without a designer").\textsuperscript{102} During the 19th century, however, this alliance between theology and science over design began to erode. In 1795, the geologist James Hutton deduced that the earth had existed an indefinitely long time and implicitly questioned the biblical account of creation. In 1830-33, Charles Lyell theorized that the earth developed gradually over eons of time rather than through upheavals. And in 1884, the amateur naturalist Robert Chambers introduced the idea of evolutionary transformation and implied that Providence was simply the order in nature.\textsuperscript{103}
These scientific developments paved the way for acceptance of Darwin's theory of evolution, based upon his study of 14 uniquely different species of finches on the geographically isolated Galapagos Islands during his five-year voyage (1831-36) aboard the Beagle. Darwin theorized that random variations within a population of finches having a single common ancestor enabled greater survival potential of the offspring. This preservation of favorable variation and the rejection of injurious variations," wrote Darwin, "I call Natural Selection." While On the Origin of Species did not address human evolution, Darwin's The Descent of Man (1871) did so explicitly: "Man the wonder and glory of the Universe proceeded [from Old World monkeys]." During his studies at Cambridge Darwin "hardly ever admired a book more than Paley's Natural Theology," but he subsequently concluded that "the old argument of design in nature, as given by Paley, which formerly seemed to me so conclusive, fails now that the law of natural selection has been discovered." Darwin's theory disproved the belief (advanced by Carolus Linnaeus in 1737) that species had remained unchanged since creation, and also called into question the idea of a superintending Providence, albeit without entirely ruling out the possibility of an original Creator. Expected to enter the clergy after Cambridge, Darwin gradually became a reluctant agnostic as his views on evolution solidified. Yet he allowed the possibility of a remote God as a First Cause and even maintained that one could be "an ardent Theist & an evolutionist."

Random variation and natural selection, described by Darwin, cannot alone account for evolution; it takes isolation to prevent interbreeding and, most importantly,
genetic heredity. During his life Darwin was unaware of Gregor Mendel's 1865 work showing that heredity factors, namely genes, passed intact from one generation to another. Thus, heritable genes provided a mechanism for transferring to successive generations preferential traits produced by random variations. The application of genetic inheritance completed Darwin's theory of species evolution in what is now called "neo-Darwinism." Virtually all scientists today accept neo-Darwinism, which has led many scientists to consider themselves atheists or agnostics.

The 19th century reaction to Darwin among believers and nonbelievers alike was swift, vocal, and persistent. If survival of the fittest among random variations over an indefinite time duration accounts for the diversities of species, including man himself, then the biblical story of man's unique creation in God's likeness no longer seemed tenable. Darwinian evolution undermined not only the theological argument from design but also the beliefs of the Abrahamic faiths in man's fall from grace, his need for redemption, and God's providential superintendence of nature. If man descended from a dumb animal rather than angelic perfection, and if nature and man evolved over millennia as a matter of blind chance and natural selection, then the God hypothesis seemed indefensible or at least unnecessary.

In the legendary 1860 Oxford Union debate, the evangelical Bishop Samuel Wilberforce opposed the Darwinian apologist Thomas Henry Huxley. In a rhetorical appeal to Victorian womanhood, Wilberforce asked if Huxley was willing to trace his descent from apes on his grandmother's side. Huxley replied that he would prefer an
ape for a grandfather than a man of Wilberforce’s station who used his influence "for the mere purpose of introducing ridicule into a grave scientific discussion." ¹¹⁴

Yet some Christian theologians, like John Henry Cardinal Newman, accepted Darwin's findings, and others, like Aubrey Moore, the Oxford theological tutor, and Frederick Temple, the Archbishop of Canterbury, even welcomed them. ¹¹⁵ Moore liked Darwinian evolution for dispatching the Deistic argument from design and the weak apologetics of special creations, implying an intermittently interested rather than immanent God. Temple thought Darwinian evolution implied divine inspiration for evolutionary progress and posed only an apparent but not a real conflict between religion and science, leaving intact man's dignity and moral law.¹¹⁶ But many conservative theologians challenged Darwinian evolution as an unproven scientific hypothesis that denies man's uniqueness and God's providential design.¹¹⁷ Darwinian evolution extended mechanism into the world of nature. It seemed to vindicate scientism's reliance on empirical analysis to provide objective proof about reality and scientific materialism's characterization of nature as basically inert matter ruled by impersonal laws and blind chance.

Henri Bergson (1859-1941) engaged the issue of evolution in his *Introduction to Metaphysics* (1903) and *Creative Evolution* (1907), which draw a distinction between analysis and intuition, between static and dynamic reality, and between indifferent natural laws and nature's vital impulse.¹¹⁸ Bergson challenged the adequacy of science's analytical mode of thought, which looks at facts in isolation (looking around the object), and introduced man's intuitive mode of thought, which enters into and appreciates an
organism (looking within the object) – two profoundly different but complementary ways of knowing. Bergson wrote "that theory of knowledge and theory of life seem to us inseparable," and then proceeded to criticize theoretic analysis as static and piecemeal and scientific reasoning as reducing an object to its elements and destroying its essence. By contrast, intuition is insightful and holistic and recognizes the object's dynamic and continuous character. Instead of abstracting the distinct and static parts of an object and reducing the object to its elements, intuition appreciates its continuous, striving, and living existence. For this reason, Bergson contended that analytical reasoning will never uncover the true self because that requires an intuitive grasping of the full range of sensations, emotions, and thoughts that interact over time within the individual.

Although Bergson began with the conscious mind, like Descartes, Bergson differed markedly from the rationalists by emphasizing the instinctual aspect of the conscious mind. He differed from the empiricists by allocating scientific thought only to the static world of inert matter and mechanism. For Bergson, life and consciousness are not susceptible to scientific analysis, which destroys them and misperceives their essence. To the contrary, life and consciousness are accessible only through intuition, which appreciates that they are continuously in process, always becoming, ever in movement and development. Bergson labeled this continuous process of becoming, duration. Only intuition can grasp duration and appreciate life in process.

Bergson then applied the intuitive mode of thought and the dynamic character of life to his evaluation of Darwinian evolution, which he considered an inadequate
account of the transition from lower to higher states in nature. Bergson considered that both matter, which wears out, and consciousness, which uses matter, are interrelated, but separate, and have a common source in a vital impulse (élan vital). The vital impulse impels all organisms towards higher and more complex states of existence. Only the intuitive consciousness can grasp nature's vital impulse, which underlies all of life and natural processes. Reductive abstractions and analytical reasoning falsify this reality, turn duration into static states, and overlook the irreversible creative processes caused by nature's vital impulse.

This vital impulse produced vegetation, anthropods, and vertebrates, including man. Whereas consciousness in animals is habitual and automatic, Bergson writes that "with man, consciousness breaks the chain. In man, and man alone, it sets itself free." Having broken the evolutionary chain, human consciousness can affect evolution by creating and enriching the self and thereby creating an open future for mankind. For Bergson, the vital impulse is like God, if not God himself.

In short, Bergson maintained that philosophy is responsible for applying both the analytical and intuitive modes of thought and for perceiving the vital impulse and enduring process of reality. While conflicting intuitions, of course, may be difficult to adjudicate, man's critical intelligence can and must play that judgmental role. Conversely, any attempt to understand reality that overlooks intuitive consciousness arbitrarily marginalizes a primary way of knowing. Indeed, Bergson considered intuition more penetrating than intellection because it brings the mind into contact with creative evolution, including its duration, vitality, and novelty.
Looking back over 17th, 18th, and 19th centuries, Western culture's engagement with scientism and scientific materialism is palpable, persistent, and powerful. Cartesian rationalism assured the reliability of sense experience, but also assured that the Newtonian machine was divinely supervised. When Descartes's rationalism faltered before Hume's empirical critique, Kant created a Copernican revolution in epistemology and infused reality with new intimations of God's existence and the soul's immortality. When scientists theorized about nature as a mindless Newtonian machine, the Romantics stepped forward, redefined and enlarged reason to include all the primal fields of meaning, emphasized the reality of human subjectivity, and portrayed nature as an organic and spiritual reality.

Even Darwinian evolution, which apparently supported a materialist view of life, drew a brisk and powerful response in theology and philosophy. Vitalist philosophers like Bergson led a strong anti-scientism movement in fin de siècle Europe, which resisted the mechanistic model as merely a tool of analysis rather than a source of truth, and rejected the conception of nature as deterministic and reductionist. Intuition integrated the human psyche and pointed a way toward truth that was the product of deep introspection, more penetrating than either rationalist speculation or scientific analysis.

The 19th century was undeniably the European century, due in large part to its major developments in science and technology. "Europe and Europeans were never prouder of their achievements," writes Baumer, and they placed themselves at the creative center of the entire universe. The vibrant culture of the chaotic 19th century,
and that of the two more settled, preceding centuries, kept scientism and scientific materialism in check by advocating a broader epistemology than empirical science alone and by advancing a teleological metaphysics. Under the influence of the Romanticism and Vitalism, reason, man's critical intelligence, took account of feelings, aesthetics, interpersonal involvements, and the narratives of man's place in the world in addition to the theoretic world of science. Employing this wider empiricism, reason continued to perceive the universe as laden with intrinsic aesthetic value, meaning, and purpose, despite the advances of Darwinian evolution. So, in the three centuries leading up to the Great War, Western culture had preserved mind, meaning, value, and purpose in reality, even as that culture was becoming frayed, decadent, and finally incapable of forestalling catastrophe.
CHAPTER 3
THE GREAT WAR AND CULTURAL BREAKDOWN

Things fall apart; the center cannot hold;
Mere anarchy is loosed upon the world,
The blood-dimmed tide is loosed, and everywhere
The ceremony of innocence is drowned;
The best lack all conviction, while the worst
Are full of passionate intensity.
– William Butler Yeats, "The Second Coming" (1920)

By definition, civilization is a relatively high level of cultural and technological
development, and culture is excellence in the arts, humanities, and sciences. Thus,
culture is both an attribute and a byproduct of civilization. Prewar Europe abounded in
both – an unprecedented level of civilization and cultural excellence. Civilization
necessarily requires sufficient material prosperity to provide leisure, and Europe
certainly had this in abundance. But, more important, claims art historian Kenneth
Clark, is "confidence in the society in which one lives, belief in its philosophy, belief in
its laws, and confidence in one's own mental powers." All great civilizations have a
feeling of energy and permanence behind them, but however solid and complex they
may appear, they are rather fragile. Like Greece and Rome, they can collapse from
exhaustion and lost confidence. The Great War proved Western civilization's fragility
and also Clark's contention that culture constitutes the most reliable indicator of the
state of that civilization.

The Great War shattered confidence in Western civilization, introduced an
unnerving sense of impermanence, and created a grave mistrust of man's mental powers.
Literary historian Paul Fussell called the Great War a "hideous embarrassment" to the
century-old Miliorist Myth of inevitable progress. William Barrett identified Western civilization's "sense of weakness and dereliction before the whirlwind that man is able to unleash but not to control," and also Western man's existential alienation – "a stranger to God, to nature, and to the gigantic social apparatus that supplies his material wants." Their assessments are not overstatements because the war opened an enormous chasm into which Western civilization collapsed. "The best that has been thought and known" in prewar culture could not prevent, and even seemed to anticipate, the West’s fall from greatness. The resulting loss of confidence in civilization’s stability and mental powers and sense of alienation from God and nature provided fertile ground for scientism and scientific materialism with their confident claims for objective truth and cosmic indifference.

*Fin De Siècle Civilization and Culture*

"What an extraordinary episode in the economic progress of man that age was which came to an end in August 1914!" So exclaimed economist John Maynard Keynes in *The Economic Consequences of the Peace* (1919). Historian Niall Ferguson reports that between 1870 and 1913, the world economy grew at an historically unprecedented pace and that Europeans could buy the world's wares, invest in international securities, and travel the globe, in "unprecedented freedom and peace." National currencies voluntarily valued under the international gold standard produced long-run price stability; goods, capital, and labor enjoyed international mobility barely equaled even today. Unparalleled political globalization supported this economic progress, with
European empires spreading over most of the world's land surface and populations, dissolving traditional professional barriers within Europe, and enabling remarkable assimilation of diverse ethnicities.\textsuperscript{11}

As the world's biggest empire, Britain seemed poised to contain the geographic spread of any continental crisis and to ensure continued \textit{Pax Britannica}, especially considering Queen Victoria's genealogical intertwining of Europe's ruling elite.\textsuperscript{12} The Russian Czar Nicholas II and the German Kaiser Wilhelm II after all were cousins and addressed each other as "Nicky" and "Willy."\textsuperscript{13} Furthermore, since the Congress of Vienna following Napoleon's defeat in 1815, Great Power diplomacy had limited or prevented wars. As Ferguson notes, these wars, including the six-month Franco-Prussian war (1870-71), "were nearly all remarkable for their limited geographical extent, short duration, and low casualties."\textsuperscript{14} The European economies were inextricably intertwined, moreover, and, as financier Ivan Block and journalist Norman Angell widely publicized, war would be ruinous for victors and vanquished alike.\textsuperscript{15}

Beneath the geopolitical and economic power of the European empires, however, danger lurked. Ireland percolated ominously in political revolt, suffragettes protested violently for women's rights, trade unions threatened a general strike in the British Isles, the Socialist International planned the destruction of world capitalism, and anarchists assassinated several dozen of Europe's ruling elite.\textsuperscript{16} In addition, 19th century industrialization had drawn a large percentage of the rural population into dramatically enlarged cities, and urbanization had destroyed its previously tight-knit sense of rural community, social integration, and group solidarity. Furthermore, capitalism proved
indifferent to human cares, customs, and values.\textsuperscript{17} In 1905, German sociologist Max Weber lamented the despiritualized, bureaucratized, and rationalized modern society; and in 1912, French sociologist Emile Durkheim gave a label to the resulting sense of individual isolation and alienation – he called it "anomie."\textsuperscript{18}

An even darker side of \textit{fin de siècle} civilization was social Darwinism, which promoted "racial hygiene" and attacked "miscegenation," especially with so-called "alien" races, like the Jews.\textsuperscript{19} For 13 years (1897-1910), the Viennese continuously reelected Karl Lueger as Mayor on an anti-Semitic platform.\textsuperscript{20} Leuger's mayoralty overlapped the notorious Dreyfus Affair (1894-1906), which produced, in Barbara Tuchman's words, a "sudden and malign bloom of anti-Semitism in France."\textsuperscript{21} In short, the urban, capitalist, and technological forces that produced 19th-century bourgeois prosperity also tore apart social relations, unleashed violence, and exposed latent unrest and prejudice throughout Europe.

\textit{Fin de siècle} culture was every bit as creative, chaotic, and precarious as the civilization that produced it. In art, Braque and Picasso found reality in geometric forms (Cubism), Léger in industrial machines, German Expressionists in inner emotional states, and Italian Futurists in action and violence. In 1907, Pablo Picasso (1881-1973) painted the groundbreaking work, \textit{Les Demoiselles d'Avignon}, which injected a Spanish brothel and a pagan world of African ritual masks into the prevailing Renaissance tradition of structural order and monumental nudes (Figure 2). Planes and arcs dissect the five female anatomies, flouting traditional depictions of bulk by fracturing mass and solidity; color becomes abstract and expressive; and jagged unpredictable patterns and
planes animate the pictorial surface – all disregarding the representation of external reality.\textsuperscript{22}

In music, Claude Debussy, Edward Elgar, Gustav Mahler, Maurice Ravel, Arnold Schoenberg, Richard Strauss, and Igor Stravinsky impressed European audiences with their widely different styles.\textsuperscript{23} In 1908, Sergei Diaghilev brought the Russian Ballet to Paris with its stars, Anna Pavlova and Vaslov Nijinsky, and in 1913, he premiered Stravinsky's groundbreaking ballet \textit{Le Sacre du Printemps (The Rite of Spring)}. \textit{Le Sacre} is music of almost total dissonance, constantly shifting meters, and percussive violence, and is ballet about pagan Russia with a ritual victim dancing to her death. Pierre Monteux conducted, Camille Saint-Saëns walked out, Maurice Ravel cried "Genius!" – and the entire theater rioted.\textsuperscript{24} European culture was not only wildly creative but also internationally appreciated: the French loved Richard Wagner even more than the Germans; the English loved the Russian novel and ballet; and Nietzscheanism spread throughout the continent "a 'new culture' of radical individualism and the supremacy of art."\textsuperscript{25}

In his celebrated 1909 Manifesto, published on the front page of the Paris newspaper \textit{Le Figaro}, Filippo Tommaso Marinetti (1876-1944), the Italian poet and flamboyant founder of Futurism, declared the end to Italy's reactionary reliance on its classical and Renaissance past, and the creation of a new forward-looking and dynamic society, poetics, and art:

\begin{quote}
We intended to sing the love of danger, the habit of energy and fearlessness. . . . We say that the world's magnificence has been enriched by a new beauty; the beauty of speed. A racing automobile whose hood is adorned with great pipes
\end{quote}
like serpents of explosive breath – a roaring car that seems to run on grapeshot – is more beautiful than the *Victory of Samothrace*. . . . We will glorify war – the world's only hygiene – militarism, patriotism, the destructive gesture of freedom-bringers, beautiful ideas worth dying for, and scorn for women. . . .

Marinetti inspired a new artistic sensibility among Italian painters, extolled violence as the source of all creativity, and glorified war against capitalism, bourgeois society, and European civilization, garnering support throughout Europe.

Other less radical artistic critiques of Western civilization focused on bourgeois indifference and corruption and on individual loneliness and lost community. In *Heart of Darkness* (1902), Joseph Conrad (1857-1924) exposed the compromised idealism and brutal excesses of European colonialism in Africa. In *The Street* (1913), Ludwig Kirchner (1880 -1938) dramatically evoked the restless, dehumanized emptiness, the clandestine, disturbed sexuality, and the widespread moral hypocrisy of bourgeois life in prewar Berlin (Figure 3). In *The Love Song of J. Alfred Prufrock* (1911), T.S. Eliot portrayed the human toll of bourgeois capitalism in loneliness and boredom. Prufrock walks "through certain half-deserted streets,/ The muttering retreats/ Of restless nights in one-night cheap hotels/ And sawdust restaurants with oyster shell," prepares "a face to meet the faces that you meet," and measures out his life "with coffee spoons."

Gustav Mahler (1860-1911) expressed his own loneliness and desperation in achingly poignant music that reflected his wildly different emotional states. His Symphony No. 5 (1902) and Symphony No. 9 (1910) transit through despair, exhilaration, and resignation over, respectively, the death of a loved one and the premonition of his own death. Mahler described his sense of alienation and loss of
community: "I am thrice homeless, as a Bohemian in Austria, as an Austrian among
Germans, as a Jew throughout the world, everywhere an intruder, never welcomed." 32
In Lord Jim (1900), Conrad's laconic alter ego Marlowe also emphasizes the importance
of community when reflecting upon Jim's breach of faith by leaving his passengers
aboard the Patna: "In our hearts we trust for our salvation in the men that surround
us." 33 In August 1914, militant nationalism became the surrogate for that lost
community.

The Shock, Euphoria, and History of the War

Despite this undercurrent of social and cultural unrest, the Great War took
Europeans completely by surprise. 34 George Bernard Shaw wrote that "only the
professional diplomats and a very few amateurs whose hobby is foreign policy even
knew the guns were loaded." 35 On June 28, 1914, young Bosnian Serb assassinated
Archduke Franz Ferdinand, the Habsburg heir to the Austro-Hungarian throne, and his
wife Sophie in Sarajevo. Barely five weeks later, the European powers declared war on
one another. Furthermore, the precipitous August 1914 declarations of war came with
little justification – basically Austria's desire to protect its fragile Empire, Germany's
belief in speed as essential to military success, and the European powers’ commitment
to entangling alliances. 36 Although war seemed to come from nowhere, Europeans
greeted it with almost unanimous enthusiasm. Every nation thought that it was
"defending its existence," according to historian A. J. P. Taylor, "though the method of
defense was to invade someone else's territory." 37
When war was announced, the "August Madness" followed, with enormous supportive crowds gathering in the major capitals of Europe – Paris, London, St. Petersburg, Vienna, and Berlin. The Irish joined the British Army to protect Belgium, the women's movement volunteered to aid the war effort, the Socialist International became nationalistic and raised no opposition, and the artists and intellectuals throughout Europe, young and old alike, embraced the war. "Among the elite of each country," lamented French musicologist and writer Romain Rolland at the start of war, "there is not one who does not proclaim and is not convinced that the cause of his people is the cause of God, the cause of liberty, and of human progress." Europe's leading theologians, philosophers, poets, historians, sociologists, psychologists, and scientists gladly joined this martial chorus for various idealistic reasons: self-identity and self-understanding, recovery of lost community, and relief from anomie, materialism, corruption, and inhumanity within bourgeois capitalist society.

Philosophers like Henri Bergson and Max Scheler, novelists and poets like Thomas Mann and Rainer Maria Rilke, psychologists like Sigmund Freud and Émile Durkheim, musicians like Igor Stravinsky and Alexander Scriabin, all supported the war. For Max Scheler it was a war against capitalism; for G. K. Chesterton it was a war against England's crimes and for democratization of England's class-ridden, privileged society; and for Edmund Gosse, writer, critic, and Librarian for the House of Lords, it was a "sovereign disinfectant" to purge England's self-indulgence and luxuriousness. With a few prominent exceptions – Albert Einstein, Bertrand Russell, and members of the Bloomsbury group among them – there were virtually no
conscientious objectors to the war. "I discovered to my amazement," remarked Bertrand Russell, "that average men and women were delighted by the prospect of war." According to historian Roland N. Stromberg, "the war spirit of 1914 was a new concoction" because it did not emphasize traditional martial themes of necessity, duty, or justice, but rather novel ideas of "renewal, adventure, apocalypse." The August Madness grew out of "a powerful thirst for identity, community, purpose," and served as "an antidote to anomie, which had resulted from the sweep of powerful forces of the recent past – urban, capitalistic, and technological forces tearing up primeval bonds and forcing people into a crisis of social relationships." Rupert Brooke (1887-1915) captured these high blown sentiments in two poems: "Peace" (1914), which thanked God for giving Britain a war to cleanse "a world grown old and cold and weary," and "The Soldier" (1915), which announced his willingness to die for England in "some corner of a foreign field." "Never such innocence again," wrote Philip Larkin in his 1964 poem "MCMXIV" about the enthusiastic crowds that greeted Britain's declaration of war in August 1914, "Grinning as if it were all/ An August bank Holiday lark." The war proceeded as quickly as it began. On July 23, 1914, less than a month after the assassination, Austria-Hungary gave Serbia an ultimatum and demanded an immediate reply. Unsatisfied with Serbia's substantially compliant response sent two days later, Austria-Hungary declared war on Serbia the very next day. In a largely political gesture Russia mobilized in support of Serbia, but Germany demanded that Russia immediately demobilize. When Russia refused, Germany declared war on Russia.
on August 1. Yet Germany's pre-existing Schlieffen plan designed to avoid a two-front war called for a quick victory in the West before turning East to challenge Russia. Consequently, Germany decided first to strike against Russia's ally France by marching through Belgium intent on encircling the French army. When Belgium refused Germany’s request for right of transit, Germany invaded Belgium on August 3 and simultaneously declared war on France. In response to Germany's violation of Belgian neutrality, Britain declared war on Germany on August 4.\textsuperscript{51} Europe was now at war.

Every nation's generals thought quick, decisive battles would win the war by Christmas 1914, but reality was quite different since these same generals never anticipated or learned that an infantry's size and fighting spirit (or \textit{élan} as the French called it) were no match for the machine gun.\textsuperscript{52} Attacking the German positions in Lorraine on August 14, 1914, barely two weeks into the war, the French suffered their highest casualties of the entire war and lost their best officers and soldiers. The French then shifted to defense and, along with the British, halted the German sweep through Belgium at the Marne River on September 5, 1914, with each side by then having suffered one-half million casualties.\textsuperscript{53} Germans dug in, war of movement ended, and trench warfare began along a front that extended from the North Sea through Belgium and France all the way to Switzerland.\textsuperscript{54} This frontline never varied more than a few miles over the next four years, despite the incredible slaughter, as armies on both sides attempted continually and futilely to break through.\textsuperscript{55}

Between February and May 1915, the French launched further futile attacks in Champagne, San Mihiel, and Arras, as did the British at Festubert and Aubers Ridge –
all with enormous casualties.\textsuperscript{56} In March 1915, the Allies landed on the Gallipoli Peninsula in a strategically brilliant plan to circumvent the impasse in the Western Front, but the campaign suffered from inadequate planning and inept execution. It left Australian and New Zealand troops clinging to narrow beachheads overlooked by entrenched Turkish forces. After sustaining heavy losses and failing to move inland by October, the Allies recognized the Dardanelles campaign was a failure and successfully evacuated their troops from the Peninsula by the end of 1915.\textsuperscript{57}

The Allies concentrated on the Western Front and planned more frontal attacks at the Somme during 1916, and the Germans planned similar attacks at Verdun – all of which were tactically and humanly disastrous. The German General Erich von Falkenhayn proposed "to bleed the French white" at their weak Verdun salient and attacked in February 1916. But the French were equally determined to defend their strategically unimportant salient, with French General Philippe Pétain declaring, "They shall not pass." Both sides suffered enormous casualties for no gain. Taylor calls Verdun "the most senseless episode in the war."\textsuperscript{58}

On July 1, 1916, the British launched their attack on the Somme – the worst location, circumstance, and timing for this offensive.\textsuperscript{59} Captain W.P. Nevill literally kicked off the British attack with a football, and then the British soldiers advanced slowly toward the entrenched German forces in uniform, solid lines of men, each weighed down by 66 pounds of equipment. With plenty of warning from five days of artillery bombardment along an 18 mile front, German soldiers emerged from their secure, forty-foot-deep trenches when the artillery stopped, set up their machine guns,
and began firing into the slowly advancing British formations. Nevill died almost immediately, and by day's end the British had suffered the largest single-day losses by any army in the war – 60,000 casualties, including 20,000 dead.\(^6^0\)

Undeterred by the senseless carnage, British General Alexander Haig ordered the same uniform attacks all along the line every day thereafter with the same disastrous results on a diminishing scale. On July 14, 1916, the attacks included a tragic British cavalry charge across No Man's Land replete with bugles and lances, all slaughtered by German machine guns. By its last attack on the Somme (November 13, 1916), the British had suffered 420,000 casualties, the French nearly 200,000, and the Germans about 450,000 (simply because the German General Falkenhayn ordered German soldiers to retake every yard of lost ground by counterattack).\(^6^1\)

After the Somme, the war dragged on for two more years, and the death toll mounted from incessant, futile frontal attacks. During its offensive at Aisne (April 1917) the French infantry was massacred for a mere 600 yards; French soldiers mutinied and 100,000 were court-martialed.\(^6^2\) During the Third Battle of Ypres (July-November 1917) (also called Passchendaele by the British), the British suffered 300,000 casualties to gain a trivial amount of ground, and the Germans suffered 200,000 casualties, in what Taylor calls, "the blindest slaughter of a blind war."\(^6^3\)

On October 24, 1917, the Italian front collapsed at Caporetto before the advancing Austro-Hungarian Army with German reinforcements. Caporetto cost the Italian army 200,000 casualties in battle and 400,000 in desertions, and almost drove the Italians from the war. The Italian line finally held at the River Piave, where the Allies
developed a unified southern strategy. In January 1917, the Germans instituted unrestricted submarine warfare and began sinking American ships. And in April 1917, the Americans discovered the Zimmerman telegram in which the German Secretary of State offered to help Mexico in a war against the United States to recover Mexico's lost territory. Promptly, America shed its isolationist mantle and entered the war, partly to counter Germany's provocative actions, but primarily to protect its booming trade and its substantial loans with the Allies.

In March 1918, following its Armistice and Brest Litovsk Treaty with Russia, the Germans moved troops from the Eastern to the Western Front, which now was key to German victory. The Central Powers had already succeeded on every other front: Russia had surrendered, Italy had retreated at Caporetto, and Britain had evacuated Gallipoli. On March 21, 1918, Germany launched its final offensive of the war at the Somme and advanced to within 71 miles of Paris, reaching the Marne on July 15. The Allies once again held the Germans at the Marne, however, and their defense turned the tide of battle toward the Allies.

On August 8, 1918, the Allies attacked across a wide front, causing "the black day of the German Army," according to German General Erich Ludendorff, since the German army retreated. By September 29, Ludendorff recognized that the German army had no chance for victory, even though its lines had not broken or its homeland been invaded. The recognition led Ludendorff to insist that Germany seek an immediate armistice, which a newly formed German government signed on November 11, 1918. During the four years and three months leading up to the Armistice, the Great War had
taken the grim toll of 9.45 million dead (averaging 6000 per day for 1500 days) and 15.4 million wounded.\textsuperscript{70}

\textit{The Experience and Disillusionment of War}

"Idealism perished on the Somme," declared Taylor. Volunteers lost not only their enthusiasm for the war but their faith "in their cause, in their leaders, in everything except loyalty to their fighting comrades. The war ceased to have a purpose. It went on for its own sake, as a contest in endurance."\textsuperscript{71} Disillusionment with the war and its leaders and loyalty toward one's comrades permeate the war literature after 1916, starting with the British war poets who fought on the Somme, like Siegfried Sassoon (1886 -1967) and Wilfred Owen (1893-1918).

In "Dulce Et Decorum Est" (1918), Wilfred Owen impugned the "old lie" that it is decorous and sweet to die for one's country.\textsuperscript{72} The poem graphically depicts a soldier's dying agony from gas poisoning, "guttering, choking, drowning," and bitterly admonishes a chauvinistic poet for urging young men to enlist in pursuit of "some desperate glory":

\begin{quote}
If you could hear, at every jolt, the blood
Come gurgling from the froth-corrupted lungs,
Obscene as cancer, bitter as the cud
Of vile, incurable sores on innocent tongues, –
My friend, you would not tell with such high zest
To children ardent for some desperate glory,
The old lie: Dulce et decorum est/ Pro patria mori.\textsuperscript{73}
\end{quote}

In "Futility" (1918), Owen mourned the horribly premature fate and unrealized potential of a soldier who froze to death overnight in the trenches.\textsuperscript{74} And in "Strange
Meeting" (1918), Owen explicitly criticized the civilization responsible for the war by describing a soldier's mythic descent into hell where he confronts his alter ego, the very man he killed the prior day.\(^7\) Owen wrote a preface for a book of poems he hoped to publish that carries both a warning and a lament:

This book is not about heroes. English poetry is not yet fit to speak of them. Nor is it about deeds, or lands, nor anything about glory, honor, might, majesty, dominion, or power, except War. Above all I am not concerned with Poetry. \textit{My subject is War, and the pity of War. The Poetry is the pity.} Yet these elegies are to this generation in no sense consolatory. They may be to the next. All a poet can do today is warn. That is why the true Poets must be truthful.\(^7\)

Owen dismissed "big words" like glory and honor, chided patriotic warmongering as an old lie, characterized modern technological warfare as most unheroic, considered enemy soldiers his brothers, and pictured modern civilization in full retreat.

Siegfried "Mad Jack" Sassoon served as a courageous second lieutenant in France, earned Britain's second-highest military honor, the Military Cross, but became disillusioned and embittered on the Somme. Sassoon wrote angry, sarcastic poetry directed at the war effort, the government and generals who pursued it, and the people on the home front who supported them.\(^7\) Fully expecting to be court-martialed, Sassoon published an openly defiant letter to his commanding officer in July 1917, claiming "that the war is being deliberately prolonged by those who have the power to end it. . . . I believe that this war, upon which I entered as a war of defense and liberation, has now become a war of aggression and conquest."\(^7\) In his 1929 war memoir, \textit{Good-Bye to All That}, Sassoon's friend and fellow officer Robert Graves (1895-1985) recounted his efforts to save Sassoon from court-martial by urging the Army to convene a medical
board instead and by appearing before the medical board on Sassoon's behalf. Graves notes the "irony of having to argue to these mad old men that Siegfried was not sane!"  

Following Graves's successful intercession, the Army sent Sassoon off to Craiglockhart psychiatric hospital for shellshocked soldiers where he met and befriended Owen, also recovering from shellshock. Both Sassoon and Owen returned to France (Owen over the objection of his doctor), not from any conviction about the war but to look after their men. As Owen wrote in a letter to his mother shortly before being killed one week prior to the Armistice: "I came out in order to help these boys – directly by leading them as well as an officer can; indirectly, by watching their suffering that I may speak of them as well as a leader can." Graves and Sassoon voiced similar sentiments about returning to their troops.

Two important anti-war novels by French and German soldiers, respectively, Henri Barbusse (1873 -1935) and Erich Maria Remarque (1898-1970), echo these same themes of the brotherhood of the trenches, the futility of war, and the betrayal by society. In Under Fire, The Story of a Squad (Le Feu in French) (1916), Barbusse described the experience at the Front of Cpl. Bertrand's infantry squad, mostly farmers and artisans of all ages, the poilu ("shaggy beasts") who had endured 15 months of rifle, machine gun, and cannon fire in "a vast and waterlogged desert," and remained "chained and riveted together in fraternity." The unnamed narrator from Bertrand's squad describes bodies mutilated by shellfire, hand-to-hand combat, executions for desertion, nighttime raids into No Man's Land, drowned men unable to "extricate
themselves from the mud," and increasing deaths among the squad, including finally the brave Cpl. Bertrand.\textsuperscript{87}

The squad constantly rails against the "truly unpardonable division" within France between "those who gain and those who griee," and between the unhappy poilu and happy civilians. In short, Under Fire is a cri de coeur against the "blasphemy" of war: "Shame on military glory, shame on armies, shame on the soldier's calling, that changes men by turns into stupid victims or ignoble brutes."\textsuperscript{88} Barbusse's novel opens surrealistically with men of culture and intelligence reading that "War is declared" and foreseeing 30 million soldiers of two slave armies "committing suicide." It closes with a socialist sermon railing against the "sword wavers, profiteers, and intriguers" who caused and benefited from the war and praising the victimized common soldiers, the universal brotherhood who must unite to ensure there is "no more war after this!"\textsuperscript{89}

In All Quiet on the Western Front (1929), Remarque had 19-year-old Paul Bäumer narrate the war experiences of his classmates and older soldiers in his German infantry squad during 1917-18 on a vaguely specified portion of the Western Front.\textsuperscript{90} They experience artillery barrages, gas attacks, food shortages, military hospitals, patrols into a No Man's Land, guard-duty over Russian prisoners, and trench life, with its rats, latrines, boredom, and carnage. All Quiet portrays the young soldiers' alienation from the patriotic older generation, their fierce loyalty to one another, their incomprehension of war's purpose, their loss of innocence, and their desperate determination to survive.\textsuperscript{91}
In his Preface to the novel, Remarque states:

This book is to be neither an accusation nor a confession, and least of all an adventure, for death is not an adventure to those who stand face-to-face with it. It will try simply to tell of a generation of men who, even though they may have escaped shells, were destroyed by the war.

His Preface to the contrary notwithstanding, *All Quiet* is both an accusation that "the culture of a thousand years could not prevent the stream of blood being poured out," and a confession that Remarque is part of that "lost generation" of men "destroyed by the war." As Bäumer's classmate remarks, "The war has ruined us for everything."92 Numerous scenes make the novel's pacifist leanings unmistakable: Bäumer thinks "a word of command might transform [the Russian prisoners] into our friends"; the squad questions the war's justification (both sides are simply protecting their fatherland, the Kaiser could have said No to the war, opposing leaders and generals have caused the war merely to "become famous," and they should simply duke it out among themselves); and Bäumer promises the dead French soldier whom he has just killed and called "Comrade" that "It shall never happen again."93

By the summer of 1918, Bäumer and his friends realize they are falling back, dying one by one, and losing the war: "We are not beaten, for as soldiers we are better and more experienced; we are simply crushed and driven back by overwhelming superior forces."94 His generation "might have unleashed a storm," says Bäumer, had they returned home in 1916, but returning now we are "weary, broken, burnt out, rootless, and without hope. We will not be able to find our way anymore."95 As historian Modris Eckstein's observed, *All Quiet* personalized the fate of the Unknown
Warrior; war became a matter of individual experience rather than interpretive history; and Paul Bäumer was the Everyman who "sparked the intense reconsideration of the meaning of the war at the end of the twenties." 96

As British historian Brian Bond reminds us, the real historical war ceased to exist after 1918, because it "was swallowed up by imagination in the guise of memory." 97 In his study of the war's effect on English culture, English professor Samuel Hynes concurred that the unprecedented and hitherto unimaginable violence and destruction of the Great War had in fact "changed reality." The war caused a "sense of radical discontinuity of present from past" and created a new narrative, the Myth of War:

. . . a generation of innocent young men, with heads full of high abstractions like Honor, Glory, and England, went off to war to make the world safe for democracy. They were slaughtered in stupid battles planned by stupid generals. Those who survived were shocked, disillusioned and embittered by their war experiences, and saw that their real enemies were not the Germans, but the old men at home who had lied to them. They rejected the values of the society that had sent them to war, and in doing so separated their own generation from the past and from their cultural inheritance. 98

This postwar narrative is not just English, however, since it also can be read, for example, in the works of Barbusse and Remarque, as well as Ernest Hemingway. These writers rejected the values of prewar culture and contemplated an entirely new reality.

Postwar Disintegration of Civilization and Culture

In his 1920 poem, Hugh Selwyn Mauberley, Ezra Pound described soldiers who went to war "believing in old men's lies, then unbelieving/ came home . . . to old lies
and new infamy” – or never came home:

There died a myriad,
And of the best, among them,
For an old bitch gone in the teeth,
For a botched civilization,

. . .
For two gross of broken statues,
For a few thousand battered books. 99

The war exposed four aspects of Pound's "botched civilization": (1) the expendability of human life for political purpose, turning soldiers into martyrs rather than heroes, (2) the mistrust and hostility within the postwar society toward its leaders, (3) the war's continuation in the form of internal unrest, and (4) the latent hostility within existing and newly created nations toward their multiracial citizenry.

The Great War produced a shocking death toll because the Great Power leadership and its civilian population maintained their support for the bloodbath to the bitter end. 100 After the Battle of the Marne the Great War became a vast industrialized siege that moved little over four years; military leaders waged war essentially to destroy the other side's manpower in a strategy of mechanized human slaughter. 101 In pursuing their strategy, moreover, both sides in the war proved indifferent to the lives even of their own soldiers. As theologian Richard L. Rubenstein observed, "Both the British and the German generals made the same decision; their country's young men were expendable.” 102 The imaginative violence of prewar Futurism had become existential; the nightmare was reality.

In Returning to the Trenches (1914-15), C.R.W. Nevinson (1889-1946) portrayed the grim march of burdened French soldiers returning to the Front, a mass of
men moving like a huge machine (Figure 4). A prewar Futurist and wartime ambulance driver, Nevinson saw war's mechanized carnage firsthand and, consequently, *Returning to the Trenches* conveys no Futurist fighting élan or optimism. Author and painter Wyndham Lewis observed that Nevinson's soldiers "have a harried and harassed melancholy and chilliness," and Nevinson remarked that "war is now dominated by machines, and that men were mere cogs in the mechanism."103

After the publication of Wilfred Owen's poems in 1920 with Sassoon's introduction, and in 1931 with Edmund Blunden's biography, Owen became recognized not just as the greatest poet of the war but, as English professor George Walter remarks, a "tragic, selfless, talented young man whose humanism in the face of wartime atrocities spoke out from every poem."104 Hynes puts it more bluntly: Owen was "neither hero nor coward, but a sacrifice."105

Once the soldier was seen as a victim, the idea of a hero became unimaginable: there would be no more tragic action in the art of war. And if entire armies could be imagined composed of such victims -- if indeed every army was an army of martyrs -- then Victory too must fade from the story, and war become only a long catastrophe, with neither significant action or direction, a violence that was neither fought nor won but only endured.106

As Ernest Hemingway wrote in *A Farewell to Arms* (1929) about the "white war" in the Italian Alps, "Abstract words such as glory, honor, courage, or hallow are obscene."107 Thus, "to represent the war in traditional ways," adds Hynes, "was necessarily to mis-represent it, to give it meaning, dignity, order, greatness."108

In addition to portraying soldiers as expendable victims, the war literature emphasized a second consequence, namely, the soldiers' estrangement from civilian
noncombatants, especially the "old men" responsible for the war. These included politicians like Lloyd George, who grandly described the British soldier as "a good sportsman" who "played the game" and did not quit, when the unvarnished truth about the war was its relentless horror; and like the Kaiser who gloried in the war and finally fled to permanent exile in Holland.\textsuperscript{109} The soldier's estrangement, mistrust, and hostility reverberates throughout both Sassoon's angry and sarcastic poetry about those supporting the aggressive war and Owen's ironic and sensitive poetry about the gruesome fate of those innocents fighting the meaningless war.

In \textit{Goodbye to All That} Robert Graves wrote, "I couldn't stand England any longer," and thought "London seemed unreal itself. Despite the number of uniforms in the streets, the general indifference to, and ignorance about, the War surprised me."\textsuperscript{110} Graves reported the same sentiments among returned soldiers; they "could not understand the war madness that ran about everywhere, looking for a pseudo-military outlet." He also found serious conversation with his parents "all but impossible."\textsuperscript{111} Similarly, in \textit{All Quiet on the Western Front}, Paul Bäumer finds himself a stranger during home leave; he cannot relate to his family or former neighbors, and he is eager to return to his comrades: "But a sense of strangeness will not leave me, I cannot feel at home amongst these things. There is my mother, there is my sister, there my case of butterflies, and there is the mahogany piano – but I am not myself there. There is a distance, a veil between us."\textsuperscript{112}

Historian Robert Wohl describes the English myth of the "lost generation" as referring "simultaneously to the severe losses suffered within a small and clearly
defined ruling class and to the difficulties that survivors from this class (and others below it) had in adjusting to the political and social realities of postwar England." The lost generation was England's "missing elite," the university and public school graduates brought up to rule, only to discover at the war's end that British power was declining and "that they were going to have to preside over the transformation of the country, the phasing out of their values, and the dissolution of the empire." The English elite, moreover, were not unique in their disillusionment. Wohl found throughout Europe "this feeling of betrayal and deceit was especially strong among returning veterans born in the 1890s." Wohl described the returning generation of First World War veterans as caught between two worlds, "one dead, the other powerless to be born."

Mistrust and resentment of the society responsible for the war is not limited to the writings of combatants but also is found in noncombatant literature, like that of George Bernard Shaw (1856-1950) and D. H. Lawrence (1885-1930). As he explained in his 1919 Introduction to the play, Shaw wrote Heartbreak House during the war (1916-17) about the "cultured, leisured Europe before the war" that pursued the war, a "house without foundations," as the play's title implies. Shaw set Heartbreak House in a Sussex country cottage occupied by a weird assortment of representative upper-class Englishmen who deconstruct and devalue every aspect of English society: industry, politics, marriage, and religion. They expose England as a sinking ship. Rather than focus on the war, Heartbreak House exposes the decaying society, corrupted values, and human folly that led Edwardian England into war. "I tell you one
of two things must happen," says Hector Hushabye near the play's end, "Either out of that darkness some new creation will come to supplant us as we have supplanted the animals, or the heavens will fall in thunder and destroy us."  

Lawrence wrote *Women in Love* at the same time, during the costly British offensives at the Somme and Passchendaele. But, like *Heartbreak House*, Lawrence's novel ignores the war and focuses instead on the disintegration of a failed civilization. Although *Women in Love* depicts societal struggles for women's and workers' rights and personal struggles for meaning by the Brangwen sisters Ursula and Gudrun and their lovers Rupert Birkin and Gerald Crich, the novel's central theme is a world in crisis: "The sisters found themselves confronted by a void, a terrifying chasm, as if they had looked over the edge." For Lawrence, the 19th century rise of industry, embodied in ruthless coal-mining industrialist Gerald Crich, caused this crisis. Crich turns men into machines and finally dies in the desolate, white, alpine winter – Lawrence's metaphor for all that Crich represents: English industrial power and wealth that caused the apocalyptic war. In Lawrence's fatally diseased world, mankind's salvation is love and marriage, and, echoing Hector's comment in Shaw's play, hope for "some other being, finer, more wonderful, some new, more lovely race, to carry on the embodiment of creation."  

A paradigm shift occurred after 1918, when intellectuals and youths began questioning the purpose and necessity of the war. They had gladly welcomed the war, but subsequently, as Stromberg reports, they developed "a revulsion against war . . . quite as powerful as the welcoming of it in 1914." Thomas Hardy posed their
unanswered and unanswerable question about the war in his poem "'And there was a
great calm' (On the Signing of the Armistice, Nov. 11, 1918)"

The Sinister Spirit sneered: "It had to be!"
And again the Spirit of Pity whispered, "Why?"125

Some individuals did offer answers. The Dadaist Tristan Tzara wanted to sweep away
the prewar civilization into nihilism; the Fabian George Bernard Shaw and the novelist
Henri Barbusse subscribed to the Myth of Stalin; and the militarist Ernst Junger (Storm
of Steel) laid the ground for Nazism and Fascism.126 This postwar disillusionment with
prewar society caused a passionate and unfortunate retreat into pacifism, which left the
door open for Nazism to enter European society unchecked.127

Even as critics lamented the unconscionable human sacrifice and lambasted the
culpable prewar society, the war produced a third, insidious effect, that of continuing
hostilities in another form, with internal violence erupting across Europe. Strikes
resumed in all of Britain's major trades (miners, railwaymen, munitions workers, cotton
spinners, and even London police) and culminated in a general ten-day strike, May 3-
13, 1926.128 The IRA Volunteers and the Black and Tans both perpetrated terrorist acts,
like Bloody Sunday (November 21, 1920), bringing about the Anglo-Irish treaty of
1921 and precipitating the gruesome Irish civil war.129 War-hardened veterans fought
the labor wars and the Irish wars, which made these internal wars all the more violent.
In January 1919, the communist Spartakus organization led a revolt in Berlin, which
resulted in the murder of its leaders Rosa Luxemburg and Karl Liebknecht. In May 1919,
French workers staged a general strike, and in fall 1920, Northern Italian strikers seized factories.\textsuperscript{130}

At the war's end, Russia plunged into a barbaric civil war that cost 1.5 million deaths and 6 million total casualties. \textit{In terrorem} Bolshevik rule precipitated the killing of \textit{kulaks}, priests, and White Guards; the establishment of concentration camps (\textit{gulags}) in 1920; and the reinstitution of pogroms that cost 120,000 lives among Russian and Ukrainian Jews.\textsuperscript{131} In effect, one authoritarian Russian Empire had replaced another, this time with Lenin as the Red Czar, ruling the first country "to be based on terror itself since the short-lived tyranny of Jacobin Revolutionary France."\textsuperscript{132}

A fourth impact and terrible irony of the Great War was the creation of vulnerable ethnic minorities in the nation-states newly formed throughout Central and Eastern Europe pursuant to the unprecedented use of Wilsonian "national self-determination." Ferguson considers this act, intended to establish a new European order, "the single most important reason for the fragility of peace in Europe."\textsuperscript{133} Although they were an overwhelming majority in many areas (e.g., Sudetenland, South-Tyrol, and Alsace Lorraine), Germans had no vote; rather, they were forced into the nations of Czechoslovakia, Italy, and France, respectively.\textsuperscript{134} Romania, Czechoslovakia, Yugoslavia, Bulgaria, and Hungary all had sizable ethnic minorities, which presented the "fundamental contradiction between self-determination and the existence of these minorities."\textsuperscript{135} Among these vulnerable ethnic minorities were primarily the Jews but also many others, including the Armenians. In a graphic demonstration of the vulnerability of such ethnic minorities, the Turks conducted a genocidal campaign
(1915-1918) that killed 1 million Armenians in a total Armenian population of about 1.8 million.\textsuperscript{136}

Routinely denied the guarantee of political and legal rights, these ethnic minorities effectively became stateless persons (apatrides) within the dominant national community. Citing Hannah Arendt, Rubinstein explained that "none of the national minorities could either trust or be trusted by the states of which they were technically citizens."\textsuperscript{137} Once deprived of political status and rights by bureaucratic definition, these stateless persons became legally unprotected and consequently vulnerable to police domination, unhindered by judicial restraint. In effect, these ethnic minorities became superfluous people. Thus, the Great War's destruction of empires and resurrection of new nations sowed the seeds of the Holocaust.

Having looked at four aspects of the war's damage to Western civilization primarily through the lenses of various cultural figures, this thesis must consider one iconic poem that, by title and content, became the mythic representation of postwar Europe – \textit{The Waste Land} (1922). His protests to the contrary notwithstanding, T.S. Eliot (1888-1965) spoke in \textit{The Waste Land} for the disillusionment of the postwar generation with the prewar civilization that undertook a devastating war and left Europe in ruins.\textsuperscript{138} The poem's collage of different languages, conversations, verse forms, literary allusions, and poetic excerpts reflects the postwar fragmentation of Western civilization and culture. In "The Burial of the Dead," displaced people vie for attention and significance: the Archduke's niece reminisces upon her barren postwar existence and her loss of childhood freedom; the speaker points to the "stony rubbish" and the
"heap of broken images" remaining from the destroyed civilization and offers to show the reader "something different"; the celebrated mystic Mme. Sosostris seeks answers for the loss of life in tarot cards; and the war veteran imagines a spectral crowd flowing over London Bridge and remarks, "I had not thought death had undone so many." The dead, including the speaker’s friend Stetson, provide no answers for the war's carnage.

"April is the cruelest month" because it reminds the speaker of Easter and ancient fertility rites, yet it fails to assure resurrection and rebirth or to inspire his poetic sensibility. War and death in the trenches (a sprouting corpse and "rats alley/ Where the dead men lost their bones") receive more emphasis than renewal and rebirth. Stark images of a desiccated, arid, and infertile landscape, and disturbing scenes of impotent, loveless, and unproductive sexuality permeate the poem. Drawing upon ancient myths and rituals, Eliot painted a bleak picture of the postwar urban wasteland, with its misused and meaningless sexuality, its loneliness and despair, its disorienting cacophony of the competing voices, and its societal and cultural disintegration. The poetic tradition itself had become a "heap of broken images" and Western culture was in crisis.

In his review of James Joyce's *Ulysses* (1922), Eliot predicted subsequent writers would follow Joyce's new technique, which Eliot described as a "mythical method" of "manipulating a continuous parallel between contemporaneity and antiquity." That technique, for Eliot, was "a way of controlling, of ordering, of giving a shape and a significance to the immense panorama of futility and anarchy which is
contemporary history," and also a way of "making the modern world possible in art."\textsuperscript{142} In \textit{The Waste Land} Eliot employs this same mythical method effectively to show civic and cultural fragmentation, but less successfully to reorder the ruined postwar civilization.\textsuperscript{143}

Ultimately, the speaker looks East to give "a shape and a significance" to the West and accepts three instructions in the Upanishads – giving, compassion, and control – that will provide "the Peace which surpasseth understanding."\textsuperscript{144} Perhaps Eliot is suggesting that Europeans blend Eastern and Western religions to provide healing and transcendental perspective for the new postwar civilization.\textsuperscript{145} In the poem's final outpouring of allusions Eliot struggles to find coherence in the fragmentation of the old civilization and to create a new aesthetic order out of the war's wreckage. Eliot's collage of allusions, quotations, history, and myths, however, requires explanatory notes because the poet and his reader no longer share a common culture. The war has destroyed it.

In conclusion, the war ended a century of sustained scientific and technological progress, accelerated economic growth, and unprecedented material prosperity during which the West dominated the globe politically and economically and bustled everywhere with cultural creativity.\textsuperscript{146} The apparently stable and progressive prewar civilization, however, proved fragile and self-destructive. The growing European middle class conducted a devastating civil war; the prosperous European empires became debtor nations; and the postwar West remained a battleground for internal ethnic and political strife.\textsuperscript{147} As the Myth of the War and the Myth of the Wasteland
merged into a single narrative, postwar culture looked back upon a prewar civilization that had failed mankind and was now dead, and looked forward to some new civilization created from the broken fragments of the past.

For purposes here, the devastated postwar condition served only to reinforce the viewpoint of scientific materialism – the cosmos seemed indifferent to mankind, self-interest drove human values, human survival belonged to the fittest, and human reason proved fundamentally flawed. In light of this catastrophic war, reality indeed seemed only mindless, indifferent matter. Western culture needed to address the war's devastation, restore faith in human reason, provide new grounds for cosmic meaning and purpose, and confront scientism and scientific materialism directly. Expecting theology, philosophy, and the arts to provide needed answers, this thesis turns next to consider whether, and to what extent, they responded to this grave cultural challenge posed by the war and its impact on Western civilization.
CHAPTER 4
POSTWAR CHRISTIAN THEOLOGY

The Bible has only one theological interest and that is not speculative: interest in God himself. It is this that I call the Bible's otherworldliness, its unhistoricalness, its antipathy to the idea of sacredness. God is the new, incomparable, unattainable . . . interest. . . . He is not a thing among other things, but the Wholly Other. . . . He it is of whom the Bible speaks.

– Karl Barth, The Word of God and the Word of Man (1924)

Personally, I am convinced that there is no more substantial nourishment for the religious life than contact with scientific realities, if they are properly understood. . . . It is useless, in consequence, and it is unfair, to oppose science and Christ, or to separate them as two domains alien to one another. By itself, science cannot discover Christ – but Christ satisfies the yearnings that are born in our hearts in the school of science.

– Teilhard de Chardin, Science and Christ or Analysis and Synthesis (1921)

The Great War produced an incomparable revolution in European thought more significant than the ancient Christian revolution or the Enlightenment scientific revolution, according to Baumer, because in such a short time it destroyed centuries-old "idols" and changed the world outlook, "leaving men without landmarks, casting them adrift on an endless sea of becoming." The postwar revolution was unique because it focused upon man himself as the basic problem. Mankind faced an existential crisis, feeling alienated from an unfathomable universe, anxious about life's meaningfulness, and fearful of life's potential absurdity.

Before the war Young Hegelians had identified self-alienation as the consequence of man's misguided projection upon an unworthy God, but they considered such alienation remediable. By contrast to such self-alienation, much less the theological optimism and triumphalism of the prewar period, man's postwar cosmic
alienation seemed an inescapable doom. The radically new postwar mentality, writes Baumer, rendered the old theological questions "not merely controversial, but meaningless, to a significant number of people, including theologians." After the Somme, talking about God was difficult as well as contentious. "Nor can the antimetaphysical climate, exemplified by both existentialism and the positivistic explosion make things easy for a certain kind of religious thinking. It made theological metaphysics suspect, thus driving religion into the realm of faith, which, for the foregoing, as well as other reasons, 'secularist man' could no longer accept."

Western man lost belief in the transcendent and, consequently, turned inward. As Europeans turned inward, postwar culture became increasingly secularized, with some accepting Nietzsche's death of God as a fait accompli and considering religious questions irrelevant, and others anguishing over apparent cosmic indifference and seeking meaningful new answers. Baumer largely attributes this postwar surge of secularism, characterized by existential and psychic angst, to "the patent failure of religion to encompass, or even to fit satisfactorily into, the scientific worldview."

Four prominent theologies represented by the following exemplars arose to address the postwar crisis of secularism: (1) Protestant neo-orthodoxy: Karl Barth, Emil Brunner, and Friedrich Gogarten, (2) Christian existentialism: Rudolf Bultmann and Paul Tillich, (3) Catholic neo-Thomism: Jacques Maritain, and (4) evolutionary or process theology: Pierre Teilhard de Chardin and Alfred North Whitehead.

Protestant neo-orthodoxy eschewed metaphysical statements, rejected 19th century liberal theological positions about God's immanence in human life and culture,
and presented God as *Wholly Other* (Barth's phrase quoted above), knowable only through biblical revelation and divine grace. Christian existentialism exemplified by Bultmann and Tillich was heavily influenced by Martin Heidegger. Bultmann tried to relate religion to postwar secularist culture by demythologizing Christianity from its pre-scientific cosmology and explaining Christ's message to postwar mankind suffering from existential anxiety over death and impermanence. Bultmann sought to preserve the essential gospel message (*kerygma*), however, by rejecting existentialism's view that autonomous man could achieve authenticity alone, since only Christ's saving grace could deliver fallen man from his abject state. Tillich rejected Barth's view of God as outside the natural world and, instead, he spoke of God as both transcendent and immanent, God as "transcending theological theism," and as "God above God." 

Roman Catholicism opposed secularist modernism and upheld Thomistic rationalism, with Jacques Maritain (1882-1973) defending Thomistic philosophy against its modernist critics, like Henri Bergson. Maritain maintained that reason can grasp the essence of a thing or the being of being, arguing from the Thomistic distinction between form and matter that form constitutes the essence and matter the individuality of a being. Thus, Maritain rejected Kant's limitations on man's cognitive capacity to understand *noumena* and to prove God's existence. He also challenged Bergson's idea of duration, or the continuous process of change, as "the pure becoming of Heraclitus," and Bergson's philosophy for its having "chosen to abandon being and the intellect." With his Thomistic emphasis on the primacy of being, Maritain adds, "But being is the only thing that endures."
Teilhard and Whitehead represented evolutionary or process theology. Teilhard's evolutionary theology attempted to explain God as inspiration for the ascent of consciousness from primordial matter toward a super consciousness in man and ultimate fulfillment in Christ. Similarly, Whitehead described a world in process, and God as its lure toward increasing novelty, creativity, and aesthetic perfection. He rejected the idea of a static, detached, and authoritarian God presiding over an entirely separate and distinct world. Thus, Teilhard's evolutionary theology and Whitehead's process philosophy were consistent with one another and embraced much of modern science, not only evolution but, in the case of Whitehead, mathematics and physics as well. Furthermore, Whitehead chided traditional Christian theology for absolutizing truth, denigrating novelty in the world, and disassociating God from the ongoing process of reality – God as an outside overseer rather than an inherent co-creator along with man. On the other hand, Maritain dismissed Teilhard's evolutionary thought as "theology-fiction" – "one more Christian gnosis" and "a sin against the intellect" – for forsaking the being of Christ and the cosmos.

Only one of the four new postwar theologies attempted to integrate Christianity with the new scientific worldview, namely, evolutionary or process theology. Protestant neo-orthodoxy considered human reason incapable of understanding God or his relationship to the world; religious existentialism focused on man's psychic needs rather than on metaphysical concerns; and Catholic neo-Thomism reverted to the medieval world of being and God as First Cause. By contrast, Teilhard and Whitehead resisted the anti-metaphysical climate of postwar positivism, re-interpreted Christianity in light
of modern scientific developments, and constructed a modern cosmology infused with
mind, meaning, and purpose.

Using Barth and Teilhard as exemplars of the two Christian denominations, this
thesis considers how the war affected their theology and how mainstream postwar
Christianity refused to adjust itself to the modern scientific worldview and, instead,
became disengaged from scientific materialism. In order to explain the nature and
extent of the postwar change in theology, however, this thesis first must address the
prewar condition of Christian theology.

Prewar Christian Theology

The dominant voice in Protestant theology at the beginning of the 19th century
was Friedrich Schleiermacher (1768-1834) who sought to establish religion on an
entirely new foundation in personal experience – not theory or practice but piety, a
personal response and surrender to the immensity of the Universe – "the result of the
operation of God in you by means of the operation of the world upon you."

For Schleiermacher, history is the best source of revelation about God, grace is essentially
the individual's "intuition and feeling" from participation in the world "through action
and culture," and, thus, personal experience provides the basis for theological language
and doctrines.

Liberal Protestant theology at the beginning of the 20th century retained
Schleiermacher's anthropocentric and historical focus, but it also invoked the ethical
message of the Gospel, exemplified in the famous lecture series (1899-1900) and later
book by Adolf von Harnack (1851-1930) entitled, *What is Christianity?*.\(^{16}\) Like Schleiermacher, Harnack asserted that the essence of Christianity lies in its personal meaning rather than in any ecclesiastical dogma.\(^{17}\) But Harnack also asserted that we must assess Christ’s character in determining what is essential and permanently valid, and that Christ had remained focused "upon man" and emphasized divine and brotherly love.\(^{18}\) Although Schleiermacher and Harnack both assumed man's inherent capacity to access God, Harnack's Christian theology differs from Schleiermacher’s by centering on the Gospel of Jesus rather than the mystery of Creation and by emphasizing Christ's message of divine and brotherly love.\(^{19}\)

Theologian Heintz Zahrt characterized Harnack's *What Is Christianity?* as follows:

. . . a great intellectual event, the highest expression and perfect manifestation of the age of bourgeois idealism, an age which was inspired by an optimistic faith in the human mind and progress in history, and believed it could unite God and the world, religion and culture, faith and intellect, divine righteousness and earthly authority, throne and altar in a natural and almost unbroken harmony, and which therefore looked forward with confidence to the future.\(^{20}\)

This symbiotic relationship between church and state, religion and history, led Harnack, upon the outbreak of the Great War, to draft for the German Kaiser an appeal to the German people in support of the war, the so-called "Manifesto of the Intellectuals" signed by ninety-three scholars, artists, and theologians.

Among the Manifesto's signatories were six Liberal Protestant theologians, including Wilhelm Herrmann as well as Harnack, both of whom Karl Barth had studied under at Marburg and Berlin, respectively. Upon reading the Manifesto, Barth
concluded that the "old world of exegesis, ethics, dogmatics and preaching, which I had hitherto held to be essentially trustworthy, was shaken to the foundations, and with it, all the other writings of the German theologians." Consequently, Barth led a generational revolt of so-called Crisis or Dialectical theologians, convinced that Protestant theology no longer could speak about God as it had in the past.

Catholicism faced a similar crisis but that occurred before war. In the period 1880-1910, two movements in Catholic thought originated in France: First, the "Philosophy of Action," led by Maurice Blondel and Lucien Labéthonyère, advocated the role of will and action in gaining religious knowledge and the need for Catholic biblical study to catch up with Protestant scholarship. A long-time philosophy professor, Blondel (1861-1949) advocated a new Christian philosophy based upon man's "immanent" source of spiritual activity, drawing upon human consciousness and experience that strives for the transcendent and supernatural.22

Second, the "Modernist Movement," led principally by Alfred Loisy, George Tyrrell, Édouard Le Roy, and Blondel, advocated changing Catholic thought to bring it current with modern intellectual and social developments.23 A biblical scholar and Catholic priest, Alfred Loisy (1857-1940), developed a historical-critical apologetic in The Gospel and the Church (1902), which sought "to adapt the Catholic religion to the intellectual, moral and social needs of the present time."24 For Loisy, the Church and the Gospel are interdependent, and the Church must change with the times because its doctrines are spiritual aids rather than inflexible rules ("Reason never ceases to put questions to faith, and traditional formulations are submitted to a constant work of
interpretation"). The Church's mission, according to Loisy, is as "an educator, rather than a domineering mistress: she instructs rather than directs, and he who obeys her only does so according to his conscience, and in order to obey God." 25

Though their views often differed, the Modernists agreed that the Church was unreceptive to the intellectual problems and spiritual needs of its members. They challenged scholasticism as an outdated apologetics inconsistent with history, evolution, and modern culture. And they advocated a new conception and further development of dogma, confident that the Church would survive historical-critical analysis. In 1907, however, Pope Pius X issued a catalogue of 65 Modernist errors and embargoed further historical study of Scripture and tradition. There followed his encyclical, Pascendi Dominici Gregis, which labeled Modernism's central tenets heretical "agnosticism" and "vital immanence," and effectively established Thomism as fundamental to Catholic theology. Hence, even before the war, the Catholic Church had taken firm steps to stifle further engagement with modern scientific developments affecting settled theological matters. 26

In 1911, four years after these ecclesiastical edicts, Pierre Teilhard de Chardin entered the priesthood and enrolled at the Paris Museum of Natural History as a doctoral student in paleontology, recently made a separate discipline within geology. Before he could complete his tertianship for full admission as a Jesuit, however, the war broke out and Teilhard received orders to report for duty in the French army. While serving as a stretcher bearer and then chaplain for four years at the Front, Teilhard
developed his views on the compatibility of science and religion and on the cosmic evolutionary process.

In effect, the Great War was a theological turning point for both Teilhard and Barth, inspiring both men to develop new theological positions that challenged the historical approach of their respective Christian denominations. With the foregoing as background, the thesis next looks in greater detail Barth's successful mission to limit human reason in Protestant apologetics and Teilhard's unsuccessful mission to integrate modern science into Catholic thought.

**Barth's Neo-Orthodoxy**

Born in Basel, Switzerland, Barth (1886-1968) grew up in Bern, began his university studies there in 1904, and then transferred to Berlin, Tübingen, and finally Marburg in 1908. In Marburg, he studied under the leading Liberal Protestant theologians, including Harnack and Hermann, and also served as an editorial assistant for the most influential Protestant Journal, *The Christian World*, which supported Liberal theologians. Thereafter, Barth served as pastor in the village of Safenwil, Aargau, Switzerland (1911-1922), where he supported the trade union movement against the local industrialists, joined the Social Democratic Party in 1915 (becoming labeled "the red pastor of Safenwil"), and opposed state religion and Church endorsement of war. During his subsequent professorships in theology at Göttingen, Münster, and Bonn, Germany (1922-1935), Barth tried to free Protestant theology from what he considered philosophical and anthropological influences.27
Following his shocked response to the August 1914 Manifesto supporting the Kaiser's war policy, Barth led a revolt against 19th-century Liberal Protestant theology by a group of German theologians, including Emile Brunner, Friedrich Gogarten, Eduard Thurneysen, and Rudolph Bultmann. They variously called their program: "Theology of Crisis," "Dialectical Theology," and "Theology of the Word of God." In his essay, "Between the Times" (1920), Gogarten explained that the Crisis theologians saw disintegration everywhere and believed they stood between the death of the old world and the birth of the new world of theology.

Zahrnt explained the approach of Crisis theologians as follows:

Everything that had been regarded as good, true and beautiful, as reasonable, civilized and liberal, as noble and humane, and which for more than a century had composed the whole world, had been destroyed. In its destruction, this world was revealed for what it was, the very delicate and skillful artifact of man. It is true that it was not a world without God, but its God had been a "human God." . . . All these theologians looked towards the crisis, the uttermost limits of human existential life, the judgment of God.

In 1922, they began the journal Between the Times to express their revolutionary thoughts. Its articles echoed the shattering experience of the Great War, forecasted the coming divine judgment against the all-too-human God created by 19th-century theology, and championed the need for mankind to approach God in abject surrender.

Between the Times continued until 1933 when the group began to disintegrate over disagreements in approach to theology and, especially, to Nazi policies.

Like the other Crisis theologians, Barth confronted a huge problem of biblical interpretation or hermeneutics, having deemed the Liberal theological views of the Reformed Church no longer adequate to the postwar world. The university had taught
Barth "awe in the presence of history," which implied both the need for historical-critical research into the Bible and Christianity and also historical pantheism, with the divine spirit permeating history and leading mankind towards higher levels of civilization. Barth found such theology wholly inadequate to a proper understanding and interpretation of the Bible. Instead of awe for history, Barth substituted awe for the Word of God.

Barth's new theology focused upon divine revelation rather than human consciousness – how God speaks to man rather than how man thinks of God. For Barth, God is not accessible from either the study of history, the psychology of the pious individual, or the speculation of philosophy about the Absolute. Rather, God is accessible solely from the Word of God. Thus, Barth reinvented himself as a biblical theologian preaching a new theology of revelation focused on God and rejecting the dominant exegetical focus on man's feelings, mind, culture, beliefs, and piety. In his famous *The Epistle to the Romans* (1918, 1921) Barth trumpeted his new theme of finding "the Word in the words." Like Kierkegaard, he preached God's "infinite qualitative distinction" from man and God's Incarnation as a matter of faith and not of reason.

The Bible creates a human *crisis*, for Barth, by driving man beyond his immediate world to the infinite, awakening man to the limitations of human thought, and inspiring man to the ultimate truth beyond human reason. For Barth, moreover, God cannot be expressed in language, except in the dialectical structure of statement and counterstatement, a constant flux between positive and negative, because with
every revelation of God there is God's concealment in creation. Such dialectical thinking is required because biblical testimony is not identical to revelation. The Bible is the word of man as well as the Word of God, and biblical witnesses make questionable judgments about history, science, religion, and theology. Therefore, a correct understanding of the Bible requires the miracle of grace – not human reasoning. As a result, Barth's faith constitutes an unutterable awe in the presence of the divine mystery, and, consequently, as Zahrnt points out, "faith in Barth becomes almost entirely speechless, almost ceases to have any content, and invariably represents no kind of assertion on the part of man, but only his denial." Barth's rejection of reasoning to grasp the biblical subject matter, i.e., hermeneutical inquiry into Jewish eschatology and Hellenistic philosophy, ultimately caused his 1933 break from the other Crisis Theologians. They thought some understanding of man, his origin, nature, and destiny, was prerequisite to understanding God. By then, however, Barth had already overturned three centuries of Liberal Protestant thought and restored God as its central theme after World War I, and was en route to becoming the dominant voice in 20th century Protestant theology. When the Nazis came to power that year, Barth challenged their attempt to control the Church. He wrote the famous Barmen Declaration, which rejected Nazi superintendence of the Church, proclaimed Church allegiance only to the Word of God, and challenged Nazi anti-Semitic policies. Furthermore, he refused to take the Nazi loyalty oath – the one German professor of theology who refused to do so. As a consequence, in 1935, the Nazis stripped him of his Bonn professorship and forced him out of Germany.
In the same year, Barth changed theological direction. In 1927, he had begun writing his *Church Dogmatics* with an emphasis on God's *Wholly Otherness* but then changed his emphasis to God's Incarnation in Christ. In this so-called "Christological concentration," Barth reversed the traditional Christian order of redemption and grace as following man's Creation and Fall. Instead, Barth proclaimed that God contemplated man's redemption through Christ from the very beginning of time, even before Creation.\(^47\) Christ comprehends all of history and salvation, brings God's grace to the whole world, and unites God and man. Consequently, all of creation, especially man, has a positive relationship with God, despite the sin and evil in the world. While evil seeks to evade God, it cannot escape God's grace.\(^48\)

Because of his faith in Christ's predetermined coming, Barth rejected the Calvinist doctrine of election – the conception of predestination whereby God chooses some for salvation and leaves others for damnation. Rather, from the very outset, God elected Himself for earthly death and elected sinful humanity for eternal life, believers and nonbelievers alike.\(^49\) While Barth does not declare universal salvation, he also does not reject it. Barth charged believers, however, with a special call to service in joyful thanksgiving for receiving the gift of grace and truth.\(^50\) Because of his *Church Dogmatics*, Barth has been called the theologian of the Good News, far removed from the pessimistic orthodoxy and divine otherness of *The Epistle to the Romans*. The Old Testament prophet of Crisis Theology had become the New Testament evangelist of Christ's loving humanity.
In summary, Barth's neo-orthodoxy rediscovered the deity of God, introduced a necessary corrective to Liberal Protestant theology, and resonated in the disillusioned postwar world. Barth's rejection of human reason in understanding God, however, also applied to man's understanding the world. Existence became comprehensible, for Barth, only Christologically, by analogy to man's understanding of Christ's humanity and divinity through Scripture. Thus, man's suffering is analogous to Christ's suffering, and marriage is analogous to the triune divinity and to Christ's relationship with the Church. Therefore, understanding existence is a one-way street that proceeds from God to man rather than the converse. Man's reason, his critical intelligence, has no role in interpreting the universe, except by analogy to Scripture.

Consequently, Barth's epistemology marginalizes the human project of scientific inquiry, of relating modern science to Christian teaching, and of participating meaningfully in God's creation. Furthermore, Barth's concept of universal redemption implies a lack of dignity and value to man's existential travails. Indeed, by considering Christ's Incarnation as preordained through eternity, Barth strips history of its ongoing drama and meaning, minimizes the spiritual significance of man's tensions and anxieties in the postwar world, and undermines man's quest to understand Creation and promote human progress. In short, Barth has diminished the value of man's critical intelligence in the quest to understand reality and effectively has ceded this ground to scientific materialism.
Teilhard's Evolutionary Theology

Born in Clermont, France, the fourth of 11 children in a religiously pious, well-to-do family, Teilhard (1881-1955) developed an early interest in geology, boarded at the Jesuit school of Notre Dame Mongré from age 12, took his initial vows as a Jesuit in 1901 at age 20, and was ordained a priest in 1911 at age 30. Teilhard pursued his doctorate in paleontology, read Henri Bergson's *Creative Evolution*, and quickly embraced Bergson's notion of time as experienced "duration" rather than the intellectualized and spatialized understanding of time in modern mechanism. At age 33, with a growing scientific reputation when the war broke out, Teilhard suddenly became an enlisted stretcher-bearer in the French auxiliary service (he declined to become an officer), attached to the light infantry in a colonial regiment (North Africans Zouaves). He saw action at the Marne and at Ypres in late 1914, while tending to the dying and wounded, and then near the Belgian coast in April 1915, while ministering to the burning throats and lungs of troops suffering from German poison gas.\(^5^3\)

In April 1916, Teilhard began a notebook, trying to make sense of the war's death toll and to find some overarching principle for the war's disintegration. He also wrote his first wartime essay, "Cosmic Life," explaining how matter progresses into organisms of greater psychic tension and fragility before crossing the line into humanity itself.\(^5^4\) Teilhard was promoted to chaplain in 1917, endured the Germans' surprise offensive in mid-March 1918, and took his final vows as a Jesuit in May 1918. During July 1918, Teilhard feared he had a rendezvous with death when his regiment retreated and then counterattacked at Soissons.\(^5^5\) For his gallantry during the war, Teilhard won
special praise from his Muslim soldiers and earned several decorations, including the Médaille Militaire and the Chevalier of the Legion of Honor.\textsuperscript{56}

Despite his four-year experience of death at the front, including two brothers killed and two wounded, Teilhard developed a Hegel-like perspective on the wartime destruction as a phase of Cosmic Evolution, drawing man inexorably toward God. Theologian Ursula King wrote the following about Teilhard's wartime epiphany:

It is quite extraordinary how in the midst of war Teilhard could commit to paper a great exuberance for life. He wrote with power and passion about the world reverberating with divine life, with the presence of God and the spirit. Seeing the unity of all things in Christ, he expressed the desire to be an 'apostle' and 'evangelist' of 'Christ in the universe.'\textsuperscript{57}

Teilhard's biographers Mary and Ellen Lucas report that "Teilhard came from the war physically sound, optimistic, and bearing his new-found trust in life before him like a banner."\textsuperscript{58}

Between April 1916, when Teilhard began writing down his philosophical-religious ideas, and the war's end in 1918, he had changed his cosmic viewpoint.\textsuperscript{59} Before the war, Teilhard had developed a pantheistic view that matter provided the underlying permanence in cosmic transience. But after reading Henri Bergson's \textit{Creative Evolution}, he focused upon living processes, recording his reversal in "Cosmic Life."\textsuperscript{60} By 1917, however, Teilhard's thinking had progressed even further. He found diversity rather than unity in matter and, instead, found cosmic unity in Christ as the object of evolutionary progress.\textsuperscript{61} By the war's end, Teilhard had transited from materialist to spiritual pantheism – from the unity of common matter, to the unity of life, and finally to the unity of a cosmic goal in Christ.\textsuperscript{62} For Teilhard, the chaos of war
seemed part of a huge Hegelian process, "an adventure, a groping, a risk," by which man participates in creative evolution.63

Immediately after the war, Teilhard returned to his doctoral studies at the Museum, earned highest honors for his dissertation in 1920, and was elected president of the French Geological Society. Discussing his views about human evolution, however, Teilhard soon ran into conflict with the Church's insistence on God's "instantaneous creation" of the world.64 The conflict arose when Teilhard questioned the literalist interpretation of Genesis and Adam's Fall, and proffered several alternative explanations to harmonize the biblical story with evolution.65 Neo-Thomist critics claimed he was designing a contrary "biological philosophy," and suddenly Teilhard worried if he could satisfy his Jesuit superiors and still remain true to his scientific beliefs.66 Teilhard's fears proved justified as ecclesiastical opposition to his views mounted relentlessly. A brief review of his career is illustrative.

Teilhard had wished to remain in Paris, where he could develop his philosophical views and bring Church doctrine in line with scientific discoveries.67 But the Jesuits pressured him to leave for Tientsin, China, to support their ongoing geological explorations there. In April 1923, Teilhard left for one and a half years in China, where he wrote essays entitled "The Mass of the World" (1923) and "My Universe" (1924), clarifying his view of reality.68 Upon returning to France in October 1924, however, Teilhard found the Roman Curia outraged at his earlier "irresponsible speculations" about the Fall, demanding that he sign a formal promise not to write or speak "anything contrary to the church's 'traditional' position on Original Sin."69 Fearing
a Curia requirement for his formal acceptance of the Bible's historical accuracy about Creation and the Fall, Teilhard prepared for his Jesuit superiors an alternative declaration he could live with. Then he obtained a private meeting with his superiors, only to find that they simply had forwarded his declaration to Rome for approval.

Meanwhile, Teilhard wrote an essay, "Hominization" (1925), which urged that scientists classify men among primates, given their small morphologic disparity, and argued that hominoids crossed the reflectivity threshold, becoming self-aware and cooperative. Hence, Teilhard already had exceeded those "limited" evolutionists who accepted evolution "only within established phyla" and excluded man because of an apparently "missing link." In June 1925, the Roman Curia gave Teilhard several ultimata: leave Paris and return to China, sign "propositions" acknowledging his belief in the literal truth of Genesis, or effectively leave the Order. Teilhard capitulated to Rome's demands as an act of fidelity rather than intellectual assent ("I stand condemned by dolts and ignoramuses!"), while privately assuring Édouard Le Roy that he had not changed his evolutionary views or his "gospel of research."

Upon returning from China in 1927, Teilhard found that Le Roy had credited him as a contributor in published articles espousing evolutionary views, which prompted a further Church ultimatum: Teilhard must confine his writings to scientific subjects or be relegated to a remote mission where he could not even continue his scientific work. Teilhard wrote letters to close friends denouncing the Church's failure to embrace mankind's scientific progress and its refusal to stop "verbal theologizing,
quantitative sacramentarianism, and over subtle devotional practicing." He asserted that "the time has come for us to save Christ from the clerics, in order to save the World." ⁷³

In 1929, Teilhard returned to China where he collaborated in work on a skull with the morphology of the Neanderthal and the cranial capacity of Pithecanthropus, which Teilhard considered a close link between men and apes. ⁷⁴ His collaborative discovery of Sinanthropus received widespread acclaim, and in 1937, Teilhard visited the United States to discuss Sinanthropus at the Academy of Science in Philadelphia and to receive the Mendel Medal at Villanova. His remarks to the Villanova audience about man's evolutionary breakthrough into self-conscious reflectivity were published in the *New York Times* and in other American and Canadian newspapers under the banner "The Jesuit Who Believes Man Descended from the Apes." This produced the so-called "Villanova Incident," which triggered a stiff response from Rome. ⁷⁵

Despite Rome's ban on publication, Teilhard continued writing private essays focused on the "psychic energy" that moved elemental particles up to complex forms and finally reached the level of man. ⁷⁶ In 1939, he completed the third revision of *The Phenomenon of Man* (1928, 1930, 1939), expanding his wartime thoughts in "Cosmic Life." He considered *The Phenomenon of Man* his "final testament" about his passionate vision of evolution's goal, and sent a copy to Rome. ⁷⁷ Trapped in China throughout World War II, Teilhard participated in efforts to protect the Sinanthropus bones in Peking, and, with the Jesuit Order's permission, addressed scientists and diplomats at Shanghai University. Teilhard's remarks, however, upset some Jesuits because he discussed evolution "as though it were proven fact." ⁷⁸ Following the war, Teilhard
returned to France only to discover that Rome had rejected *The Phenomenon of Man* and required such extensive revisions that Teilhard felt defeated.\(^79\)

In 1948, the Jesuit Father General invited Teilhard to Rome to discuss his philosophical and theological views, his books, his invitation to apply for the chair of prehistory at the College of France, and his invitation to give lectures at Columbia University. At the meeting the Father General refused Teilhard everything – permission to accept the college chairmanship because his evolutionist views would cause another "Villanova incident"; permission to publish *The Phenomenon of Man* because it would imply Jesuit endorsement; and permission to lecture at Columbia or to discuss his philosophy in public. Leaving Rome empty-handed, Teilhard complained to friends, "My general doesn't want to understand!" and "Those people in Rome are living on another planet!"\(^80\)

Recognizing that the Jesuits considered his writings misguided and might expunge his entire life's work upon his death, Teilhard consulted a Canon lawyer about following his conscience to preserve his writings, and then he wrote a will leaving his papers to his friend Mademoiselle Mortier.\(^81\) "If I'd had it to do over," Teilhard mused, "I wonder if I'd still have been a Jesuit!"\(^82\) In 1951, recognizing a return to France would place him under surveillance in some Jesuit retreat house, Teilhard found a scientific position at the Wenner-Gren Foundation in New York, where he died on Easter Sunday, 1955. On the prior Good Friday, he wrote "Evil is not 'catastrophic' (the fruit of some cosmic accident), but the inevitable side effect of the process of the cosmos unifying into God."\(^83\)
Teilhard's works appeared shortly after his death, fulfilling his lifelong mission, as both scientist and priest, to integrate science, religion, and philosophy in systematic thought. Just as Thomas Aquinas had educated medieval man, Teilhard had wanted to educate modern man, but he intended to do so by examining the cosmos inductively from within, rather than deductively from without. In numerous writings, like The Phenomenon of Man, Teilhard portrayed the universe as expanding in an energetic process of ever-greater complexity from elementary particles through complex organisms toward "hominization," the crucial evolutionary turning point at which man appears. Man constitutes a new stage of increasing complexity-consciousness that produces planetary consciousness, which Teilhard called the "noosphere." The evolutionary path inevitably moves mankind towards ever greater human consciousness in a process he called "noogenesis."

Noogenesis proceeds towards increased complexity-consciousness in phases: first, centrifugal force promotes human freedom and individuality; second, centripetal force promotes human planetary socialization; and third, human "planetization" converges at the Omega point where the evolutionary process ends in self-transcending love and unity with God. While God does not preordain the cosmic evolutionary process, which remains subject to human direction, divine love draws evolution toward Christ at the Omega point. Thus, Teilhard sees divine love as both the inspiration and the endpoint for the cosmic evolutionary process, with Omega both "supremely present" and yet "independent of the collapse of the forces with which evolution is woven."
Because of his unshakable belief in the force of divine and human love, Teilhard remained optimistic about man's fate. He believed that man's care for and cooperation with his fellow man would increase as man advanced toward union with Christ, that man plays a crucial role in the cosmic evolutionary process, and that Christianity has a unique capacity and responsibility to promote such evolutionary progress. Teilhard considered scientific study a critical human contribution to such progress: "Christians have no need to be afraid of, or to be unreasonably shocked by, the results of scientific research, whether in physics, in biology, or in history." Teilhard spent his entire career trying unsuccessfully to convince the Church of this position, and lamented in an essay written three days before he died that the Church's edict requiring him to perform his scientific work "without getting involved in philosophy or theology is psychologically unviable and, what is more, directly opposed to the greater glory of God."

Barth, Teilhard, and Modern Science

Out of their war experiences, Barth and Teilhard developed new theological positions, with some remarkable similarities, that produced paradigm shifts in Christian theology. Barth overturned three centuries of Protestant theology and restored God as its central theme, and Teilhard integrated Darwinian evolution with biblical teaching and pioneered evolutionary theology within Catholicism. Christ was central to their thinking: Christ united God and man in Barth's Church Dogmatics, and inspired evolutionary progress for Teilhard. For Barth, evil cannot escape God's loving kindness and divine election, and for Teilhard, evil is the "disunity" inherent in the evolutionary
process toward Christ. In ethics, Barth considered God's humanity "the source and norm of all human standards and human dignity," and Teilhard considered socialization, cooperation, and mutuality among men a necessary and inevitable result of increased inter-human consciousness en route toward Omega.

They diverge, however, precisely on the point of concern here, namely, theology's rational engagement with modern science. Teilhard represented a philosophic approach to Christianity that Barth rejected for failing to focus exclusively on Scripture and that the Catholic Church rejected for failing to adhere to traditional dogma and Thomistic reasoning. Teilhard thought Christianity needed to embrace the modern spirit, which he considered "pantheist in tendency, immanent, organistic, evolutionary," and needed to alter its traditional viewpoints, which are "expressed primarily in terms of personality, transcendence, juridical relationships, and immutability." Both Christian denominations, however, resisted the theological engagement with modern science which Teilhard advocated.

Teilhard considered a religion of progress and evolution "exactly in line with what the modern world is looking for as its God, . . . a God who justifies, sets the crown upon, and receives as a supreme tribute, the incessant . . . labour of the consummation, even on earth, of man." Instead of becoming a brake, Teilhard urged the Church to become a stimulus for man, replacing the image of Christ as "hidden in the clouds" with an image of Christ "clothed in the energies of the world in which he is immersed." Teilhard believed that "the incorporation and assimilation by Christian thought of modern evolutionary views is sufficient to break down the barrier that for four centuries
has continually been arising between reason and faith." Furthermore, it allowed Catholics and non-Catholics to "meet as one through their basic faith in a progress of the earth," confident of "a divine guarantee that, in spite of all death, the fruit of our labour is irreversible and cannot be lost."96

While Teilhard has been criticized for being too speculative, his efforts to relate Christianity and science constituted a necessary corrective to fin de siècle Catholic rigidity, just as Barth's Crisis theology constituted a necessary corrective to 19th century Liberal Protestant anthropocentrism. Barth's corrective to Protestant theology, however, so denigrated human reason in spiritual matters that his understanding of Scripture bore little relevance to existential reality, modern science, and secular life. Barth's theology became dogmatic, remote from genuine human concerns, and indifferent to modern scientific developments. Conversely, Teilhard's integration of science and Christianity offered Catholicism a new existential relevance, with both God and man playing a meaningful role in cosmic evolution. Barth's total rejection of any philosophy in theology and Catholicism's resistance to any non-Thomistic philosophy in theology led both Christian denominations away from reasoned engagement with scientific materialism after the Great War.

Postwar Theology's Disengagement from Scientific Developments

Despite his dominant influence, Barth was not the only voice in Protestant theology, but those other voices – neo-orthodoxy and biblical existentialism – focused primarily on man rather than cosmology. After the demise of Crisis Theology, Emil
Brunner (1889-1966) wrote the first Christian anthropology since the Great War, *Man in Revolt* (1935). Influenced by Martin Buber's philosophy, Brunner distinguished personal *I-Thou* relationships from the rational-scientific *I-It* relationships. Upon discovering the *I-Thou* relationship, Brunner determined that man comes to know himself as created in God's image, recognizes his need for something higher, and recovers his origins through faith in Christ's revelation. Thus, Faith, for Brunner, is not knowledge. Rather, faith is trust in a personal correspondence between God and man, like the original relationship described in the Bible.97

Barth parted with Brunner over the latter's natural theology. Brunner considered God's revelation in Creation (nature) an anthropological fact, whereas Barth considered nature and grace exclusive of one another. Brunner continued to steer his middle course between liberalism and orthodoxy, and even undertook to attack non-Christian ideologies like scientific positivism. His theology remained anthropological, however, focused upon man's inescapable need for a personal relationship with God revealed in Creation.98 Thus, even with its critique of positivism, Brunner's theology centered upon man and not upon integrating modern science with Christian faith.

Another leading Crisis and neo-orthodox theologian, Friedrich Gogarten (1887-1967), also fell out with Barth over the relationship between theology and anthropology. Like Barth, Gogarten rejected the liberal Protestant interpretation of history, but Gogarten still took human history into account as interpersonal encounters of the individual with God and with his neighbors. In a refinement of Brunner's *I-Thou* relationship, Gogarten stressed the primary importance of the Other in the relationship,
whether the Thou be God or man. Consequently, Gogarten became a lifelong critic of subjectivism and individualism, which prompted his opposition to the liberalism of the Weimar Republic, his brief and unfortunate embrace of the Nazi state, and his consequent attack on Barth and the Confessing Church. 99

Because he wrote at length about the relationship of theology and science, Gogarten's views deserve special attention here. Pre-Christian man worshiped the cosmos as divine, his original sin, according to Gogarten. But post-Christian man worshiped God as God, thereby removing divinity from the world and secularizing it. Thus, Christianity freed man from the divinized pre-Christian world and simultaneously entrusted post-Christian man with responsibility for the divinely created world through the exercise of his reason. When medieval Christianity reunified God with the world, however, man lost his freedom, until Luther restored it. Luther drew a distinction between the kingdoms of God and of the world, and thereby re-secularized the Christian world and inaugurated the modern era of man's cultural autonomy.

As Zahrnt points out, Gogarten's secularized world has an ambivalent character: "While Christian faith cannot exist without secularisation, it is quite possible, once the process of secularisation was set in motion by faith, for it to continue without faith." 100 In other words, men can forget that their freedom to rule the world is a God-given inheritance and, as "sons of God," they have responsibility to care for the world as their God-given patrimony. 101 When man ignores his inheritance as a divine gift and presumes to give meaning to the world himself, secularization becomes secularism, namely, a world delivered of its divinity by man's self-importance rather than by
Christ's revelation. Thus, secularism results in an alien system of human servitude, or worse, of meaningless chaos and despair. Interestingly, Gogarten faults theology and the Church more than the dominance of science for modern secularism.

The Church has failed to understand and has corrupted secularization, according to Gogarten, by challenging man's freedom to exercise reason in his stewardship of the earth, and by trying to reunite God with the world in a misguided "religious worship of the world and its laws." Gogarten contends that faith and science must remain distinct and independent. Like politics, economics, and other human projects using reason, science must remain free to pursue knowledge in the realm of experience, unfettered by any theological concerns about its conflicting with faith. While posing questions and seeking answers, however, science must remain "related only to individual data, never to the whole of existence." Otherwise, by advancing a metaphysical "world view," science would cease to be science, would lose its secularized character, would encroach upon the realm of divine mystery, and, thus, would become idolatrous philosophy. Conversely, faith should not attempt to supply philosophical answers to questions that science must leave open, because by offering a "Christian world view," faith would desert secularization and degenerate into "Christian secularism."

Zahrnt summarizes Gogarten's position as follows:

. . . science is without faith, or else it ceases to be science; but only where faith exists can science be without faith. We cannot escape this dialectic relationship between faith and science. Since the process of secularisation has come into being, in essence since the coming of Christian faith into the world, the unity of knowledge and faith has been destroyed once for all, and cannot be restored by any device, however ingenious, on the part of faith or on the part of knowledge. Since that time, knowledge and faith have no longer been able to exist in a unity,
but only in a duality, or more precisely in the juxtaposition which preserves the identity of both. Faith must not subject knowledge to itself, nor must knowledge attempt to eliminate faith.\textsuperscript{108}

In short, science becomes idolatrous, encroaches on the realm of divine mystery, and exceeds the capability of human cognition and responsibility when it exceeds the realm of data and purports to explain the whole of existence.\textsuperscript{109} Conversely, theology becomes secularism when it intrudes on scientific thinking and tries to reconnect God with such worldly concerns. Hence, Gogarten’s theology distances itself from the advances of modern science and limits its engagement to chastising metaphysics like scientific materialism as idolatry and pretentiousness. Despite his views on the importance of secularization and science, therefore, Gogarten strictly separated faith and reason, theology and science. He clearly invited no engagement between these two distinct realms and thereby effectively gave free rein to scientific materialism.

Leaving the neo-orthodox theologians, Brunner and Gogarten, this thesis turns next to the biblical existentialists, Rudolf Bultmann and Paul Tillich. Protestant existentialist theology focused upon man's finitude and anxiety from being "thrown" into the world, as Martin Heidegger defined \textit{Dasein}, and also man's self-transcendence from experiencing the divine presence.\textsuperscript{110} Bultmann (1884-1976) bridged historical and philosophical theology, liberalism and orthodoxy, by considering nature and history dependent on God, even though God's actions on the world are inscrutable to man. He demythologized the New Testament imagery as simply biblical man's means of expressing the transcendent in human terms. Instead, Bultmann considered the Bible's truth to repose not in its pre-scientific imagery but in its basic message about human
existence. Thus, unlike Barth for whom the Bible is God's self revelation, Bultmann considered the Bible to describe God's interrelationship with man and to provide man's opportunity for authentic Christian existence.111

For Tillich (1886-1965), man's existential anxiety arises out of the triple threat of non-being: ontic anxiety caused by fate and death, spiritual anxiety caused by doubt and fear of meaninglessness, and moral anxiety caused by one's unrealized possibilities. Authentic man, for Tillich, affirms being in spite of non-being through a courageous act of will that requires divine inspiration. Such inspiration comes not from the traditional God of theology, however, because that God is the object of a pathologic transference to a parental figure. Rather, Tillich conceives of God as the depth dimension, the ground of being, the unconditional acceptance, and the God above God. In Tillich's view, classical theism is really idolatry because it reduces God to finite proportions. Man becomes truly self-reliant only when drawing his source of being from something infinite, namely, the God above God.112

As this brief summary indicates, the existentialist theologians tried to relate the biblical message to the postwar human condition – man's depersonalization, anxiety, inauthenticity, and man's desire for self transcendence. The mission of the biblical existentialists, however, was not to relate Christianity to the modern scientific worldview. Rather, they sought to relate God and religion to man's existential estrangement in the postwar world. Nor was it the mission of the neo-orthodox theologians, like Barth, Brunner, and Gogarten. They did not engage with modern science either in their Crisis theology or in their separate theological positions after
parting ways. Instead, the neo-orthodox theologians focused on keeping the realms of religion and science entirely separate and largely ignoring modern science.

Similarly, Catholicism remained staunchly dogmatic and resistant to any engagement with modern science, at least until Vatican II (1962-65). Instead, Catholic apologists like Jacques Maritain used Thomistic philosophy to challenge modern philosophic-scientific ideas. Invoking Thomistic reasoning, Maritain contested Bergson's ideas of creative evolution and dynamic reality and Teilhard's evolutionary thought, branding them as presumptuous human speculation.\(^ {113}\) (Whitehead's process philosophy did develop a following among some Protestant theologians in the United States, and his philosophical engagement with modern science is addressed in Chapter 8.)\(^ {114}\) Thus, the experience of Barth and Teilhard was indeed exemplary of Christianity's postwar position concerning modern science. Protestantism and Catholicism both refused to engage man's critical intelligence in addressing the serious religious implications of modern scientific developments, and they both remained largely indifferent to those developments. Their indifference unfortunately cleared an unobstructed path for scientific materialism.
CHAPTER 5

POSTWAR WESTERN PHILOSOPHY

The book [*Tractatus Logico-Philosophicus*] deals with the problems of philosophy, and shows, I believe, that the reason why these problems are posed is that the logic of our language is misunderstood. The whole sense of the book might be summed up in the following words: what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence.

– Ludwig Wittgenstein, *Tractatus Logico-Philosophicus* (1921)\(^1\)

Thinking only begins at the point where we have come to know that Reason, glorified for centuries, is the most obstinate adversary of thinking.

– Martin Heidegger, *Lectures on Nietzsche* (1936-40)\(^2\)

Just before the war a revolution began in science that continued through the 1920s and radically altered the Newtonian conception of the universe. It included Max Planck's quantum theory, Albert Einstein's special and general relativity theories, and Niels Bohr's and Werner Heisenberg's uncertainty principle in physics.\(^3\) In response to these scientific developments, philosophers began questioning traditional philosophy – neo-Kantianism on the continent and Hegelianism in Britain – and searching for ways to place philosophy on a more solid scientific foundation. The scientific spirit of the age demanded scientific proof of metaphysical claims for absolute knowledge.\(^4\)

In classical Newtonian physics, matter moved in absolute space and time, both independent and immutable. Motion produced a change in spatial relations over time, time proceeded uniformly, and, therefore, matter and motion, space and time were absolutes. Although matter's distribution within the universe changed, its atomic components were rigid, impenetrable, inert, and unchanging – constant in mass, volume, shape, and total quantity. Thus, matter was susceptible to mathematical
calculation and not susceptible to change, except in location; it remained motionless unless acted upon externally by forces like gravity.\(^5\)

Quantum and relativity physics radically changed this predictable and deterministic Newtonian world order. Einstein's relativity theory interrelated space and time, and gave rise to what he called "a four-dimensional space-time continuum."\(^6\) No longer was space motionless and time absolute. Rather, measurements of time and space varied with the movements of the observer such that a moving clock ran slower than a stationary clock. In Einstein's world, space was no longer static or uniform, but had variable structures, with gravity affected by the curvature of the space through which a body moved. In addition, matter was no longer indestructible, with a fixed size and shape, but it was active, constantly changing energy. Furthermore, the position of subatomic electrons was not predictable, and their position and velocity were not both measurable at the same time.

The new physics contributed to the long-standing positivist skepticism about metaphysics because Newton's static model no longer applied and the theory of relativity and principal of indeterminacy held that the observer's mind affected the characteristics of the outside world.\(^7\) Although this scientific viewpoint about the mind's effect on reality provided grounds for philosophic idealism, philosophy instead turned away from idealism and toward empiricism (logical positivism) and existentialism. Consequently, despite its interest in becoming more scientific, postwar philosophy generally sidestepped the new questions about the cosmos posed by the scientific revolution.
The logical positivists considered metaphysical questions fundamentally illegitimate, and the existentialists generally ignored them, focusing instead on how to exist authentically within their accepted cosmos. Although existentialists returned to ontological questions of freedom, they basically accepted the Cartesian dualism of mind and matter and the materialist reality, and they tried to make room for freedom in this deterministic world. Furthermore, despite the theories of relativity and indeterminacy, the new physics at bottom consisted of matter and energy, and positivists and existentialists basically accepted them as essential reality. Thus, throughout this scientific revolution, materialism persisted.\(^8\)

The logical positivists at Cambridge and Vienna deemed metaphysical propositions unverifiable by empirical science and, therefore, meaningless. In the words of Rudolf Carnap, a leading member of the Vienna Circle of logical positivists:

> Metaphysical propositions are neither true nor false, because they assert nothing, they contain neither knowledge nor error, they lie completely outside the field of knowledge, of theory, outside the discussion of truth or falsehood. But they are, like laughing, lyrics, and music, expressive. . . . The danger lies in the deceptive character of metaphysics; it gives the illusion of knowledge without actually giving any knowledge. This is the reason why we reject it.\(^9\)

In short, the logical positivists remained unconcerned with traditional philosophical questions of cosmic meaning and purpose. Instead, they focused on scientific propositions to determine if they were logical and empirically verifiable, and they implicitly accepted the materialist worldview.\(^10\)

Existentialists also essentially ignored metaphysical questions, even though their perspective on nature affected their approach to the human condition. Baumer remarks
on this curious and counterintuitive disregard of nature among existentialists:

Conceivably, the existentialists might have found in the new physics support for their philosophy of freedom. But they do not seem to have looked at it that way. They were in revolt against positivistic science, as well as against idealism. True philosophy, seeking man's authentic "existence," had more to do with the objective and impersonal, the deterministic and materialistic, than with "nature" studied by scientists, than with the Hegelian Absolute. . . . In Karl Jaspers words, "the abstract sciences lacked the sentiment of a humanistic culture."11

The existentialists focused upon man and his quest for human authenticity, as if the natural order were largely irrelevant, although by and large they adopted an impersonal, deterministic, and materialist universe.

Three European philosophers were at the forefront of this philosophic retreat from prewar rationalist engagement with metaphysical questions: Ludwig Wittgenstein with his philosophy of language, Edmund Husserl with his transcendental phenomenology, and Martin Heidegger with his phenomenological ontology. All three philosophers personally experienced the Great War: Wittgenstein as front-line soldier on Austria's Eastern and Southern Fronts and as war prisoner of the Italians; Husserl as winner of the Iron Cross for his lectures in support of Germany's war effort and as father of two soldiers, both wounded, one fatally, at Verdun; and Heidegger as German support soldier with a medical deferment. Their war experience affected their philosophic views, especially those of Wittgenstein and Husserl.

*Ludwig Wittgenstein*

Born in Vienna, Austria, the youngest of eight children of a wealthy and cultured Viennese family, Wittgenstein (1889-1951) was baptized a Roman Catholic
and educated at home until age 14. He then attended gymnasium (grammar school) in Vienna; secondary school in Linz; and technical college in Berlin, given his early aptitude in engineering. His interest in the new field of aeronautical engineering took him to England in 1908 (at age 19), where he eventually gravitated toward mathematics and its philosophical foundations. This inspired him to read Bertrand Russell and Alfred North Whitehead's *Principia Mathematica* (1910) and to study logic at Cambridge University (1912-14), where he became Russell's protégé and friend.

Until his war experience, Viennese culture and Russell's logical atomism were Wittgenstein's dominant philosophic influences. In *fin de siècle* Vienna, philosophic problems centered on the critique of language, the separation of facts and values, and the meaning of life as a mystical rather than rational endeavor. Fritz Mauthner (1849-1923), the Viennese journalist turned philosopher, contended that philosophical problems devolve to problems of language, that names of things are only metaphors for sense perceptions, that language is a social convention unable to grasp the real world, and that logic is mere abstraction and psychology at work. In short, reality is incomprehensible. In Viennese intellectual circles, the three most widely read authors – Arthur Schopenhauer (1788-1860), Søren Kierkegaard (1813-1855), and Leo Tolstoy (1828-1910) – all considered values, morality, and meaning in life beyond rational thought and essentially mystical in nature.

The neo-Kantian Schopenhauer had purported to access Kant's noumenal world, which he called the blind, obstinate, and impetuous Will, and rejected Kant's *a priori* rational conception of morality, which instead he considered the compassionate
experience of the willing subject. Similarly, Kierkegaard had challenged Hegel's historical dialectic as beyond human comprehension, and transformed Hegel's Absolute Spirit into the Absolute Paradox of Christ's Incarnation, which instead lay beyond scientific knowledge and required faith. Tolstoy had argued that morality rests upon feeling. Since art is the language of feeling and speech the language of thought and reason, Tolstoy considered speech "incommensurable" with meaning of life – life's meaning was found in the living of it.

While at Cambridge, Wittgenstein found Russell endeavoring to reduce mathematics to logic and to invent a new language (logical atomism) for expressing facts with a mathematical rigor applicable to all scientific disciplines. In 1914, Russell declared that "logic is the essence of philosophy," and that discrete atoms of sense data form the elementary building blocks of all reality. With his new philosophical thinking, Russell abandoned his Hegelian roots, challenged Britain's reigning post-Hegelian idealists, such as Francis Herbert Bradley, and provided the core principles of analytical philosophy at Cambridge and logical positivism in Austria.

Back home in Vienna when war broke out in August 1914, Wittgenstein promptly enlisted in the Imperial Army, spent two years with an artillery unit on the Eastern Front, entered officer training in 1916, and returned to his unit as a lieutenant. Later posted to the Italian Front, Wittgenstein fell prisoner to the Italians in October 1918, when the Austro-Hungarian front collapsed, and was interned near Monte Cassino until August 1919. His war experience affected Wittgenstein profoundly. The war evoked his sense of service and self-sacrifice (volunteering for military duty and
seeking posts ever closer to the fighting); introduced him to ordinary soldiers and citizens (interacting regularly with common people he rarely met as a rich man's son); prompted his reading of Tolstoy's *The Gospels in Brief* (carrying *The Gospels* everywhere, he became "the man of the book" to fellow soldiers, and he later told Russell it "saved my life"); and led him to renounce his privileged life for one of austerity (relinquishing his 1912 inheritance to his siblings). After his 1919 meeting with Wittgenstein in Holland, Russell reported that Wittgenstein had become a "mystic."23

While home on leave in 1918, Wittgenstein wrote the manuscript for his *Tractatus Logico-Philosophicus*, which he completed during his captivity near Monte Cassino and published with Russell's help in 1921.24 Having formed his principal thoughts before the war, Wittgenstein synthesized his ideas about truth-functions, about language as a picture of reality, and about ethics as beyond the reach of philosophy, while stationed on the Eastern Front.25 As indicated in his introduction to the *Tractatus*, Wittgenstein believed that understanding "the logic of our language" and limiting it "to the expression of thoughts" would separate philosophical sense from "nonsense" and solve all philosophical problems. By showing what can be *thought* is only what can be *said*, Wittgenstein believed he could prevent philosophy from improperly intruding into the "unsayable" realm of ethics, value, and the meaning of life – the realm he considered most important.

Wittgenstein predicated the *Tractatus* on two major premises. First, language consists of propositions of thought made up of elementary propositions that are
combinations of names, which constitute the basic constituents of language.\textsuperscript{26} Second, the foregoing structure of language corresponds to the structure of the world composed of facts that combine objects or things ("states of affairs"), which constitute the world's unalterable, simple, and ultimate constituents.\textsuperscript{27} From these two major premises Wittgenstein concludes that language mirrors the world, i.e., names correspond to objects, elementary propositions to states of affairs, and propositions to facts. These two premises in the \textit{Tractatus} provide the basis for Wittgenstein's "picture theory of meaning."\textsuperscript{28}

Wittgenstein defines thought as a "logical picture of facts" perceived by the senses and expressed in a proposition, which constitutes "a picture of reality."\textsuperscript{29} The world consists of the "totality of existing states of affairs," and the "totality of true propositions is the whole of natural science."\textsuperscript{30} Consequently, the limits of thought and factual discourse extend only to "the propositions of natural science." Thought and discourse do not extend to philosophy, therefore, because "philosophy is not one of the natural sciences"; instead, philosophy only "aims at the logical clarification of thoughts."\textsuperscript{31} Furthermore, philosophy "is not a body of doctrine but an activity," namely, "the clarification of propositions" in order "to make them clear and to give them sharp boundaries."\textsuperscript{32} By setting "limits to what can be thought," philosophy undertakes only the limited role of specifying the permissible scope of meaningful discourse and separating sense from nonsense.\textsuperscript{33}

Having thus directed matters of fact to science and matters of logic to philosophy, Wittgenstein asserts that any other philosophic propositions, like those
metaphysics, are senseless and must be discarded so we can "see the world aright." To see the world aright, we must throw away the philosophical ladder because reality concerns "what is higher" and lies beyond the scope and capacity of philosophy. Rather, these higher concerns about reality, namely, ethics, aesthetics, and the meaning of life, are "transcendental" and "mystical." They "cannot be put into words," they "make themselves manifest," and, therefore, they can only be shown and not said. In other words, transcendental and mystical matters fall within the province of the arts, not philosophy. Wittgenstein famously concludes the Tractatus as follows: "What we cannot speak about we must pass over in silence."

Wittgenstein's silence, of course, is thunderous since it puts an end to philosophy's rationalist and idealist speculations about reality. Even though he considered his emphasis on the importance of transcendental matters to be the greatest contribution of the Tractatus, Wittgenstein leaves those transcendental matters unsaid. In the 1920s, however, the Vienna Circle used the Tractatus as its blueprint for further philosophical development, despite Wittgenstein's view that philosophy had no doctrines. The Vienna Circle took Wittgenstein's "atomic facts" to mean sense data, or empirical observation, as grounding all factual knowledge, and took Wittgenstein's transcendental considerations as utterly meaningless – effectively subverting the emphasis that Wittgenstein placed on the transcendental. Whereas Wittgenstein thought philosophy must be silent about what really matters, the logical positivists thought that philosophy itself was all that really mattered.
Wittgenstein is partially at fault here for applying Russell's concept of "logical atomism" to the world as the totality of facts.\textsuperscript{41} Wittgenstein thereby gave philosophic expression to the image of a fragmented world of disconnected facts – perhaps characteristic of postwar European culture but certainly not Wittgenstein's picture of the world as a whole.\textsuperscript{42} Logical atomism grows out of two things: first, David Hume's analysis of causation, which holds that the most we can say about B consistently following A is that they are conjoined, not causally related, facts (the view prevalent among empiricists). Second, mathematical logic, which ignores causation altogether, abstracts from the nature of A and B, and considers them merely distributions in logical space, having nothing to do with one another. By projecting such dictatorial logic onto a world of disconnected factual elements, Wittgenstein's \textit{Tractatus} constitutes metaphysics, namely, a disconnected, sterile, and meaningless reality.

Wittgenstein compounds his bleak materialist metaphysics by applying logic (his truth tables) to propositions, which can be true irrespective of the particular facts and, therefore, say nothing meaningful about the real world.\textsuperscript{43} Furthermore, by stripping philosophy of any doctrines, whether metaphysical or ethical, Wittgenstein reduces philosophy solely to the following tasks: separating questions of fact from questions of logic, deferring factual statements to the natural sciences, analyzing the logic of propositional statements, and characterizing transcendental and value statements as nonsense.\textsuperscript{44} By adopting Hume's fragmented world, Wittgenstein's \textit{Tractatus} depicts a mindless world composed of atomistic facts with no causal relationship between past,
present, and future – a world divided between science and human experience, a world defined by scientific materialism.

Believing that the *Tractatus* had solved all the problems of philosophy, Wittgenstein abandoned philosophy in 1920 to train as a teacher, and for six years thereafter he taught at a grammar school in a village south of Vienna. In 1929, however, Wittgenstein returned to Cambridge University, submitted the *Tractatus* as his doctoral dissertation, and received his Ph. D. that next year (at age 40), with Bertrand Russell and G. E. Moore as his examiners. Following graduation, Wittgenstein received a five-year fellowship at Trinity College, Cambridge. In 1935-36, Wittgenstein lived in a Norwegian hut that he had built before the war as his retreat, and there began to write his posthumously published *Philosophical Investigations* (1953).

In 1937, Wittgenstein returned to Cambridge, and in 1939, he succeeded G. E. Moore as Chairman of the Philosophy Department. After the Anschluss, Wittgenstein relinquished his Austrian passport and became a British citizen (he had to choose between German and British citizenship), and during World War II he served at Guy's Hospital in London and the Royal Victoria Infirmary in New Castle. In 1947, Wittgenstein relinquished his Chairmanship, moved to Ireland where he finished *Philosophical Investigations*, and then returned to England where he lived with friends in Oxford and Cambridge until his death from cancer in 1951.

Wittgenstein ultimately abandoned the "picture theory" of language as mirroring the world of facts set forth in the *Tractatus*. Instead, he adopted a new theory of language in *Philosophic Investigations* as the mastery of technique, i.e., knowing how
to use language and to participate in "language-games." Language games are the practices, customs, and assumptions from which linguistic expressions derive their meaning in shared forms of life. Yet Wittgenstein still maintained, as he had in the *Tractatus*, that philosophic problems arise from misconceptions and misuse of language and that proper grasp of the workings of language dissolve rather than resolve such philosophic problems. Thus, for the later Wittgenstein, philosophy continued to play only the limited role of clarifying language and correcting linguistic errors, like a physician treating an illness. "What is your aim in philosophy?" Wittgenstein remarks: "To show the fly the way out of the fly-bottle."\(^{47}\)

In short, for Wittgenstein, the relationship between language and the world must be shown rather than stated. That relationship, like transcendental and mystical matters, remains unsayable. Whereas Kant contended that *a priori* conceptual categories are necessary to order thoughts and experience, Wittgenstein contended that only the understanding of language is necessary and, further, that such understanding requires an appreciation of the rules, language games, and modes of life that give language expression and meaning. Thus, Wittgenstein declared the post-Kantian "transcendental" tradition illusory and deferred those all-important transcendental concerns from expression in philosophy to demonstration in the arts.

Wittgenstein considered the world as a whole to have transcendental meaning, but he pictured the world as scientific materialism does, colorless, odorless, senseless, and indifferent. He emphasized the role of poetry and art to "see the world aright" and to *show* its transcendental meaning, thereby emphasizing two important aspects of
man's critical intelligence – being attentive to, and intelligent about, the world as a whole. But Wittgenstein gave philosophy no role in these two aspects of critical intelligence. Furthermore, he removed philosophy from any role in the other two aspects of critical intelligence, namely, being critical about and judging what the artistic experience shows us about reality. Indeed, Wittgenstein limited philosophy's critical function to identifying any such philosophic statements as nonsense because reality, for him, is no longer the object of knowledge. Language as a practice became the medium of understanding and, for Wittgenstein, philosophy was not up to that task.

*Edmund Husserl*

Born to German-speaking liberal Jews in Prossnitz, Moravia, then part of the Austro-Hungarian Empire and now part of the Czech Republic, Husserl (1859-1938) attended the University of Leipzig to study astronomy, mathematics, physics, and philosophy. Then, in 1881, he attended the University of Vienna to concentrate on, and received his doctorate in, mathematics. After one-year's military service, Husserl returned to Vienna at age 25 for a three year course of study in classical philosophical psychology (1884-86) with Franz Brentano, who inspired his interest in philosophy and ultimately in phenomenology. In 1886, Husserl converted to Christianity, was baptized in the Lutheran Church in Vienna, and thereafter read the New Testament daily as a committed, if non-confessional, Christian.

In 1886, Husserl transferred to the University of Halle to study psychology with a former Brentano student, and the next year married the daughter of a Jewish scholar.
from Prossnitz, Malvine Steinschneider, who also converted to Christianity. In Halle, they had all three of their children, and Husserl published his first book, *Logical Investigations* (1900), which enlarged his reputation. In 1900, Husserl transferred to the University of Göttingen as an assistant professor, and he remained in Göttingen for the next 16 years, immersing himself in the study of classical philosophical psychology and in the new discipline of phenomenology, perched on the border of logic, ontology, and descriptive psychology. In 1907-09, Husserl lectured and wrote on Kant, comparing his own transcendental phenomenology with Kant's transcendental logic, and published his second book, *Ideas: General Introduction to Pure Phenomenology* (1913).

As Husserl wrote in his 1931 Preface to the English edition, *Ideas* is "exclusively directed to this one end: to discover a radical beginning to a philosophy" that "will be able to present itself as science." Although his constant rallying cry "To the things!" sounds like a call to empiricism, Husserl focused upon knowledge as a mental activity, specifically the manner in which consciousness contemplates the phenomena of which it is conscious. While agreeing that phenomena are the only given, Husserl opposed Kant's division between phenomena and noumena, Hegel's historical dialectic within phenomena, and scientific materialism’s reduction of consciousness to physical matter. Instead, Husserl claimed that in phenomena is given the very essence of reality, and that phenomenology is "a theory of essence contained in pure intuition."

The essence of reality, for Husserl, lies within consciousness as an absolute and necessary truth – a pure intelligibility that is separate and apart from contingent existence (phenomena). Husserl attempted to get at this essential reality simply by
investigating consciousness, an unprecedented epistemological methodology. Thus, Husserl's phenomenology is both a philosophy and a technique. It attempts to bridge the implicit Cartesian dualism between a presumably independent reality and a subjective consciousness of that reality by examining consciousness of phenomena within consciousness.54

The phenomenological technique employs four interdependent processes, collectively called "intentional constitution," which purify and validate an intuitive grasp or knowledge of reality, the essence of being. *Epoché* brackets or sets aside consciousness and the intentionally constituted object of consciousness in order to abstain from judgments and to cleanse the mind of preconceptions about the world. *Eidetic reduction* discloses the structure of consciousness and its intended object in six successive steps (eidetic is from the Greek *eidos*, meaning structure). During the last four reductive steps, *ideation* reveals the essences of those structures in the *transcendental ego*. Finally, *intentionality* investigates structural variations to reveal the identical among them and thereby constitutes essential intuition and necessary knowledge of fundamental reality.55

Whereas Descartes separated the subject and the object, thinking and extended substance, Husserl considered them intelligible only in combination, guaranteeing each other and thereby guaranteeing absolute knowledge of being-in-consciousness.56 Whereas Kant thought that pure reason can attain absolute knowledge by limiting itself to phenomena and that practical reason can postulate the noumenal realm (God, freedom, immortality), Husserl thought that pure reason can attain absolute knowledge
of noumena as "intentionally constituted" in consciousness.\textsuperscript{57} Thus, Husserl synthesized Descartes's ideal of a universal science with Kant's transcendental idealism, but he rejected Descartes's dualism by placing existence within consciousness, and he rejected Kant's limitation of pure reason to scientific thought by constituting essence (Kant's noumena) in the transcendental ego.

Because knowledge of being-in-consciousness constitutes the only authentic access to being (essential reality), for Husserl, phenomenology is the only science of being:

Only a science transcendentally clarified and justified, in the phenomenological sense, can be the ultimate science. Only a world clarified by transcendental phenomenology can be a world definitively comprehended.\textsuperscript{58} In short, phenomenology is a metaphysics of consciousness, which clarifies and justifies the real world by constituting its essence in and for the consciousness. Furthermore, the transcendental subject grows in knowledge with each phenomenological experience, which increases the intuitive capacity of the ego.\textsuperscript{59} In the words of philosopher Quentin Lauer, Husserl's transcendental phenomenology constitutes "a heroic effort to re-establish metaphysics according to the canons set up by science."\textsuperscript{60}

While promoting phenomenology as the science of sciences, however, Husserl also emphasized the prescientific, primordial, and unsophisticated mode of ordinary experience in the life-world (\textit{Lebenswelt}). By life-world, Husserl meant everyday human perception and interpretation of the world from which science abstracts its objects. Husserl stressed the life-world in an effort to liberate philosophy and science
from their narrow positivist outlooks and to refocus them on the world of human experience.61

When World War I broke out in August 1914, Husserl was at Göttingen and 55 years old. Despite the horror of the war, Husserl became inspired by the spirit of the German people ("A magnificent stream of national will to win floods through every one of us and gives us an undreamt of strength of will in this terrible national loneliness").62 Husserl's daughter volunteered in a field hospital and his two sons were mobilized. His sons had "gone out to fight this war in the Fichtean spirit as a truly sacred war," remarked Husserl, believing that God supported Germany, even as the European nations aligned to destroy it.63 At Verdun in March 1916, however, his younger son Wolfgang, winner of the Iron Cross, was killed, and his eldest son Gerhart was badly wounded.

Husserl became depressed over the death of his son and numerous students, including his brilliant Halle protégé Adolph Reinach.64 In April 1916, shortly after his son's death, Husserl assumed the Chair of Philosophy at Freiburg where he remained until his retirement in 1929. In his inaugural lecture in May 1917, Husserl called for restructuring science and philosophy: "Most recently, the need for an utterly original philosophy has re-emerged, the need of a philosophy that . . . seeks by radically clarifying the sense and the motifs of philosophical problems to penetrate to that primal ground on whose basis those problems must find whatever solution is genuinely scientific." Husserl added that philosophy's mission is to protect and promote the "spiritual life of mankind."65
In 1918, during the last months of the war, Husserl gave three lectures in Freiburg entitled *Fichte's Ideal of Humanity* that earned him the Iron Cross for his assistance in the German war effort. Husserl's lectures invoked Fichte's ability to find spiritual resources in defeat, to unite Kant's theory with practice, and to find a moral dimension in his idealism. Citing Fichte's desire for a moral world order and belief in God's revelation through self-understanding, Husserl exclaims: "How elevating is this philosophy for the noble self-consciousness of the human being and the dignity of his existence when it proves that the entire world-creation is achieved in the absolute intelligence for his sake." Although predicting a German victory to his wife Malvine even in late 1918, Husserl soon recognized the ethical bankruptcy of his earlier position that Germany's war was just, a recognition that no doubt contributed to his emerging view of the crisis in Western civilization.

In 1921, having become the leading philosopher in Germany, Husserl called for an overall phenomenological philosophy to address the intellectual and spiritual needs of postwar humanity. He exerted his influence to establish this philosophy as an international movement, advocating an international human community and moral order of shared interests extending beyond national borders – the same call for a "higher humanism" echoed later in his *The Crisis of European Sciences* (1937). At Freiburg, Husserl met Martin Heidegger who helped Husserl translate his manuscripts for publication and joined Husserl in an article on phenomenology for the *Encyclopaedia Britannica* in 1929. That same year, Heidegger succeeded Husserl upon his retirement as Chairman of the Philosophy Department.
Husserl's postwar philosophy grew out of his grave concern that Western culture had lost direction because philosophy no longer provided answers to man's fundamental concerns. Husserl faulted the natural sciences for the "seeming collapse of rationalism," and he pursued phenomenology as the means of "saving human reason." In *Crisis* Husserl describes "a change which set in at the turn of the past century in the general evaluation of the sciences" concerning "what they, or what science in general, had meant and could mean for human existence." Husserl presented his grave concern about the change wrought by science, as follows:

The exclusiveness with which the total world-view of modern man, in the second half of the 19th century, let itself be determined by the positive sciences and be blinded by the "prosperity" they produce, meant an indifferent turning away from the questions which are decisive for a genuine humanity. *Merely fact-minded sciences make merely fact-minded people.* The change in public evaluation was unavoidable, especially after the war, and we know that it has gradually become a feeling of hostility among the younger generation. In our vital need – so we are told – *this science has nothing to say to us.* It excludes in principle precisely the questions which man, given over in our unhappy times to the most portentous upheavals, finds the most burning: questions of the meaning or meaninglessness of the whole of this human existence. *Do not these questions, universal and necessary for all men, demand universal reflections and answers based on rational insight?*

Husserl worried that Western man had become drawn to science and blinded by the prosperity it produced and, consequently, had repudiated the Greek spirit of philosophic inquiry that "bespeaks nothing but universal science, science of the world as a whole, of the universal unity of all being." Instead, mankind had adopted the mechanistic worldview of the natural sciences, which maintain that "there can be no pure self-contained search for an explanation of the spiritual, no purely inner-oriented psychology or theory of spirit beginning with the ego in psychical-self-experience and
extending to the other psyche. The way that must be traveled is the external one, the path of physics and chemistry."\textsuperscript{72} So long as the materialist focus of the natural sciences dominated the human spirit, Husserl thought Western man would never understand his true purpose.

In \textit{Crisis} Husserl situated phenomenology at the end of the long teleological process for safeguarding the primacy of reason as the means of understanding reality. He argued that the surrender of reason to the anti-rationalist forces of the natural sciences would constitute a betrayal of Western man. Scientific positivism, explained Husserl, "decapitates philosophy" by giving questions of fact a higher dignity than basic questions of meaning.\textsuperscript{73} By the summer of 1935, Husserl finally despaired over the prevailing anti-rationalism, which he considered the root cause of the European crisis: "Philosophy of science, as serious, rigorous, indeed apodictically rigorous science – the dream is over."\textsuperscript{74}

In April 1933, the National Socialist Party issued a decree prohibiting non-Aryans from holding positions in state service. Heidegger enforced that decree against emeritus professor Husserl, who was devastated, given his own loyal support of Germany, his sons' military service in the war, and his daughter's service in a field hospital.\textsuperscript{75} Then, in September 1935, under a subsequent law against non-Aryans, Husserl lost his teaching license and German citizenship and, as a consequence of his resulting non-German status, Husserl also lost his place among the German delegation to the international philosophy congresses in 1936 and 1937. Freiburg dropped his name from the faculty list in 1936, and the National Socialists denounced his philosophy.
urging universal rationality because it included Jews and Negroes, represented "a barren spirit without blood lineage or race," and failed to understand "the attachment to the soil of genuine spirituality." 76

Despite his last years of decreasing friends and increasing isolation, Husserl was remarkably productive. 77 He died in April 1938, shortly after his 79th birthday, and only one person from the Freiburg philosophical faculty attended his funeral (not Heidegger, who was allegedly sick). Father Van Breda, a Belgian Franciscan priest intending to research Husserl's unpublished manuscripts in Freiburg, met with Husserl's widow Malvine, and together they developed a plan to preserve Husserl's manuscripts from the Nazis by using a Belgian diplomatic courier to send them to Leuven where they are now part of the Husserl Archive. Father Van Breda also arranged for Husserl's widow to move to Belgium where she hid in a convent during the Nazi occupation. In 1946, Malvine traveled to the United States to join her two surviving children, who emigrated there in 1933-34. 78

In summary, Husserl was a rationalist who thought that transcendental phenomenology provided an unshakable foundation for all knowledge as the science of sciences. He searched for a priori structures within the life-world and found those structures in "the things themselves" once their essences became constituted in the transcendental ego. In the postwar era, Husserl advocated the vital need for rationalism to address mankind's most burning questions because "science has nothing to say to us." He called for the Greek spirit of philosophic inquiry that "bespeaks nothing but universal science, science of the world as a whole, and universal unity of all being."
Ultimately, he determined that scientific positivism had triumphed over rationalist inquiry and despaired that "the dream is over."

Husserl fought a rearguard action to save a modified form of rationalism from the encroaching forces of materialism. Significantly, he emphasized the reality of consciousness itself, and thereby attempted to bridge the Cartesian dualism of mind and matter. Although Husserl tried to put subjectivity back into reality, he undertook to objectify such subjectivity through his phenomenological technique, a form of empirical analysis of consciousness which assumes erroneously that empirical science alone can grasp essential reality. In effect, Husserl's adaptation of rationalism as the "pure science" of phenomenology never broke from scientism, which ultimately doomed his attempt to overcome materialism, to integrate mind into matter, or to save human reason.

In pursuit of its desire to know, man's reason, his critical intelligence, needs a wider empiricism than Husserl allowed in his phenomenological reduction of the objects of consciousness. Unfortunately, Husserl's last ditch attempt to save reason and to challenge scientific materialism eliminated most of the primal fields of meaning through which critical intelligence must proceed in order to apprehend the truth of reality. He focused only on the narrow impersonal approach of empirical science and omitted the other four fields of meaning – feelings, aesthetics, interpersonal involvements, and narratives of our place in the world. By limiting critical intelligence solely to the theoretic approach of science, Husserl ignored these other rich sources of access to nature, just as does scientific materialism. As a result, Husserl inevitably
narrowed and prejudiced his resultant analysis and ultimately failed in his determined postwar effort to overcome materialism.

*Martin Heidegger*

Born into a poor Catholic family in Messkirch, Baden, located in southwest Germany, Heidegger (1889-1976) attended school on scholarship, first in Konstanz and later in Freiburg, to prepare for the priesthood. Discharged from his Jesuit novitiate because of his bad heart and lack of perceived vocation, Heidegger entered Freiburg University to study theology and scholastic philosophy, earned his doctorate in 1913 with a dissertation criticizing psychologism (the psychological approach to philosophy), and qualified as a lecturer in 1915 with his thesis on Duns Scotus. Conscripted into the German army that same year, Heidegger avoided front-line duty and entered the postal and meteorological services through a "limited service" deferment because of his weak heart. Otherwise, he seemed personally unaffected by the war. In 1917, while still in uniform and lecturing at University by night, Heidegger married Elfriede Petri, a Protestant, and in 1919, upon the birth of the first of their two sons, he renounced his Catholicism for Protestantism.79

Upon discharge from the Army in 1918, Heidegger became an assistant to Husserl at Freiburg and achieved renown as a lecturer. In 1923, Heidegger became an associate professor at Marburg, and in 1927, he published his most influential work, *Being and Time*, in order to meet a government requirement for full professorship. It was published in the *Yearbook for Philosophy and Phenomenological Research*, edited
by Husserl. In 1929, Heidegger succeeded Husserl as Chairman of the Philosophy
Department at Freiburg and gave his inaugural lecture entitled "What is Metaphysics?"

Husserl had led 19th century philosophy out of the impasse between the idealists
and the materialists, both speculative philosophies about the nature of reality, by
pursuing phenomenology, an important new idea of essential reality as a component of
transcendental consciousness. In *Being and Time* (1927), Heidegger stepped beyond
Husserl by dispensing with the idea of man as consciousness-of-objects and adopting
the idea of man as being-in-the-world, existing outside his own skin and inside the
entire world of his cares and concerns.\(^{80}\) Heidegger's principal concern, however, was
the meaning of Being, so he applied phenomenology to ontology since "the task of
ontology is to set in relief that Being of beings and to explicate Being."\(^{81}\)

In approaching the question of Being, Heidegger started with the human being
(*Dasein*, meaning "existence" or literally "being there") because Dasein not only
questions the meaning of Being but also has a pre-conceptual understanding of Being.
As Heidegger explains, Dasein is "ontically distinguished by the fact that in its Being
this being is concerned *about* its very Being."\(^{82}\) Furthermore, Dasein derives its
preliminary understanding of Being by engaging with entities (or beings) in the world.\(^{83}\)
Indeed, Dasein is the center of the world, unifying the other things in the world, which
are present or ready at hand but, unlike Dasein, cannot take charge of their being. By
contrast to such entities, Dasein decides what it wants to be because, for Heidegger,
Dasein has no essential nature. Instead, it consists of inherent possibility prior to
actuality, not a definite thing but a possibility of different modes of being.
While Dasein cannot decide whether to be, since it is "thrown" into the world, Dasein can decide how to be. Dasein exists or "stands out" as constituting possibilities limited only by its facticity, i.e., its inherent physical and mental limitations. Dasein is inauthentic when it accedes to the choices of others (the "they"), and is authentic when it makes its choices for its own reasons. Dasein becomes its own authentic Self by acknowledging and embracing both its finitude (its ever present possibility of death, i.e., its being-toward-death) and its existential guilt (its concerns over its basic inadequacies, i.e., what Dasein is not, has not been, and never can be).

Having no determinate nature, Dasein needs a world populated with other entities to become itself through engagement in the world. Dasein's world consists most immediately of those entities it uses, like tools and equipment ready-at-hand, and less immediately of other entities merely present-at-hand, like rocks and trees. Entities ready-at-hand in turn point beyond themselves to toolmakers and material resources of the wider world, which Husserl calls the "life-world" and Heidegger calls merely "the world." Whereas Husserl brackets or isolates the objects of consciousness from the world, Heidegger places them in their context with other entities in the world of Dasein's needs and purposes. Also, whereas Husserl focused inwardly on the conscious ego, Heidegger describes Dasein's normal condition as un-self-aware.

Dasein and the world, for Heidegger, are complementary and interdependent. Dasein's engagement with entities in its world is constant and practical, not disinterested and theoretical. Dasein understands a priori its relationship with others and its application of tools because existing with others is a structural feature of Dasein without
which Dasein is incomplete. Consequently, without Dasein, there would be no Being or world because there would be no being to have entities ready or present at hand or to question the meaning of Being as distinct from beings. Without Dasein, there would only be beings.

In his 1929 inaugural lecture to the Freiburg faculties, entitled and later published as *What Is Metaphysics?*, Heidegger explained that metaphysics historically had tried to grasp the whole of beings and had forgotten Being itself, forgotten that Being might not have been. For Heidegger, the inexplicable happening of Being – the utter contingency of Dasein and Being – posed the ultimate metaphysical question since man and Being might not have been. Heidegger called this contingency "the nothing," claimed it belongs to Dasein and Being, and declared "the question of the nothing proves to be such that it embraces the whole of metaphysics." 85

Dasein's latent mood of existential anxiety over its finitude and contingency reveals the nothing, thereby rendering Dasein, and not the traditional philosopher, the real metaphysician. As Heidegger explains:

> . . . metaphysics belongs to the "nature of man." It is neither a division of academic philosophy nor a field of arbitrary notions. Metaphysics is the basic occurrence of Dasein. It is Dasein itself because the truth of metaphysics dwells in this groundless ground it stands in closest proximity to the constantly lurking possibility of deepest error. For this reason no amount of scientific rigor attains to the seriousness of metaphysics. Philosophy can never be measured by the standard of the idea of science. 86

With this position, Heidegger rejected Husserl's idea of philosophy as a science, questioned philosophy’s capability of grasping Being, and yet stressed man's fundamental nature as concerned with Being. While calling Nietzsche the last
metaphysician. Heidegger has actually undertaken metaphysics himself, by focusing his thinking on Being in its difference from beings. Heidegger ended his 1929 inaugural lecture with the famous question: "Why are there beings at all, and why not rather nothing?" Heidegger, however, never attempted an answer.

Heidegger concluded that Western philosophy had taken the wrong turn with Plato and Aristotle by interpreting beings and forgetting Being in its distinction from beings. Plato exalted human values over the rest of existence, considered reality to exist in ideal forms, and deemed truth accessible through the mind rather than the senses. Once the truth of ultimate reality became a product of the mind, reality ceased to be the unhiddenness of Being, as it was for the pre-Socratic Greeks. This post-Socratic shift of philosophy, for Heidegger, inaugurated Western humanism, separating man from nature, reifying mental concepts as ultimate reality, and focusing on beings rather than Being.

Heidegger identifies Nietzsche’s Will to Power as the fulfillment of the philosophical path that began with Plato’s identification of the eternal forms because it arrogated to man the intellectual capacity to understand and exert power over Being. Heidegger considered Western philosophy responsible for bringing about modern science and technology but also for transforming the idea of truth into the will to power over not just beings but Being itself. Greek philosophical thought, for Heidegger, enabled the development of science by detaching recognizable entities or objects from Being’s encompassing presence. Science in turn promoted the development of technology in its search for better means of measuring and dominating things, a unique
characteristic of Western civilization. Heidegger's originality lies in his placing the
development of modern technology and the quest for national power within the history
of Western philosophy, beginning with the Greeks. The new technological era may
continue indefinitely since the possibilities of technology are inexhaustible, but, for
Heidegger, the philosophy that brought it about was now exhausted.

At this point, shortly after *Being and Time*, Heidegger determined that his own
focus on Dasein as his means of understanding Being was the same humanistic,
anthropocentric mistake characteristic of all Western philosophy since Plato and
Aristotle. With this revelation Heidegger made his famous "turn" away from the most
existential aspect of his most influential work in order to focus on Being itself.
Heidegger found the logical, propositional language of traditional philosophy
inadequate to his new purpose. Truth, for Heidegger, is not the correspondence of
statements with beings in the world, but the "unconcealment or uncovering" of beings
that themselves are meaning-laden. The correspondence theory of truth is an artificial
construct, from Heidegger's perspective, since it deems entities merely present-at-hand
rather than a functional aspect of Dasein's world. Language refers to entities and entities
are meaning-laden, but even as language discloses beings, it nevertheless conceals
Being. Looking to the pre-Socratic Greek understanding of "truth" as unconcealment
(*aletheia*), Heidegger redirected his attention away from Dasein as the "clearing" where
Being reveals itself and toward Being itself for disclosure of truth.

Since truth is not an exercise of mind or will, for Heidegger, but of freedom in
the form of receptivity and acceptance, man needs to relax his will and let Being show
itself.\textsuperscript{93} Barrett described Heidegger as being "drawn instead to the exalted rapture that may come to us in a walk through the woods or over a country path, and which, if we were poets, we could turn into a lyric poem."\textsuperscript{94} Thus, Heidegger turned to the poets and artists who let things speak to and through them and let Being become present to them. "Being is indeed just this presence," writes Barrett, "invisible and all-pervasive, which cannot be enclosed in any mental concept. To think it is to thank it, to remember it with gratitude, for our human existence is ultimately rooted in it."\textsuperscript{95}

In his 1935 lectures on \textit{The Origin of the Work of Art} published in 1950, Heidegger rejected the idea of art as the concern for beauty and pleasure and embraced art as the disclosure of Being. He focuses on three forms of art: Van Gogh's painting \textit{A Pair of Shoes} (1887), the Greek temple, and poetry. \textit{Shoes} (Figure 5) brings to light what is ordinarily inconspicuous in the peasant world of products and activities without itself being part of the peasant world. By contrast, the Greek temple gives a unity to the world in which the Greeks lived and acted, showing the earthly setting and the worldly striving for openness. Whereas the earth hides things, the world seeks clarity, leaving the two in conflict, and the Greek temple bridges this divide with a happening of truth and unconcealedness.\textsuperscript{96} Poetry, Heidegger's third example, involves language, defined by Heidegger, as "projective saying" – not just a means of communicating what we know but of naming something for the first time and stimulating conversation among readers, i.e., revealing its truth as relational meaning.\textsuperscript{97}

In short, the essence of art is the founding of truth. Rather than Dasein, the artist's work product, for Heidegger, has now become the clearing that presents a new
ground for truth, resolving conflicts between concealment and unconcealment and
providing a conversion experience, a happening in a clearing of beings, an
unconcealment of Being. Furthermore, art causes a paradigm shift, presenting the
extraordinary and diminishing the ordinary, and presenting the truth as a gift. Art
provides an entirely new perspective on Being and causes a new historical beginning,
allowing truth to leap forward. Consequently, the artist has now replaced Dasein at
center stage, like some demigod open to the force of art, truth, and Being itself, creating
and preserving a new world.

Heidegger remained at Freiburg from 1929 through the end of World War II,
rejecting an offer in 1930 to assume the prestigious position of Philosophy Department
Chairman in Berlin. During the Weimar Republic (1918-1933), Heidegger was
apolitical, but in May 1933, within 10 days of the Freiburg's faculty electing him as
rector (president) of the University, Heidegger joined the National Socialist Party. In
that capacity Heidegger cooperated with the new Nazi regime (e.g., denying library
privileges to his mentor, Professor Emeritus Husserl, because of Husserl's Jewish
background), and advocated for Germany's withdrawal from the League of Nations in
the 1933 plebiscite. In April 1934, Heidegger resigned as rector over conflicts with
faculty and party officials but he never left the party, although he played no significant
role thereafter in its affairs.

In 1944, the German government drafted a humiliated Heidegger into the home
guard to dig anti-tank trenches along the Rhine. After Germany's surrender, Heidegger
appeared before the "Denazification Commission," which forbade him to teach until
1949, a verdict supported by his erstwhile friend Karl Jaspers, by the university authorities, and by the French administration. In 1947, Heidegger published *On Humanism*, distancing himself from French existentialism, and in 1955, he lectured in France on "What Is Philosophy?" In 1966, Heidegger gave an interview to *Der Spiegel* (published after his death 10 years later), seeking to justify his Nazi era conduct and despairing of Western civilization: "Only a god can save us." In 1976, Heidegger died and was buried next to his parents in the Messkirch churchyard, following a Catholic mass officiated by his nephew Heinrich Heidegger.  

In summary, Heidegger attempted to overcome Cartesian dualism and to restore human integrity by describing Dasein as a being who questions the meaning of Being and by placing Dasein in the world of his cares. Furthermore, Heidegger usefully expanded the concept of reason to include remaining passive and attentive in the presence of Being, thereby allowing Being to reveal itself and Dasein to be grasp by Being. Heidegger pointed to poets and artists as exemplifying such attentiveness, but he simultaneously criticized the other aspects of man's critical intelligence. As Heidegger admonished, "Thinking only begins at the point where we have come to know that Reason, glorified for centuries, is the most obstinate adversary of thinking." No doubt by Reason here, Heidegger has targeted rationalism with its metaphysical claims, but his support for "thinking" represents a similarly deficient conception of man's critical intelligence.

The artist's attentiveness and intelligence can reveal much about Being, but critical intelligence in its pursuit of truth also requires criticism and judgment. Pursuit of
the meaning of Being requires more than merely understanding the poet’s and artist’s revelation; it requires being critical and exercising judgment about what their attentiveness and intelligence discloses. Heidegger's form of "thinking," however, truncates man's critical intelligence by eliminating the acts of criticizing and judging. Indeed, Heidegger's deemphasis of these latter two aspects of critical intelligence may well have contributed to his being led astray by the poetry and rhetoric of Nazism.

Despite his concern for Being and as his grant of ontological status to art and language as a means of accessing Being, Heidegger never criticized materialist metaphysics, even though it devalues Being itself, as fundamentally indifferent, meaningless, and valueless. Artistic attentiveness and intelligence, as Heidegger pointed out, are essential aspects of "thinking." But in pursuit of truth, reason requires more than simply attentiveness to Being; it also requires being critical and responsible, two distinct and important activities of man's critical intelligence that Heidegger overlooks. Heidegger never states whether the poet and artist can answer his most fundamental existential question about why there are beings rather nothing, but he left philosophy and reason nothing to say in response to his central question and no role in critiquing and judging the truth claims of materialist metaphysics.

**Logical Positivism and Existentialism**

The foregoing three philosophers, Wittgenstein, Husserl, and Heidegger, were ground breakers who inadvertently promoted two major postwar philosophical trends at odds with their respective philosophies, namely, logical positivism and existentialism.
Wittgenstein tried to avoid philosophical doctrines and to emphasize the transcendent, whereas his successors, the logical positivists, directed philosophy towards new doctrines and marginalized the transcendent. Husserl developed transcendental phenomenology to investigate human consciousness as a means of accessing essential reality and he emphasized the precognitive life-world to provide an additional source of access. Husserl's protégé Heidegger redirected phenomenology toward ontology, the meaning of Being, using human existence to gain access. Husserl's analysis of human subjectivity and the life world and Heidegger's analysis of human existence led to postwar existentialism, which largely ignored Husserl's essences and Heidegger's Being in order to focus on human authenticity. This is not to denigrate the creative, indeed heroic, stance of existentialist philosophy in addressing the ontology of freedom. Rather, it is to point out that existentialists pursue human freedom and authenticity in a Cartesian world that divorces mind from matter and a materialist world that consists of only meaningless and valueless matter.

In the 1920s, Moritz Schlick founded logical positivism in Vienna and quickly identified Wittgenstein's *Tractatus* as support for this philosophic endeavor. The logical positivists highly regarded natural science, mathematics, and logic, and sought to advance philosophy by making it more scientific. They considered science capable of resolving issues objectively, stripping them of subjective opinion and testing them against verifiable facts. "Science for the positivists," writes philosopher Samir Okasha, "was thus a paradigmatically rational activity, the surest route to the truth that there is." Their approach was rational in that every factual proposition was subjected to
verification through empirical observation and every inference drawn from such factual propositions was subjected to logical analysis.\textsuperscript{104} They placed their faith in science as the only road to ultimate truth.

While eminently rational, logical positivism was decidedly not rationalistic. The logical positivists rejected metaphysical statements as unverifiable, deceptive, and, in the previously quoted words of Rudolf Carnap, "completely outside the field of knowledge, of theory, outside the discussion of truth or falsehood."\textsuperscript{105} Presumably the logical positivists would recognize and reject scientific materialism as a metaphysic, despite its purported basis in scientific fact, but their highly academic focus lay elsewhere, namely, the distinction between analytic and synthetic truths and the verification of the synthetic statements.\textsuperscript{106} The logical positivists did not concern themselves with metaphysical statements, which they considered "meaningless," or in Wittgenstein's terminology "senseless," so they did not engage with scientific materialism. Instead, they generally accepted scientism and scientific materialism.

The existentialists adopted some aspects of Husserl's phenomenological method, especially his claim that all consciousness is consciousness \textit{of} something other than mere consciousness itself. In other words, consciousness is intentional since the mind focuses beyond itself towards some \textit{other}, signaling how we behave in the real world.\textsuperscript{107} While adopting Husserl's view of intentionality, however, existentialists resisted his "bracketing" of existence to gain access to essence. Yet they embraced Husserl's life-world because of their interest in lived experience, even as they rejected Husserl's essences and theoretical concepts.\textsuperscript{108}
Heidegger maintained that he was not an existentialist, which is apparent from his focus in *Being and Time* on the meaning of Being rather than on ethical issues. Although he described the structures of human existence, Heidegger's approach was more like Kant's than either Kierkegaard's or Nietzsche's. Heidegger analyzed the general structures of human existence, explaining the difference between the authentic and inauthentic Dasein, but he was not concerned with Dasein’s specific ethical behavior. Rather than grappling with man's ethical struggle for authenticity, Heidegger remained interested in man essentially as a vehicle to further his ontological inquiry, intent upon removing impediments to man's focus on Being.

In his *Letter on Humanism* (1947) responding to Sartre's *Existentialism Is a Humanism* (1945), Heidegger criticized the humanistic definition of man as a rational animal because it was reason that produced the modern technological society, diminished man to an instrument of productivity, and distracted man from openness to Being. Openness to Being requires a poetic rather than a pragmatic individual, and, therefore, true humanism, for Heidegger, is man's attention to Being, not his quest for authenticity. Despite Heidegger's use of many Kierkegaardean and Nietzschean ideas, therefore, Heidegger considered existentialism's intense focus on individual authenticity a distraction from his overarching concern for Being.

Although their worldviews certainly influenced their approach to human authenticity, existentialists generally prescinded from metaphysics in favor of an ontology of freedom formulated against a meaningless, materialist backdrop. Atheistic existentialists, like Nietzsche and Sartre, urged man to a heroic stance in an indifferent
universe, whereas theistic existentialists, like Kierkegaard and Gabriel Marcel, urged man to respond authentically to a caring Deity. Thus, for Sartre, "Existentialism is nothing else but an attempt to draw the full conclusions from a consistently atheistic position." For Kierkegaard, by contrast, it is the task of becoming a true Christian by holding fast to an "objective uncertainty" with "the most passionate inwardness."

Sartre spent more time than most existentialists developing his ontology, which is similar to Cartesian dualism of mind and matter. Sartre distinguished being-for-itself (consciousness) from being-in-itself (substance), both of which he considered wholly contingent. For Sartre, however, interpreting existence was not a rational inquiry into the essence of reality, but a creative act of individual expression. Sartre says that "man is nothing else but that which he makes of himself." As Barrett explains, "For Sartre, Doing takes precedence over Being, and the will to action becomes the central feature of man." Consequently, Sartre's ontological interest is illustrative of existentialism in general: Sartre's existentialism addressed human authenticity based primarily upon a preconceived and generally un-rationalized cosmology. Existentialism's primary interest was man and not nature, ethics and not cosmology, and, therefore, existentialism never constituted a significant foil to materialist metaphysics. Although the materialist world is deterministic and leaves no room for freedom, existentialists evolved a heroic philosophical stance against this indifferent reality, but without ever confronting materialist metaphysics itself.
Postwar Philosophy and Scientific Materialism

Already under attack before the war, traditional rationalist philosophy now confronted its greatest challenge, that of finding meaning in the fractured postwar reality. The three great European philosophers of the postwar era – Wittgenstein, Husserl, and Heidegger – were ideally positioned to confront this challenge. They all personally experienced the Great War, all held strong views on the role and future of philosophy, all exerted a dominant influence on postwar philosophy, all considered the meaning of reality vitally important, and all thought scientific positivism detrimental or at least inadequate to an understanding of reality.

These giants of postwar Western philosophy, however, thought metaphysics had no future and they abandoned cosmology to the materialists. Given their devotion to a meaningful reality, their philosophic position is stunning. The logical positivists considered verifiable empirical observation the foundation of all knowledge, dismissed metaphysics as nonsense, but embraced a meaningless, materialist reality. Surely, any philosopher convinced that reality has fundamental meaning needs to confront this positivist challenge. In their own ways, Wittgenstein, Husserl, and Heidegger did venture a limited, if inadequate, response, even as they gave up on metaphysics.

Husserl presented the most outspoken critique of positive science and defense of phenomenology, his modified form of rationalism. He worried that the reductionist view of reality to physics and chemistry advanced by the positive sciences was fast becoming the exclusive worldview of postwar modernity – blinding mankind by producing prosperity, precipitating the collapse of rationalist philosophy, and turning
man away from the vital questions "decisive for a genuine humanity." Husserl thought these questions demanded "answers based on rational insights," the Greek spirit of philosophic inquiry, because in this regard "science has nothing to say to us."

Consequently, Husserl tried to restore reason by calling for a "higher humanism," and an international human community, and new moral order. Obviously, Germany ignored Husserl's insistent call and soon precipitated the even more disastrous World War II. Although he died just before that war, Husserl felt the encroaching anti-rationalist forces of Nazism and ultimately despaired of restoring reason: "the dream is over."

Husserl's message was sound but his methodology inadequate. Husserl determined to liberate philosophy from the materialist influence of positivist science by promoting transcendental phenomenology as the science of sciences and the life-world as the pre-scientific mode of experiencing reality. While emphasizing the subjectivity of consciousness, however, Husserl's phenomenology tried to objectify consciousness through empirical analysis. Consequently, Husserl never escaped the false dichotomy between consciousness and existence, subjectivity and reality. Phenomenology bracketed existence to focus upon the objects of consciousness and thereby perpetuated the Cartesian dualism between mind and matter, the very dualism underlying scientific materialism.117 Furthermore, it succumbed to scientism by reducing philosophy to a narrow empiricism and theoretic analysis rather than proceeding through reason’s other fields of meaning to apprehend the truth of reality. Even Husserl's life-world – man's common, pre-reflective mode of accessing reality and finding meaning in daily life – appears but an afterthought. Furthermore, like Wittgenstein's forms of life and
Heidegger’s world of Dasein, Husserl’s life-world seems to relinquish metaphysical inquiry to the common man rather than entrust it to the philosopher.

While Husserl retained a deep commitment to reason’s role in metaphysics, Wittgenstein and Heidegger dismissed it outright: Wittgenstein in his 1921 *Tractatus* and Heidegger in his 1929 lecture “What Is Metaphysics?” They both took their stance against metaphysics, moreover, despite the growing prominence of the materialist worldview, devoid of either transcendental meaning or concern for Being. Wittgenstein surely knew the Vienna Circle was misusing his *Tractatus* for philosophical analysis and his colleague Russell was embracing logical positivism. Similarly, Heidegger knew that science's exclusive focus on the material world of beings was distracting man from his more basic concern for the mystery of Being. Yet they never undertook to critique this materialist cosmology even though it undermined their respective views concerning the importance of the world as a whole and the meaning of Being.

Despite his spiritual epiphany during the war and his subsequent mission to preserve the transcendent and mystical, Wittgenstein remained content throughout his career to argue that philosophical statements about reality constituted nonsense, that language within a form of life provided the source of meaning, and that only art could "show" the mystery of reality. Ironically, his *Tractatus* pictured a materialist world of logical atomism bereft of transcendent and mystical meaning. Wittgenstein must have eventually recognized his unintended metaphysics, especially since the *Tractatus* purported to eliminate all metaphysics. Yet he neither corrected his portrait of this bleak materialist reality nor rebutted scientific materialism itself. Furthermore, Wittgenstein
gave language the role of showing the world as a whole, but he removed much of man's critical intelligence from any meaningful role in criticizing and judging the significance of language's revelations about reality.

That leaves Heidegger, whose phenomenological ontology in *Being and Time* focused on the fundamental existential question, the very meaning of Being. Although Heidegger never wrote his intended sequel on Being itself, he soon thereafter declared metaphysics and all Western philosophy at an end. He positioned Dasein as the sole legitimate metaphysician and urged an entirely new, non-philosophical kind of "thinking." This new thinking, for Heidegger as for Wittgenstein, lay outside the realm of philosophy and inside the realm of poetry and art.

In the end, therefore, Heidegger left the question of Being and Wittgenstein left the mystery of the transcendent in the hands of artists and poets. No doubt the attention and intelligence of poets and artists provide a unique access to essential reality, but man's desire to pursue truth and the meaning of reality requires his full critical intelligence, which also includes criticizing and judging as well as being attentive and intelligent. Western culture should not have to depend exclusively on poets and artists to evaluate and judge the epistemological and metaphysical merits of scientific materialism since traditionally and appropriately philosophy has served this vital role.

As Whitehead argues, philosophy aims to unify and bring coherence to "all departments of rational thought" and to serve as the "constant critic of partial formulations" like scientific materialism. He adds that philosophers seek "to harmonize the ultimate concepts of science with the ideas drawn from a more concrete survey of the whole of
reality."¹¹⁹ In other words, philosophers must consider not only the theoretic analysis of the sciences but also the other fields of meaning afforded by the arts and ordinary experience, and then must critique and judge that broad experiential input in seeking truth about reality. Alas, the war left Europe without such philosophers.

In summary, the Great War sounded the death knell for metaphysics and ended philosophy's engagement with scientific materialism. Europe's leading postwar philosophers, Wittgenstein, Husserl, and Heidegger, lost faith in man's critical intelligence to come to grips with reality as a whole and with the meaning of Being. By abandoning reason, European philosophy effectively has deferred to empirical science as the sole avenue to objective truth and has anointed scientific materialism as the sole arbiter of reality.

As a result, the Great War bequeathed Western man a colorless, odorless, indifferent, material world within which he must try to eke out a meaningful existence. Echoing Husserl's concern about the loss of reason to the positive sciences, Whitehead warned in his 1925 Harvard lectures published as Science and the Modern World that the sciences "with their refusal to rationalize below some ultimate mechanism" have "pushed philosophy out of the effective currents of modern life."¹²⁰ The sciences succeeded in doing so because postwar Western philosophy lost faith in reason, one of the many great tragedies of the Great War.
CHAPTER 6

POSTWAR WESTERN LITERATURE

If people bring so much courage to this world the world has to kill them to break them, so of course it kills them. The world would break everyone and afterward many are strong at the broken places. But those that will not break it kills. It kills the very good and very gentle and very brave impartially. If you are none of these you can be sure it will kill you to but there will be no special hurry.

– Ernest Hemingway, A Farewell to Arms (1929)\textsuperscript{1}

Here was a new generation, . . . grown up to find all Gods dead, all wars fought, all faiths in man shaken. . . .

– F. Scott Fitzgerald, This Side of Paradise (1920)\textsuperscript{2}

A sense of loss, betrayal, and estrangement reverberates throughout the important wartime and postwar literature of all the major combatant nations. Henri Barbusse’s narrator in Under Fire (1916) rails at the "truly unpardonable division" in France between the victimized common soldiers and those back home who caused and profited from the senseless war.\textsuperscript{3} Paul Bäumer feels emotionally detached from everyone and everything in Germany during home leave, in Erich Maria Remarque's All Quiet on the Western Front (1929). Bäumer longs for the Front simply to rejoin his comrades, who are "weary, broken, burnt out, rootless, and without hope."\textsuperscript{4} Robert Graves wrote his war memoir Good-Bye to All That (1929) as a "bitter leave-taking of England," which "looked strange to us returned soldiers," where "civilians talked a foreign language," and where he found serious conversation even with his parents "all but impossible."\textsuperscript{5} After fighting in all the major American campaigns, Harold Krebs returns to Oklahoma, in Ernest Hemingway's "Soldiers Home" (1925), to find his family and community acting as if the war had never happened. Krebs becomes disillusioned,
withdrawn, and resentful of society's lack of support, sympathy, and respect for his wartime service.⁶

Ezra Pound’s *Hugh Selwyn Mauberley* (1920) typifies much of the war literature considered in Chapter 3. Young men went to war "believing in old men's lies," they "walked eye-deep in hell," left behind "a myriad" and "of the best, among them," and returned "home to old lies and new infamy" – all for "a botched civilization."⁷ As a consequence, the returning soldier "was forced into himself, was shocked into a painful suspicion of the words and acts of others; he retreated into embarrassed silence and suspicious disapproval when he encountered any public display of formal emotion or belief." English professor Frederick J. Hoffman so described the American experience and "what was left was the isolated person, who had in almost every case to start anew."⁸ Samuel Hynes painted a similar portrait of the disaffected British war veteran. Picking up the same theme, postwar 20th-century literature is the chronicle of man's alienation from society and the cosmos and of man's "going inward."⁹

Franklin Baumer labeled this postwar phenomenon "subjectivism" and identified its three distinct characteristics as (1) epistemological despair, (2) relativism or behaviorism, and (3) self-deprecation.¹⁰ Epistemological despair means "despair of ever finding out who 'man' is," of ever unraveling his genuine self, his true underlying identity.¹¹ Whereas the hero of the 19th-century novel would "stand out" as "unforgettable," French Novelist Nathalie Sarraute pointed out in her essay "The Age of Suspicion" (1950) that the principal character of the modern novel seems "to vacillate and fall apart," and to lose "that most precious of all possessions, his personality –
which belonged to him alone – and frequently, even his name.\textsuperscript{12} Twentieth century authors and readers alike no longer believed in these characters, who "now become the converging point of their mutual distrust." Sarraute attributed this state of modern literature to "the infinitely profuse growth of the psychological world and the vast, as yet almost unexplored regions of the unconscious."\textsuperscript{13}

In his \textit{Introductory Lectures on Psychoanalysis} (1916), Sigmund Freud (1856-1939) questioned man's rational autonomy, declaring "that mental processes are in themselves unconscious and that of all mental life it is only certain individual acts and portions that are conscious."\textsuperscript{14} In \textit{Civilization and Its Discontents} (1929), Freud also questioned man's rational control of his hostile instincts, declaring that "civilized society is perpetually threatened with disintegration. The interest of working in common would not hold it together; instinctual passions are stronger than reasonable interests."\textsuperscript{15} An avalanche of postwar literature focused upon man himself, his existential fate and his troublesome psyche, with Freudian psychology striking the greatest blow to man's classical image. After Copernicus, man was no longer the center of the universe, and after Darwin, man was no longer different from the ape, but after Freud, man was no longer master of his own mind.

The second characteristic, distinct from but related to epistemological despair, is relativism or behaviorism – man's complete lack of any fixed human nature, his "infinite plasticity." Outside influences – time, place, culture, society, education, and environment – completely shape modern man's whole personality.\textsuperscript{16} In \textit{Brave New World} (1932), for example, Aldous Huxley gives a chilling description of the Central
London Hatchery and Conditioning Center which breeds people like robots for particular roles and societal castes. The Center’s Director proudly describes this behavioral conditioning process as "one of the major instruments of social stability!"\(^{17}\)

The third characteristic, self-deprecation, is man's thinking ill of himself and his prospects because he feels insignificant, powerless, and inherently evil. Baumer illustrated this wholesale unraveling of man's classical image by contrasting two works by the English philosopher and broadcast personality C. E. M. Joad: his autobiography *Under the Fifth Rib* (1933) and his *Guide to Modern Wickedness* (1939). Joad's autobiography describes the transition from his prewar confidence in human rationality and perfectibility while studying at Oxford to his subsequent postwar disillusionment in the latter work, in which he declared that "man's true enemy is within himself; it lies in the strength of his own uncontrolled passions and appetites."\(^{18}\) In short, postwar literature descended into the mysterious and troubling world of man's own psyche, leaving behind the prewar cosmic questions about the death of God and turning instead to the postwar existential questions about "the death of Man."\(^{19}\)

This subjectivist strain dominates postwar writing and accompanies the postwar loss of belief in the transcendent, described in Chapter 4 on theology. By focusing inward upon man, postwar literature, including expository as well as fictional writing, largely disengaged from questions about cosmic meaning and purpose.\(^{20}\) Instead, as illustrated below in the exemplary literary genre of British, American, and European postwar novels, this literature essentially accepted the condition of cosmic alienation. Consequently, postwar Western literature interposed little opposition to materialist
metaphysics. Furthermore, in the postwar decade hundreds of new books appeared extolling the gifts of science, which only reinforced the growing postwar conviction in scientism.

One of these books was Harold Stearns' *Civilization in the United States* (1922), which Hoffman called "a historical landmark in the post-World War I years." Stearns' book is a compilation of articles by various contributors such as the American journalist and critic H. L. Mencken and American literary critic, biographer, and historian Van Wyck Brooks. According to Hoffman, *Civilization in the United States* is "a curious document of disaffection, pointing to and reiterating the failure of culture, entertainment, family life, religion – of everything but science, and even it scored only partial success in the survey of American life and institutions."22

In short, science emerged from the war's cultural devastation relatively unscathed, due primarily to its continuing gifts to man's knowledge, technology, and power. With science's position relatively secure, writing about science often took aim at the rest of Western culture, including the role and value of literature, especially with respect to literature addressing belief in the transcendent and meaning and purpose in reality. Before considering postwar fiction itself, this chapter looks at some important critical writing about the implications of modern science for postwar literature.

*Modern Science and the Role of Postwar Literature*

Two works stand out, for Hoffman, as pertinent to the postwar attitude toward science: "A Free Man's Worship" (1903, 1917) by the British philosopher Bertrand
Russell, and *The Modern Temper* (1929) by the American critic and journalist Joseph Wood Krutch. Russell espoused a scientific perspective on the modern world, and Krutch lamented science’s adverse effect on belief and aesthetics. In the following passage from his essay "A Free Man's Worship," Russell eloquently described the purposeless universe, devoid of meaning, which science gave man and man must accept:

That man is the product of causes which had no prevision of the end they were achieving; that his origin, his growth, his hopes and fears, his loves and his beliefs, are but the outcome of accidental collocations of atoms; that no fire, no heroism, no intensity of thoughts and feelings, can preserve an individual life beyond the grave; that all the labors of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius, are destined to extinction in the vast death of the solar system, and that the whole temple of man's achievement must inevitably be buried beneath the debris of a universe in ruins – all these things, if not quite beyond dispute, are yet so nearly certain, that no philosophy which rejects them can hope to stand. Only within the scaffolding of these truths, only on the firm foundation of unyielding despair, can the soul's habitation henceforth be safely built.\(^2^3\)

To maintain human dignity within the indifferent cosmos bequeathed by science, Russell advocated the following naturalist philosophy:

\ldots disdaining the coward terrors of the slave of Fate, to worship at the shrine that his own hands have built; undismayed by the empire of chance, to preserve a mind free from the wanton tyranny that rules his outward fate; proudly defiant of the irresistible forces that tolerate, for a moment, his knowledge and his condemnation, to sustain alone, a weary but unyielding Atlas, the world that his own ideals have fashioned despite the trampling march of unconscious power.\(^2^4\)

In short, man must rationally endeavor to improve the human lot in life, while simultaneously accepting his dismal fate in a meaningless world.

In Russell's naturalist philosophy, constructive use of science and human intelligence can better the human condition: "It is science, ultimately, that makes our
age different, for good or evil, from the ages that have gone before. And science, whatever harm it may cause by the way, is capable of bringing mankind ultimately to a far happier condition than any that has been known in the past."25 In *What I Believe* (1925), Russell rejected religious notions of good and evil as unscientific and also rejected cosmic philosophies, whether optimistic or pessimistic, because they arise from "the same naïve humanism: the great world, so far as we know it from the philosophy of nature, is neither good nor bad, and is not concerned to make us either happy or unhappy. All such philosophies spring from self-importance, and are best corrected by a little astronomy."26

Whereas Russell confronted the indifferent world with ultimate faith in the promise of science, Krutch mourned the lost world of faith and reason taken from man by science. In *The Modern Temper* (1929), Krutch reflected on science’s dire implications for man's prewar world of poetry, mythology, and religion:

Formerly he had believed in even his darkest moments that the universe was rational if he could only grasp its rationality, but gradually he comes to suspect that rationality is an attribute of himself alone and that there is no reason to suppose that his own life has any more meaning than the life of the humblest insect that crawls from one annihilation to another.27

Gradually over the prior centuries, science has eroded God's control of the universe and man's convictions about its meaning and purpose, leaving man stripped of his stabilizing beliefs and lodged in an alien environment:

His teleological concepts molded [his world] into a form which you could appreciate and he gave to it moral laws which would make it meaningful, but step-by-step the outlines of nature have thrust themselves upon him, and for the dream which he made is substituted a reality devoid of any pattern which you can understand.28
Among the several kinds of stabilizing beliefs that science has destroyed, Krutch identified the following four. First, science has disproved or at least seriously questioned the value of humanism in resolving the conflict between thought and feeling, leaving science alone as a potential source of human happiness ("Science has always promised two things not necessarily related – an increase first in our powers, second in our happiness or wisdom, and we have come to realize that it is the first and less important of the two promises which it has kept most abundantly"). 29 Second, love has lost the promise of happiness as science has removed the mystery of sex ("if love is coming to be less often a sin, it has come also to be less often the supreme privilege," and, instead, has become "gradually so accessible, so unmysterious, and so free that its value is trivial"). 30

Third, literature no longer can achieve real tragedy because tragedy requires a genuine belief in man's nobility and potential heroism ("We can no longer tell tales of the fall of noble men because we do not believe that noble man exists." "Our cosmos may be farcical or it may be prophetic, but it has not the dignity of tragedy and we cannot accept it as such"). 31 And fourth, aesthetic principles provide no relief – "though the human mind may be made to work in accordance with them, external nature will not, and the ultimate dilemma may be stated thus: the proposition that life is a science is intellectually indefensible; the proposition that life is an art is pragmatically impossible." 32
Krutch concluded his long lamentation by observing that scientific materialism has taken "possession of each field of human speculation as soon as a connection had been established" and, further, that materialism and science have converged to expose metaphysical certitudes as mere phantoms. Science has unmasked metaphysics as an art pretending to be a science, and "metaphysics, which promised so much, thus ends by confirming the very despair which it set out to combat." Despite his dejection concerning "the tyranny which scientific thought has come to exercise over the human spirit," Krutch notes that "we know at least that we have discovered the trick which has been played on us and that whatever else may be we are no longer dupes." Thus, Krutch finds this one purportedly positive outcome of science's systematic destruction of the prewar belief systems – we can now understand and consciously accept our dire fate.

With science offering the one clear road to truth, however dismal that truth may be, the very role of literature was called into question, and Krutch was only one among these questioners. In The Literary Mind: Its Place in an Age of Science (1931), Max Eastman, an American journalist and critic, suggested that science is the inevitable successor to literature in interpreting experience:

Literature, then as a thing distinct from science, may be a pure communication of experience; it may interpret experience in spheres as yet untouched by science; it may offer interpretations as intellectual things to be enjoyed without a tense regard to their validity. . . . To which we must add that in these spirited activities, serious and yet set free from the tether of verification, new ideas and suggestions of infinite value to science may be born.
Literature may open up avenues for scientific exploration but literature must give way once science has given answer: "Poetry is compelled by its very nature to yield up to science the task of interpreting experience, of finding out what we call truth, of giving men reliable guidance in the conduct of their lives."\textsuperscript{37}

The British psychologist and critic I. A. Richards, who taught poetry at Cambridge University and whose \textit{Principles of Literary Criticism} (1924) profoundly influenced the modern poetic, maintained that science appeals to the intellect whereas poetry appeals to man's attitudes and emotional interests:

\begin{quote}
In its use of words poetry is just the reverse of science. Very definite thoughts do occur, but not because the words are chosen as logically to bar out all possibilities but one. No. But because the manner, the tone of voice, the cadence and the rhythm play upon our interests and make \textit{them} pick out from among the indefinite number of possibilities the precise particular thought which they need.\textsuperscript{38}
\end{quote}

Whereas poetry and belief were historically linked, modern science has challenged traditional beliefs as unverifiable pseudo-statements and left poetry a purely human focus:

\begin{quote}
Countless pseudo-statements – about God, about the universe, about human nature, the relations of mind to mind, about the soul, its rank and destiny – pseudo-statements which are pivotal points in the organization of the mind, vital to its well-being, have suddenly become, for sincere, honest, and informed minds, impossible to believe. For centuries they have been believed; now they are gone, irrevocably; and the knowledge which has killed them is not a kind upon which an equally firm organization of the mind can be based.\textsuperscript{39}
\end{quote}

Modern science has neutralized nature, rendered spiritual notions of the universe "probably nonsense," and prompted Richards to value highly the poetry of Thomas Hardy for it honest confrontation of an indifferent, materialist universe.\textsuperscript{40} Because
science has exposed belief systems to which poetry previously was linked as pseudo-statements, poetry hereafter, for Richards, serves a different role. Poetry can enrich life, enhance the human personality, and ultimately save us from despair: "it is a perfectly possible means of overcoming chaos."41

While some bemoaned literature's diminution by science, other writers considered science even more comforting than literature. In an article in the *New Republic* (January 26, 1927), the American novelist, poet, and critic Edmund Wilson found science "not abject, but, just at present, particularly heroic. . . . In the last century it was often literature which magnified humanity and almost invariably science which made us feel insignificant. Today, the situation seems reversed: it is science which restores us to importance and fiction and poetry which often make us feel like worms."42

Even from this brief sampling it is apparent that respected essayists considered science to support a meaningless, materialist cosmos and also to pose a serious postwar challenge to the role and value of fictional literature because of the latter's historical alignment with a meaningful and purposeful cosmos. Could postwar fiction create genuine tragedy in a world lacking human dignity and ultimate meaning? Was fiction only a temporary reprieve from existential despair, and could it provide any genuine comfort from cosmic indifference?

Not everyone, of course, accepted science as the sole road to truth, as Hoffman
points out:

Other critics refused to believe that science had so fully usurped all significant fields of knowledge, or had reduced the problem of truth to such an unyielding criterion as "verifiability." They also suggested that scientists were not nearly so convinced of their reading of the universe as they were alleged to be. . . . The arts are not philosophy or sociology, and they should not pretend to be; as arts they may (and should) in their special ways communicate significant truths either ignored or disparaged by science.43

The response to science from a religious perspective ran the full gamut from return to religious fundamentalism, to religion based on science, to provisional religious beliefs pending new scientific discoveries, to complete separation of religious and scientific thought.

In *God without Thunder* (1930), John Crowe Ransom, the American poet and critic, aligned himself with the religious fundamentalists against the modernists and argued that science's refusal to accept myth discards much of human thought and experience.44 The Harvard geologist Kirtley F. Mather argued on behalf of a non-traditional religion "based on facts and experiences, a religion developed by rigidly scientific methods of thought."45 William Pepperell Montague, philosophy professor at Columbia University, proposed a new religion without sacrosanct authority: "Such dogmas as remain, and there would be many, would be transformed into hypotheses. The most fantastic theory of the supernatural, if held as a hypothesis, is honorable, and belief in it is honest and to be expected."46

At the other end of the spectrum, Herbert Croly, the American journalist and founder of the *New Republic*, claimed that science's "achievements have only intensified that moral chaos, of which the war with its barren victory, its peace without
appeasement, and the ominous Bolshevist menace, are different but closely connected expressions." For Croly, science's imperative must include reconciliation with religion: "Scientific inquiry must posit the existence of the world which the human mind is capable, after a fashion, of understanding. The religious life must posit the existence of a world in which human purposes can, after a fashion, get themselves realized."[^47]

In summary, a large body of critical literature of the postwar era sought various ways of coping with the dominant influence of modern science, ranging from Russell's courageous acceptance of the godless universe that science had revealed, at one extreme, to Ransom's bold reaffirmation of the fundamentalist religion, at the other, and much in between. The great difficulty for many writers, as Hoffman explains, was finding meaning in a universe defined by science and devoid of the transcendent:

> The tragedy for many of these men and women was that there could scarcely be a tragic or heroic act without a structure of myth and an acceptable mode of belief within it. This was a genuine dilemma; symbolically it might be considered the condition of the spiritual wasteland. The agony of the spiritual quest in a world that regarded spiritual matters with indifference was one of the most profound emotional experiences of the 1920s.[^48]

Modern science engendered defensiveness among essayists about the continuing role and value not only of religious beliefs but also of literature itself because of its historical link to such beliefs. With that perspective, this thesis turns to some of the important fictional works of the immediate postwar era, concentrating on British, American, and European novels as a representative genre.

Modernism and the British War Novel

The term Modernism generally refers to an international aesthetic movement toward distinctively new forms and concepts of literature and the other arts that began in the 1890s and reached its high watermark the decade immediately following World War I. According to English professor R. B. Kershner, Modernism began in the decades just before the war "as a series of ceaseless avant-garde experiments that constituted an attack on tradition and in some ways on art itself." Modernism advocated both new subjects and new artistic forms in general adherence to Ezra Pound's dictum: "Make it new." New novelistic forms included unusual, sometimes unreliable, and even multiple narrators, including the stream of consciousness narration. Among the modernists were T.S. Eliot and Ezra Pound, D. H. Lawrence and Virginia Woolf, William Butler Yeats and James Joyce, and Ernest Hemingway and F. Scott Fitzgerald.

The 19th century novel that preceded the modernist movement is generally associated with the rise of realism and described as "representing complex characters with mixed motives who are rooted in a social class, operate in a developed social structure, interact with many other characters, and undergo plausible, everyday modes of experience." Realism depicted a relatively stable, if often troubled, world, as illustrated by some exemplary 19th-century novels. Jane Austen (1775-1817) revealed characters primarily through their own words; she used marriage is a metaphor for social and political revitalization; and she emphasized a traditional value system with her typical comedic endings, as in Emma (1816). Charles Dickens (1812-1870)
addressed social issues, as in *Hard Times* (1854), which depicted the harsh working conditions in England's industrial communities and the moral hypocrisy among wealthy factory managers in fictional Coketown.

In France, Gustave Flaubert (1821-1880) emphasized art over morality in *Madam Bovary* (1857), searching for the right word, style, and structure in the story of an otherwise intellectually undistinguished bourgeois adulteress. Emile Zola (1845-1902) applied his journalistic technique in novels like *Gerimal* (1885), written expressly to show the French miner as "crushed, starving, a victim of ignorance, suffering with his children in a hell on earth... a victim of the facts of existence – capital, competition, industrial crises...." In the same genre, but representing a multinational critique, Joseph Conrad (1857-1924) exposed the hypocrisy of the civilizing ideals underlying European imperialism in *Heart of Darkness* (1902).

Virginia Woolf claimed that "on or about December, 1910, human character changed," referring to the exhibition of postimpressionist paintings presented in London by her friend Roger Fry. Woolf's larger point was that artistic distortions and exaggerations, like those that appear in the exhibition paintings by Cézanne, Van Gogh, Gauguin, and Duchamp, present a greater and more compelling truth than the exact representation of external reality in traditional art. The modernist novel represents this change, exemplified in the transition from the confident, omniscient narrator of 19th century works by Austen, Dickens, Flaubert, and Zola to the ironic, vague, impressionistic narration by Charlie Marlow in Conrad's *Heart of Darkness*.55
In "Modern Fiction" (1925), Virginia Woolf argued that "life or spirit, truth or reality" no longer lie in the 19th century novelistic conventions because ideally "there would be no plot, no comedy, no tragedy, no love interest or catastrophe in the accepted style." Instead, the modernist novel would look within to "examine for a moment an ordinary mind on an ordinary day" during which it "receives a myriad of impressions – trivial, fantastic, evanescent, or engraved with the sharpness of steel." Life, she asserted, "is not a series of gigs-lamps symmetrically arranged; life is a luminous halo, a semi-transparent envelope surrounding us from the beginning of consciousness to the end." For Woolf, therefore, life involves "atoms as they fall upon the mind in the order in which they fall . . . however disconnected and incoherent in appearance" because, for the modern novelist, the point of interest "lies very likely in the dark places of psychology." For Woolf, therefore, life involves "atomic as they fall upon the mind in the order in which they fall . . . however disconnected and incoherent in appearance" because, for the modern novelist, the point of interest "lies very likely in the dark places of psychology."  

While novelists like Conrad and poets like Pound and Eliot were already doing substantially modernist work before the war, and while Woolf considers 1910 a turning point for Modernism, many others see the war as "the decisive break," according to Kershner:

. . . the massive disenchantment with sentimental patriotism generalized itself in a feeling of rejection of the older generation's entire set of values. It seemed to many that an art expressing a new sensibility and new values would have to reject conventional forms. Certainly there was a strong linkage between rejection of the war and aesthetic experimentation. James Joyce both by personal conviction and as an Irishman was a noncombatant. Many artists and intellectuals among Virginia Woolf's Bloomsbury group were pacifists, as was D. H. Lawrence. . . .
Whether the war was its initiator or merely its accelerator, Modernism flourished in the
decade of the 20s, hastening its freighted postwar journey into "the dark places of
psychology."59

Among the important British postwar novels inspired by the war and not already
cONSidered in Chapter 3 are Virginia Woolf's Mrs. Dalloway (1925) and Ford Maddox
Ford's Parade's End (1924-28). Woolf sets Mrs. Dalloway in London's governing
district of Westminster on a single day in the middle of June 1923, when Mrs. Clarissa
Dalloway, "the perfect hostess," plans a party for England's ruling elite.60 Mrs.
Dalloway concerns war's continuing psychological damage in a society that ignores its
war victims while attempting to return to normalcy. Although almost 4 years have
passed since the Treaty of Versailles (June 28, 1919), war and death haunt this novel
and hover over London society's glitter and flutter.61

From each character's center of consciousness, Woolf explores postwar reality
by juxtaposing a politician's wife with a survivor's guilt.62 Septimus Smith, his wife
Rezia, and Doris Kilman live daily with the war's consequences, whereas Peter Walsh,
Clarissa Dalloway, and the prominent politicians at Clarissa's party, including the Prime
Minister, ignore society's ongoing responsibility for the postwar condition.63 It is not the
defered effects of shell shock, as Dr. Bradshaw opines, but society's indifference that is
the proximate cause of Septimus's suicide. In a terrible irony, Peter Walsh hears the
ambulance that removes Septimus's mangled body and thinks only of the ambulance as
"one of the triumphs of civilization."64 In her June 29, 1920, diary entry Virginia Woolf
wrote: "Our generation is daily scourged by the bloody war."65
Roger Poole considers *Mrs. Dalloway* one of the finest war novels because of its uniquely "empathetic reconstitution of a mind thrown off balance by the experiences of sheer horror" – Septimus Smith's "internalized, inexpressible, incommunicable" fate.\(^66\) Wilfred Owen memorialized this very condition in his poem "Mental Cases" (1918):

> These are the men whose minds the Dead have ravished.  
> Memory fingers in their hair of murders,  
> Multitudinous murders they once witnessed.\(^67\)

Woolf emphasized that society has no sympathy for madness: "Once you stumble, Septimus wrote on the back of a postcard, human nature is on you. . . . So he was deserted."\(^68\) In a sense, Septimus Smith is Everyman, suffering from what Poole calls "the burden of the incommunicable" – a random shell missed him and killed his friend and lover Evans just before the Armistice; so, "if Evans can die like that, then we all can die like that."\(^69\) As Septimus remarks, "it might be possible that the world itself is without meaning."\(^70\)

Ford's *Parade's End* (1924-28) is a tetralogy without battle scenes, a tragedy without resolution, and a love story without lovemaking; its focus is historical change viewed through the eyes of the anachronistic Christopher Tietjens, the last English Tory.\(^71\) A large, untidy, 26-year-old Yorkshire gentleman, "an eighteenth-century figure of the Dr. Johnson type," Tietjens is a throwback to the English gentry before the middle-class built the British Empire, closer to the Jane Austen era that D. H. Lawrence admired. Staunchly noble, morally correct, socially humane, and classically educated, Tietjens resides in, but is not of, the greedy, venal, and unprincipled Edwardian society undergoing disintegration and unwittingly teetering on the brink of ruin.\(^72\) Despite,
indeed because of, his inherent goodness, Tietjens is endlessly persecuted, betrayed, and 
disparaged by everyone closest to him, including his wife Sylvia and his close friend 
Macmaster.\textsuperscript{73}

\textit{Some Do Not} . . , the first novel in the tetralogy, opens prewar in the oft-cited 
scene of Tietjens and Macmaster traveling in a well appointed railway car, part of the 
English official class that "administered the world."\textsuperscript{74} After predicting the 1914 
European conflagration "with financial statistics as to the approaching bankruptcy of 
various European powers and the growing acquisitive skill and rapacity of the 
inhabitants of Great Britain," Tietjens goes to war, gets injured, and returns home to 
recuperate. An exploding bomb dropped by a German airplane has caused Tietjens' 
amnesia and speech loss, and he is rebuilding his mind by reading the \textit{Encyclopaedia 
Britannica}.\textsuperscript{75}

The middle two novels, \textit{No More Parades} and \textit{A Man Could Stand Up}, show 
Tietjens's continuing psychological stress, while performing admirably as an Army 
captain in charge of replacements and, subsequently, as a front-line commander.\textsuperscript{76} He 
copes with dire and tragic personnel issues: Lieutenant McKechnie, a classical scholar 
and brave officer who has gone mad; O Nine Morgan, a Welch private who dies in his 
arms, killed by the shrapnel from a German "candlestick" bomb; a self-interested 
quartermaster who denies necessary supplies that jeopardize Tietjens' troops, simply to 
look good for promotion. Despite his competence and compassion as an officer, 
Tietjens is unappreciated and mistreated by his superiors and wrongly disparaged as a 
socialist and French spy. \textit{The Last Post} ends the tetralogy with Tietjens living in a
country cottage, surviving as an antiques dealer, and selling English antiquities to wealthy Americans.

Samuel Hynes applauds Parade's End as a masterly presentation of "the whole historical myth – the war-before-the-war, the gap of the war itself, and the war-after-the-war – in one intelligible story, and in a form that is appropriate to the Myths: a fragmented, elliptical, difficult form." Parade's End exposes the unreliable values and unstable world of Edwardian England that led to war and left Britain after the war with an uncertain and unpromising future. Recalling the band's playing Land of Hope and Glory and the adjutant's saying There will be no more parades upon disbanding a Kitchener Battalion in 1914, Tietjens sees the whole march of Western civilization coming to a halt: "No more Hope, no more Glory, no more parades for you and me anymore. Nor for the country… Nor for the world, I daresay. . . ."

Referring in the final book to Tietjens' and his dying brother Mark's reconciliation to the coming end of the Tietjens dynasty, Robbie Macauley writes:

Both their strength and their failure lie in the fact that they have been true to something in the world where no one is truly anything. They are an anachronism and, as an anachronism, must disappear. It is inevitable that one theory of Truth, one systematic idea of how man may lead a 'good' life, will be swallowed up in a world of Untruth, but that is according to history's law – not its equity.

Because Tietjens consistently forgives his tormentors during his long martyrdom from persecution by his wife, his friends, his military superiors, and his civilian leadership, Bernard Bergonzi calls Tietjens "an Anglican saint." Bergonzi salutes Parade's End for its profound treatment of key themes in British literature of the Great War: "the suppression of the Hero as a tangible ideal; a nostalgic love of rural England, combined
with an anguished sense that centuries of English tradition were being overthrown; the alienation of the soldier from the civilians."

Woolf and Ford convey a profound sense of a lost civilization – the 18th-century Tory world of Jane Austen where the British Empire assured universal stability, moral balance, and civic propriety. The war radically upset such stability, balance, and propriety: for Woolf, by fostering a moral indifference to the consequences of that horrific catastrophe and by leaving war victims like Septimus Smith to struggle alone with the terrible burden of personal loss; and, for Ford, by fostering the venal culture of Edwardian England that persecutes, betrays, and marginalizes people of integrity like Tietjens. Hoffman writes that "no American literature of the 1920s came quite so close to the heart of the cultural issue that Ford's tetralogy so brilliantly documents." This sense of lost civilization left individuals like Clarissa Dalloway and Christopher Tietjens isolated in the postwar world, even in the midst civic bustle. Talk of death intrudes into Clarissa's party, and the Tietjens dynasty is dying out. Both Woolf and Ford portray a cultural devolution and, along with Septimus Smith, raise the new possibility "that the world itself is without meaning."

American Novels of the Great War

Because America had not wanted to enter the war and only launched its first all-American offensive in September 1917, more than three years after the war began, many of the young American writers volunteered for the American Ambulance Service: E.E. Cummings and John Dos Passos with the Norton-Harjes in France, and Ernest
Hemingway with the Red Cross ambulance section in Italy. They had volunteered for personal reasons to experience and test themselves in a world crisis rather than for patriotic reasons to defend country and tradition. For example, when the English nurse Catherine Barkley questions the American Frederick Henry in *A Farewell to Arms* about why he volunteered for the Italian ambulance corps, Frederick answers, "I don't know. There isn't always an explanation for everything." These American quests for dangerous adventure, however, often ended in real personal trauma: for Hemingway, a near-death experience in Italy on July 8, 1918, from 238 fragments of a mortar shell; and for E.E. Cummings, a false imprisonment from August 1917 to January 11, 1918, in a ghastly French prison.

For participating Americans, World War I was strange because it was "an affair they were not quite genuinely committed to sharing," according to Hoffman. Consequently, their wounds were "personally suffered and not in any way to be interpreted as a contribution to the cause." Rather, their injuries provoked a sense of personal violation:

The shock was immediate and for a long time irremediable. Danger, violence, battle chaos, death, were in every case disassociated from both geography and culture. The postwar American was almost abnormally sensitive to a form of experience that may best be described by the term "violation," a term that indicates what happened to their sense of dignity and security as a result of the events that had little or nothing to do with them.

By contrast, Hoffman finds few English writers who "had a comparable feeling of outrage."
Four important American novelists wrestled with the effect of the war: E.E. Cummings, John Dos Passos, Ernest Hemingway, and F. Scott Fitzgerald. In the autobiographical novel, *The Enormous Room* (1922), E. E. Cummings (1894-1962) described his arrest and four-month imprisonment along with his friend and coworker William Slater Brown on trumped up charges of "treasonable correspondence" growing out of their fraternizing with the poilu.\(^8\) The novel re-creates their Dante-esque descent into the hell of La Ferté Macé prison in Orne, 100 miles west of Paris. The prison is a bedlam of "weird cries, oaths, laughter. . . by at least 30 voices in 11 languages," which left Cummings "trembling with this chaos" and feeling he had "gone completely crazy."\(^9\)

La Ferté Macé is a triage camp housing men of various nationalities suspected of espionage, women prostitutes found in the restricted Army Zone, and prisoners' wives incarcerated voluntarily to be with their husbands – all awaiting a Commission's quarterly determination of their guilt or innocence. With remarkable grace these endearingly portrayed inmates endure questionable arrests on mostly spurious and often nonexistent charges, indefinite incarceration in grossly squalid conditions, and brutal mistreatment under the cruel administration of Prison Director Apollyon. *The Enormous Room* celebrates these abused prisoners as "the finest people," chronicles Cummings's own spiritual growth under hellacious conditions, and excoriates the prison bureaucracy and French civilization responsible for such depravity.\(^9\)

John Dos Passos (1896-1970) considered military life "slavery" and "an enormous, tragic digression in people's lives which brought death to the intellect, to art,
His novel, *Three Soldiers* (1921), dramatizes his viewpoint by showing the damaging effect of the military machine on three young enlisted men with different geographic, ethnic, socioeconomic, and educational backgrounds. The central figure among the three is John Andrews, a 22-year-old Harvard-educated musician and composer. While washing windows stateside, Andrews mentally orchestrates the monotonous rhythms of the Army training routine and viscerally recoils at the "blind hatred stirring" among men after attending an anti-German indoctrination film.

Following the Armistice and still on active duty in France, Andrews is apprehended, handcuffed, and beaten by MPs for lacking his required military pass and failing to salute a superior officer. The book ends with Andrews being placed under arrest as a deserter facing 20 years to life imprisonment, while sheet music from his uncompleted composition about John Brown, "a madman who wanted to free people," blows page by page over his apartment floor. Of John Andrews, Humanities Professor Claudia Matherly Stoltz writes: "No glory, no heroism of the type one associates with war novels, but a man presented as a hero nonetheless because he is courageous enough to make a stand for and to pay the consequences of his individual beliefs."

Ernest Hemingway (1899-1961) wrote three books about the Great War: a collection of short stories, *In Our Time* (1925), and two novels, *The Sun Also Rises* (1926) and *A Farewell to Arms* (1929). As revised for republication in 1930, *In Our Time* contains 16 epiphanic short stories and 16 italicized prose poems (Chapters). It opens with the short story "On the Quai at Smyrna" about traumatized Greek refugees
escaping the pain of the brutal Greco-Turkish War, and closes with the italicized (but unnumbered) prose poem "L'Envoi" about the deposed Greek king responsible for his nation's postwar chaos.97 Organized like an autobiographical novel, In Our Time contains scenes depicting personal maturation through the experience of war and death.98

The prose poems or Chapters begin (as they end) with scenes from World War I and the Greco-Turkish War, shift to bullfighting and then to violence and death in America. Its centerpiece is the prose poem about Nick Adams and his friend Rinaldi, both seriously wounded in the Italian campaign and making "a separate peace." The short stories center on Nick Adams as a young man growing up in America, as a soldier in the crucible of war, as a spouse in a failing marriage, and as a traumatized veteran in search of a new existential code.99 The eight short stories and single prose poem about Nick Adams anchor In Our Time, but the book adds characters and scenes to broaden the implications of Hemingway's major themes: the brutality of war, the hypocrisy of the era, and the need for stoic personalized values.

A Farewell to Arms portrays two characters disillusioned by the capricious chaos of the Great War, Frederick Henry and Catherine Barkley. They discover love as a religious experience that gives meaning to their lives. After her fiancé is blown to bits on the Somme, Catherine teaches Frederick the world's absurdity and turns their relationship into her religion.100 Frederick reciprocates her love after two near-death experiences from an exploding shell on the Alpine Front and from a murderous Italian Peace Brigade.101 Thereafter, the two lovers think of themselves as "the same one," and
briefly enjoy the "religious feeling" of love before Catherine's death in an absurd world.

Escaping to Edenic Switzerland, they live on borrowed time because they know the absurd world "kills the very good and very gentle and very brave impartially." Reflecting on the meaningless carnage during Italy's "white war," Frederick concludes that "abstract words such as glory, honor, courage, or hallow are obscene," and Catherine despairs before her death in childbirth that "they just keep it up until they break you." 

Though written before A Farewell to Arms, The Sun Also Rises is its logical sequel, focusing on the "lost generation" of postwar American expatriates in Paris. Primary among them is Jake Barnes, the quintessential Hemingway hero: knowledgeable, wounded, vulnerable, and brave. In love with Brett Ashley but unable to consummate their relationship because of his war wound, Jake is "hard-boiled about everything in the daytime, but at night it is another thing." He tries to live by his code of conduct to give meaning to his life, stoically enduring the trauma of his war injury with dignity and courage: "All I wanted to know is how to live in it. Maybe if you found out how to live in it you learned from that what it was all about." By contrast, Jake's antagonist Robert Cohn is not "one of us," but instead is an outsider who behaves badly: sleeping with Brett, intruding on Jake's fishing trip, and fighting with Jake and the bullfighter Pedro Romero. Whereas Jake embodies the Hemingway code of stoic endurance, Cohn violates it repeatedly.

Jake's fishing trip in Burguete, Spain, celebrates not just camaraderie with Bill Gorton and Bill Harris, but also the ritualistic, spiritually healing rite of fishing. Like
Nick Adams in "Big Two-Hearted River" from *In Our Time*, Jake also recuperates from loss, suffering, and death in the Great War. By contrast with hedonistic France, Spain represents community and values. Jake's visit to the monastery of Roncesvalles (made famous in the *Song of Roland*) and his sharing bread and wine with the Basques en route to Pamplona have a sacramental quality. In addition, Jake is the lone bullfighting "aficionado" on the Spanish trip, sharing with the hotel owner Montoya a spiritual passion for bullfighting, that ritualistic confrontation with death.¹⁰⁷ Like the bullfighter Villalta in *In Our Time*, the extraordinary Romero in *The Sun Also Rises* embodies the critical characteristics of courage and style in the face of death. As Jake says, "Nobody ever lives their life all the way up except bullfighters."¹⁰⁸

F. Scott Fitzgerald (1896-1940) wrote his autobiographical novel, *This Side of Paradise* (1920), about the quest of young Amory Blaine for self-discovery.¹⁰⁹ Blaine gradually transitions from a morally weak, aristocratic egoist in boarding school, through Princeton, World War I service, and postwar employment, to emerge as a more courageously self-aware individual.¹¹⁰ After the war Blaine exclaims that "my whole generation is restless" because of its loss of ideals (Woodrow Wilson "had to compromise over and over again"), its loss of faith ("I think four men have discovered Paris to one that discovered God"), and its loss of leadership ("There were no more wise men; there were no more heroes"). Blaine "had grown up to a thousand books, a thousand lies; he had listened eagerly to people who pretended to know, but knew nothing." This realization leaves him "brood[ing] over a new generation, the chosen youths from the muddled, unchastened world, still fed romantically on the mistakes and
half-forgotten dreams of dead statesmen and poets." This Side of Paradise captures the disillusionment of the younger generation in postwar America, striving for meaning in a discredited civilization.\textsuperscript{112}

With its undercurrent of crass materialism, self-love, and foreboding, This Side of Paradise prefigures The Great Gatsby (1925), about the futile, romantic quest of the fabulously wealthy Jay Gatsby for the beautiful, married, and equally wealthy Daisy Buchanan. Gatsby is the tragic story of one veteran of the Great War, Jay Gatsby, told by another veteran, Daisy's younger second-cousin Nick Carraway. In October 1917, a month before embarking for France, Jay Gatsby, the penniless young Army officer "without a past," had an affair and fell obsessively in love with Daisy, a rich Louisville socialite. Then, in June 1919, Gatsby lost Daisy in marriage to the wealthy Chicagoan Tom Buchanan. For three years thereafter Gatsby aggressively acquired largely tainted money to finance his illusory dream of winning Daisy back.\textsuperscript{113}

Nick and Gatsby bond over reminiscences of their common war experience in "some wet, grey little village in France." Gatsby did "extraordinarily well in the war," advanced from lieutenant to major, commanded divisional machine guns in the Argonne Forest, and received various awards for bravery, including a declaration from Montenegro. After the war he joined the American Legion to pursue his questionable business dealings with Meyer Wolfsheim.\textsuperscript{114} The war also provides much of Gatsby's mystique ("they say he's a nephew or cousin of Kaiser Wilhelm's. That's where his money comes from"; "he was a German spy during the war"; "he was a nephew to von Hindenburg and a second cousin to the devil"). Hearing Gatsby's fantastic and
contradictory stories, Nick "had reached the point of believing everything and nothing about him." Ultimately, however, Nick comes to judge Gatsby the best of that "rotten crowd" of New Yorkers, and tells Gatsby, "You're worth the whole damn bunch put together."  

*Gatsby* depicts the postwar hedonism, venality, and moral indifference that corrupted the American dream of success, and left a "valley of ashes" – materialism's wasteland of disillusionment, sterility, and despair. Daisy negligently kills Myrtle Wilson and also indirectly causes Gatsby's death: "They were careless people, Tom and Daisy," says Nick, "they smashed up things and creatures and then retreated back into their money or their vast carelessness, or whatever it was that kept them together, and let other people clean up the mess that they made."  

Embodying the American dream of success, Gatsby rose from humble origins to extraordinary, albeit tainted, wealth, but he also possessed "some heightened sensitivity to the promises of life" and "an extraordinary gift for hope, a romantic readiness" that was incorruptible. As English Professor Arnold Weinstein observes, "the achievements furthered by the dream may be tawdry and corrupt, although the dream never can be." While describing the loss of values and the social dissolution of the postwar era, *Gatsby* also celebrates the enduring American belief that individuals can create themselves and their reality.  

In comparison to a sophisticated British soldier like Christopher Tietjens coping with cultural disintegration, American war heroes seem naïve, stunned by the horror of war, repelled by the patriotic abstractions used to inspire fighting spirit, withdrawn into themselves, and alienated from the society they left. Nick Adams, Frederick Henry, and
Jake Barnes discovers through war's wanton brutality that the world lacks meaning; it injures and kills the weak and the strong with capricious indifference. Consequently, they retreat from society for spiritual healing and renewal, Nick to the Northern Michigan woods, Frederick to the Swiss mountains, and Jake to Basque country. For Hemingway, existence amid meaninglessness requires strict adherence to the stoic virtues of discipline and courage, exemplified for him by bullfighting with the consummate skill of the Villalta and Romero.

Instead of reacting to an indifferent universe, like Hemingway, Cummings and Dos Passos reacted to demeaning institutions: for Cummings, the brutal French penal system that ignores human rights and abuses human dignity; and for Dos Passos, the military bureaucracy that enslaves men, molds them into brutes, stifles their intellect, and saps their basic humanity. Cummings and John Andrews suffer for their self-expression: Cummings for fraternizing with the poilu, and Andrews for deserting to compose music. Fitzgerald broadened his focus to cover postwar society in general, with Amory Blaine and his generation disaffected by society's lack of any wise men or heroes, and Nick Carraway repelled by its corruption and greed. For all these American writers, the war was the cause of personal disaffection, isolation, and alienation.

*The Postwar Continental Novel*

The novels of Franz Kafka and Jean-Paul Sartre resonate with intense introspection and anxiety over existence in a universe lacking any transcendent meaning. Franz Kafka (1883-1924) brought clarity, rigor, and rationality to his writing
about personal revulsion lying within (man's psychic makeup) and about nightmarish
dread lying without (man's immediate bureaucratic society and wider existential
environment). Kafka wrote *The Metamorphosis* (1915) in 1912, before the war, about
his sense of shame and unworthiness, his struggle to recover his humanity, and his place
within the family. Beginning with the famous line: "As Gregor Samsa awoke one
morning from uneasy dreams he found himself transformed in his bed into a gigantic
insect," the book develops from this nightmarish, surreal, and implausible premise into
a realistic dramatization of Gregor's futile attempt to cope with paternal hostility and
deceit and to recover from revulsion at his personal condition.119

When Austria declared war on Serbia on July 28, 1914, Kafka attempted
unsuccessfully to enlist in the Austro-Hungarian army as a Czech citizen. Professor of
German and contemporary literature Stanley Korngold explained that Kafka wrote *The
Trial* (1925) during the last five months of 1914 to alleviate a profound sense of
personal failure from escaping the draft and from dodging his engagement to Felice
Bauer.120 In *The Trial* Joseph K. is awakened and arrested one morning on undefined
charges. Thus begins his long, desperate, and futile effort to find a court in which to
prove his innocence, only to be brutally executed for his unknown crime. Joseph K.
finds no legal recourse or ultimate redemption because, for Kafka, his corruption lies in
his very essence.

*The Castle* (1926), written in 1922 and, like *The Trial*, published
posthumously, is the story of a land surveyor by the name of K. (again without a
surname) who is summoned by the Castle authorities only to learn that the surveyor job
offer was a miscommunication. Although the authorities accommodate him with a demeaning alternate position as school janitor, K. repeatedly seeks to contact the inaccessible Lord of the Castle and to obtain administrative redress within the inscrutable Castle bureaucracy. But different obstacles inevitably thwart his efforts. Of course, K. is Kafka himself, feeling summoned by some higher authority for some higher purpose but unable to access or understand it and ultimately left estranged and homeless. Baumer writes that Kafka "finds God alternatively remote, cruel by human standards, incommensurable with the human mind, and probably nonexistent."\(^{121}\)

Jean-Paul Sartre (1905-1980) achieved maturity during the 1930s while launching his critique of the ineffectual and self-righteously smug postwar French bourgeoisie, whom he called "Les salauds" or "the stinkers."\(^{122}\) Sartre established the relationship between existentialism and literature and made his early reputation with the novel *Nausea* (1938), permeated with the decadent salauds.\(^{123}\) In *Nausea*, Antoine Roquentin, a writer doing historical research for a book on the Marquis de Rollebon, experiences the contingency of his own existence, triggered by viewing the roots of the chestnut tree while sitting on a park bench. "Existence had suddenly unveiled itself," says Roquentin, "we hadn't the slightest reason to be there, none of us," and that was "the key to my Nauseas, to my own life . . . to this fundamental absurdity."\(^{124}\) Existence was not necessary but contingent, and he was superfluous (*de trop*): "Everything existing is born without reason, prolongs itself out of weakness and dies by chance."\(^{125}\)

Philosopher William Barrett considered *Nausea* probably Sartre's best book because it effectively conjoins the intellectual and creative artist. American poet
Hayden Carruth considered Roquentin's confrontation with the chestnut tree "one of the sharpest pictures ever drawn of self-doubt and metaphysical anguish." Roquentin's mood of disgust plunges him into an authentic experience of his own existence, and a recognition that he, like the chestnut tree, has no ultimate reason for existing. Roquentin has encountered the void, the Nothingness, his own contingency and finitude, and he finds it disgusting, nauseating, and fearsome. The nothingness, by definition, is unknowable, non-rational, and absurd. When the search for rational answers confronts the radical meaninglessness of existence, the result is nausea.

Roquentin tried unsuccessfully to escape from his predicament through traditional avenues. The Self-Taught Man rejected belief in God during his internment as a prisoner of war ("His existence is belied by science," and "I learned to believe in man"). But Roquentin dismisses the rational humanism of the Self-Taught Man following their final and grossly ludicrous encounter in the town library. Neither his life in town with its activity and commerce, nor his desire for travel, nor his final pursuit of his former mistress Anny is availing for Roquentin, who remains nauseated by his consciousness of existence. Roquentin's way out, much debated by critics, is through his own writing, though not biography but fiction, and through self-acceptance. Typical of existentialist writers, Sartre finds it difficult to give Nausea any finality because of his open-ended view of life and its constant state of becoming.

Kafka and Sartre represent the two faces of postwar secularism. Kafka is anguished over his feeling of cosmic homelessness, poignantly dramatized in K.'s desperate and futile pursuit of access to the Lord of the Castle and in Joseph K.'s
relentless and unavailing effort to defend his innocence before some judicial tribunal. Kafka finds no relief, no remedy, no understanding in his inscrutable universe, and remains tormented by his inability to find answers and by his abject sense of personal inadequacy. By contrast, Sartre accepts cosmic meaninglessness, rejects religious concerns, and tries to create meaning in a world without meaning. Antoine Roquentin's existential drama is about discovering the cause of his metaphysical anguish, namely, his utter contingency, accepting his condition, and giving meaning to his life by personal endeavor.

**Literature and Scientific Materialism**

Despite the industrialized slaughter wrought by modern scientific technology during the Great War, science emerged relatively uninjured in public sentiment and the popular literature. Bertrand Russell trumpeted the promise of modern science despite its having proved "that all the labors of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius, are destined to extinction in the vast death of the solar system." Joseph Wood Krutch reluctantly accepted science's proof that the old certitudes were phantoms and he mourned man's loss of faith and nobility, humanistic and aesthetic values, and meaning and purpose in the universe. Science had unmasked the pretensions of metaphysical truth, so that man at least is no longer duped by its trickery and at last can knowingly and consciously confront his dismal fate. Thus, Krutch reluctantly resigned himself to science's tyranny of the human spirit and to scientific materialism's dominance of metaphysics.
Looking to creative literature for solace has proven unavailing. Modern critics invoked science to substantially diminish literature’s traditional role and value of relating man to God and to cosmic meaning. They declared that science had succeeded literature as the source of truth about reality, with Max Eastman asserting that poetry must "yield up to science the task of interpreting experience, of finding out what we call truth, of giving men reliable guidance in the conduct of their lives." The dominant postwar literary critic I. A. Richards concurred. For Richards, science had exposed "countless pseudo-statements – about God, about the universe, about human nature, the relations of mind to mind, about the soul, its rank and destiny." Consequently, science had relegated poetry to enhancing man's personality and to alleviating his despair rather than to addressing man's ultimate concerns about cosmic meaning and purpose. In short, modern literary criticism directed literature away from the cosmos and toward the individual – his loss of the stable prewar world, his alienation in the postwar universe, his doubts about his real identity, and his feelings of insignificance, powerlessness, and depravity.

As seen above, the leading postwar novelists consistently obliged these critics. British postwar literature powerfully evokes the sense of a lost civilization shattered by war and of damaged individuals alienated from an indifferent and corrupt postwar society and potentially meaningless reality. American postwar literature turned wartime injury into personal violation, postwar existence into cosmic alienation, and life into a quest, not to answer big philosophical questions about the world, but simply to learn "how to live in it." Continental literature portrayed a similarly meaningless world, with
the characters variously agonized by a feeling of unworthiness, self-doubt, and metaphysical anguish; by an inability to justify themselves to society or to any higher power; and by a mission to live meaningfully within meaninglessness. Thus, the central characters in the leading British, American, and Continental novels are injured, tormented, and alienated; they confront postwar cultural disintegration and cosmic indifference, anguished by doubt yet determined to endure life amid chaos.

In summary, the Great War engendered a metaphysically dark literature that abandoned any quest for cosmic meaning and purpose – science had rendered that quest a fool's errand. Instead, postwar literature turned away from metaphysical engagement and towards psychic unrest, exploring man's fate and his efforts to cope in a materialist universe – mindless, meaningless, and indifferent. Postwar literature sets man adrift in society and in the universe, a stranger to himself and to the world he left behind to go to war. Consequently, that literature provides essentially no counterweight to scientism or scientific materialism. Indeed, it accepts their premises, essentially reinforcing their epistemological and metaphysical claims, and basically exploring ways to live successfully within their mechanistic world.
CHAPTER 7
POSTWAR WESTERN ART

How are we to bring order to the chaos of this infinite, formless variation: man? The principle of "love thy neighbor" is hypocritical. "Know thyself" is a Utopian idea, but a more acceptable one, which also contains spite. No pity. What remains to us after the carnage is a putrefied humanity. . . . Thus DADA was born of the need for independence, of mistrust of the community. Those who belong to us keep their freedom. . . . Does anyone think that, by a minute refinement of logic, he had demonstrated the truth and established the correctness of these opinions? Logic imprisoned by the senses is an organic disease. To this element philosophers always like to add: the power of observation. But actually this magnificent quality of the mind is the proof of its impotence.

– Tristan Tzara, 1918 Dada Manifesto

In the half-century between the last Impressionist exhibition in 1886 and the start of World War II in 1939, the theory and practice of art experienced a change that art professor George H. Hamilton considered "as radical and momentous as any that had occurred in human history." This change was the dramatic emergence of abstract (or non-objective) art. Abstract art rejected the traditional aesthetic, dominant since the Renaissance, that art should represent objects and events as they appear in the natural world, and that artists should use form, light, and color as observed in three-dimensional visual space. Post-impressionists like Paul Cézanne and Paul Gauguin began to flatten space, distort color, depart from Renaissance perspective, and record experience originating in their minds rather than in the objective world.

By the start of the 20th century, avant-garde artists were investigating new techniques to manifest their interior, personal experience of reality. With the advent of Cubism just before the Great War, and its successive, derivative movements, the work
of art ceased being a description or illusion of the natural world, but, instead, became "its own reality, a real thing, subject to the laws of art rather than of nature, imposing its own system of relations upon nature."\(^4\)

Traditional criteria of shape, color, and dimension appropriate for representational art were no longer adequate to interpret such non-objective art with its new aesthetic values. By the advent of the Great War, therefore, art had become quintessentially "modern," which English professor and cultural critic Frederick R. Karl defined as an ongoing process of defying authority, escaping historical imperatives, departing from traditional art, and constantly breaking new ground.\(^5\)

In 1907, Pablo Picasso (1881-1973) painted his innovative *Les Demoiselles d'Avignon* (discussed in Chapter 3), which pioneered new ways of treating the traditional elements of mass, line, and color without regard to the representation of external reality, and presaged the advent of abstraction and Cubism (Figure 2).\(^6\)

Significantly, *Les Demoiselles* (1907) included primitive, bestial, and non-human heads, which implicitly cast doubt on human reason. In Picasso's hands the human head, from which man derives his intelligence and communicates his understanding, has become mere illusion.\(^7\) Thus, prewar artists began to turn inward and to question human reason.

Cubism, along with Futurism and Expressionism, were the three prewar movements with the greatest effect on Dada and Surrealism, which arose in direct response to the Great War. This chapter looks first at representative artists of the Cubism, Futurism, and Expressionism movements who went to war and suffered for it, and then looks at representative artists of the Dadaism and Surrealism movements who
generally avoided war and violently reacted to it. The representative artist-soldiers considered here are French Cubist Fernand Léger, English Futurist Christopher Nevinson, and German Expressionists Ernst Ludwig Kirchner and Otto Dix. The representative Dadaists are from each of the five important Dada centers – Hans (Jean) Arp in Zürich, Marcel Duchamp in New York, Kurt Schwitters in Hanover, George Grosz in Berlin, Max Ernst in Cologne and Paris. Since he straddled both Dada and Surrealism, Max Ernst appropriately provides the transition to Surrealism, after which the chapter analyzes the relevance of Dadaism and Surrealism to scientific materialism.

The Prewar Avant-Garde – Cubism, Futurism, and Expressionism

In 1907, when Picasso met Georges Braque (1882-1963), Braque was already experimenting with Cubism. The two became friends, and between 1909 and 1914, when Braque went off to war, they collaborated in the development of Cubism – one of the great aesthetic transformations, a watershed in modern art. In their initial “analytic” phase (1909-12), they examined real objects from different perspectives, lighting them from different directions, exploring their mass from inside and out, and depicting interpenetrating and shifting planes of color. While always referring to the natural object and never constituting pure abstraction, their analytical styles nevertheless became increasingly abstract and converged in two climactic masterpieces, Braque's The Portuguese (1911) and Picasso's Ma Jolie (Woman with Guitar) (1911-12). Both paintings depict figures playing a stringed instrument, rendered in quintessentially
Cubist language of opposing and interpenetrating curves, rectilinear shapes, lines, and planes.

In their subsequent "synthetic" phase (1912-14), they used fragments of real, unrelated, and recognizable objects to construct works, using a bright and expressive palette rather than the monochromatic and restrained palette of their analytical phase. Picasso created the first Cubist collage, Still Life with Chair Caning (1912), in which he pasted an oilcloth having a chair-cane pattern onto the canvas and also painted fragments of objects (a pipe, glass, knife, and scallop shell) and of words ("JOU" for "Journal"). He then framed the work unconventionally with actual rope. Still Life with Chair Caning explores the ambiguity between reality and art: the oilcloth is real but its caning is illusion, the trompe l'oeil pipe appears real but is an illusion, the rope is real but it frames a pictorial illusion. Picasso's use of everyday objects for artistic effect in his synthetic phase of Cubism contributed significantly to the development of both Dada and Surrealism.

In 1909, on the front page of the Paris newspaper Le Figaro, the Italian poet Filippo Tommaso Marinetti published his Futurist manifesto advocating a dynamic new society, poetics, and art and rejecting Italy's reactionary reliance on its classical and Renaissance past. He celebrated "love of danger, the habit of energy and fearlessness," and glorified "war – the world's only hygiene – militarism, patriotism, the destructive gesture of freedom-bringers, beautiful ideas worth dying for, and scorn for women." One year later a group of Italian artists published their "Manifesto of the Futurist
Painters," exalting originality and a new artistic sensibility that used "dynamic sensation" to achieve Marinetti's principles of energy and velocity. In late 1911, four Italian Futurists visited Paris, saw Cubism, and immediately recognized Cubism's value as an expressive technique to capture continuous movement. To this Cubist vocabulary they added their characteristic technique, "lines of force," since "objects reveal in their lines calm or frenzy, sadness or gaiety." In his quintessentially Futurist painting *Elasticity* (1912), Umberto Boccioni used lines of force and Cubist fragmentation to convey in vivid color the sequential movement of a machine-like horse and its black-booted rider racing across a mechanized landscape of high tension poles and factories (Figure 6). In works like *Elasticity*, Futurism left the conceptual studio of analytic Cubism for the dynamic sensation of velocity and energy. Boccioni joined the Italian artillery and executed a number of war paintings, but by 1916, Boccioni was dead, along with the architect Antonio Sant' Elia, two important leaders of the Futurist movement. As the war's slaughter sapped its moral standing and decimated its leadership, Futurism lost its intrinsic vitality and became a spent aesthetic force.

During 1905, Expressionism arose in several different countries as a movement in which the artist records his or her personal response to the surrounding world by emphasizing or distorting every aspect of the artist's technique. French *Fauves* (Wild Beasts), for example, employed color and form symbolically to evoke mood. But Expressionism is most associated with German art, especially two movements, *Die Brücke* (The Bridge) (1905-14) and *Der Blaue Reiter* (The Blue Rider) (1910-16).
Prewar Expressionism often addressed the spiritual emptiness and psychological effects of the modern industrialized world.

In two remarkably prescient paintings, both entitled *Apocalyptic Landscape* (1913), the Berlin expressionist Ludwig Meidner painted visions of Armageddon a year before war. The first painting portrays a naked man asleep in the foreground by a fire, dreaming about the violent lightning storm raging in the background that splinters the buildings and threatens the survival of those few figures located in the valley below the dark whirlwind. The second painting (Figure 7) portrays a large city with fires spreading and buildings crumbling from the violent force of bombs exploding throughout the sky and city below. "I feared such visions," Meidner said, "yet the final results gave me an especially warm feeling of satisfaction, a slightly Satanic joy."17

Even this brief summary of just three avant-garde movements shows that prewar art had begun the process of turning inward and away from outer reality, seeing outer reality as fractured, blurred, and in flux, and questioning the capacity of human reason to understand either the inner or the outer world.18 By the war's start, European avant-garde artists had established the principles of abstract, nonrepresentational art, and they never returned to objective representation, despite the postwar opposition of Dada and Surrealism to their aesthetics.19 In 1916, Dada erupted as outspokenly anti-art, challenging outright the prevalent prewar aesthetics and the bourgeois society responsible for the catastrophic and insane war. In 1924, Surrealism emerged from Dada in Paris and continued its confrontational, anti-bourgeois, and anti-rationalist attitude by delving into man's unconscious dream world.
No analysis of the war's effect on modern art, however, would be complete without some consideration of those artists who experienced the war firsthand and recorded its personal impact in their art. So, before turning to Dada and Surrealism, this chapter considers artist-soldiers representing Cubism, Futurism, and Expressionism, the three prewar avant-garde movements most influential to Dadaism and Surrealism.

_The War in Cubist, Futurist, and Expressionist Art_

Of the three movements, Cubism seems least suited to address the effects of war, given its analytical rather than expressive content and its focus on still life and human forms, at least as practiced by Braque and Picasso. But French Cubist Fernand Léger used his particular Cubist style effectively to portray fellow soldiers mechanized for combat. Futurism seems most suited, with its militaristic credo and lines of force, but English Futurist Christopher Nevinson turned away from Futurist techniques to a more representational style for recording war's dehumanizing brutality. Focused as it is on the artist's personal feelings, Expressionism seems particularly well suited to record the artist's experience of war, as indeed it was. But the war tormented Ernst Ludwig Kirchner and changed Otto Dix, causing both German Expressionists ultimately to abandon Expressionism.

In 1910, after viewing the works of Braque and Picasso at Kahnweiler's gallery, Fernand Léger (1881-1955) apparently destroyed his prior art work and started to develop his own Cubist style. By contrast with Braque and Picasso, Léger's Cubism accepts the fracture but not fragmentation of objects, addresses physical activity and
industrialization rather than intellectual conceptions and still life, and celebrates the aesthetic appeal and equation of men-as-machine. In his prewar work, best expressed in *Nudes in the Forest* (1910), Léger already painted inhuman, robotic, sexless figures consisting of rounded or flattened mechanized parts that blend confusingly with the surrounding natural environment.

Léger's wartime experience included dangerous frontline service during 1915 as a sapper (a fortifications and demolitions expert) in the Argonne Forest, where he endured some of the heaviest fighting on the Western front. A gas attack on the Aisne Front in the spring of 1917 invalided him out of his regiment and into a hospital outside of Paris. Léger reported three significant responses to his war experience: First, among his soldier compatriots, the poilu, "I discovered the French people," "the exuberance, the variety, the humor, the perfection of certain types of men," and "I found them poets, inventors of everyday poetic images." Second, "I was dazzled by the breach of a 75-millimeter gun which was standing uncovered in the sunlight: the magic of light on white metal." And, third, "once I had got my teeth into that sort of reality I never let go of objects again."

Léger's Cubist style changed during the war, as seen in *Soldier Smoking* (1916), painted in a subdued, austere palette while on leave in Paris that summer. *Soldier Smoking* (Figure 8) portrays a wounded soldier smoking his pipe while recovering from battle injuries evident from the head bandage and the red patch on the man's left cheek, right hand, and right forearm. The soldier's cylindrical arms, armored jacket, and metallic inner structure, convey the effect of "light on white metal." The soldier's rigid
posture suggests a continued commitment to duty and fighting spirit, wounds notwithstanding. Unlike the conflating and abstracting of human and environmental forms in his prewar paintings, like Nudes in the Forest, Léger presented here a very recognizable and formidable figure who occupies the entire canvas. The wounded soldier suggests that very "perfection of certain types of men" whom Léger came to admire at the Front. Soldier Smoking displays the quiet confidence and imposing force of the poilu, symbolized in the puffs of his pipe smoke that look like cannonballs.

While convalescing in 1917, Léger painted a mechanized and gravely serious game of cards entitled The Card Game (1917), drawing upon this 18th-century artistic theme also employed by Cézanne, but without Cézanne's quiet mood and peasant setting.24 His three card-players in The Card Game (Figure 9) are awesome machines, pausing from the industrialized game of war to which their monumental forms suggest they are ideally suited. Cramped within the walls of their narrow trench, the robotic players confront each other on three sides of a large, rigid, mustard-colored table, a color probably inspired by Léger's recent gas attack.25 Instead of the subdued sepia color of Soldier Smoking, Léger painted his card players in gunmetal gray, wearing their chevrons and medals. 26 The subject of Léger's Card Game is the unsentimental but dignified uniting of man and machine for industrial warfare, consistent with Léger's optimistic view of the modern industrialized world.

Léger's depiction of the human as machine has none of the pejorative, dehumanizing connotations of Christopher Nevinson's mechanized soldiers in Returning to the Trenches (1914-15) discussed in Chapter 3 (Figure 4). Nor does it impart the
fanatical belligerence of the Futurist Boccioni, the debilitating psychosis of the
Expressionist Kirschner, or the satirical bitterness of Dadaists. Furthermore, even a
cursory glance at Richard Cork's magnificent and seminal book *A Bitter Truth: Avant-
Garde Art and the Great War* demonstrates that Léger's positive portrait of man as
machine is anomalous within war art. How strange to see robotic soldiers stripped of
their most human qualities portrayed in a positive light. Yet Léger retained this positive
view of modern man and technology into his Cubist treatment of postwar urban life.²⁷

Soon after leaving the Slade School of Art in 1912, Christopher Nevinson
(1989-1946) became a devoted follower of Marinetti's Futurist movement, and like a
ture Futurist, he volunteered for Red Cross service as an ambulance driver in France
when the war broke out (a limp prevented him from enlisting).²⁸ As he told the *Daily
Express* in February 1915, "This war will be a violent incentive to Futurism for we
believe that there is no beauty accept in strife, and no masterpiece without
aggressiveness."²⁹ Although better known in England than internationally, Nevinson
serves as a useful exemplar of Futurism and its fate because he went to war and
survived it and because the war led him to abandon the Futurist cause and technique.

Nevinson entered the war as a Futurist with paintings like *Returning to the
Trenches* and *A Bursting Shell* (1915), one of his last Futuristic works. *Bursting Shell*
displays an aerial view of an explosion with its brilliant spiraling light in five triangular
shards radiating from the center of the picture, which a contemporary art critic labeled:
"Futurism pure and simple, without hidden remnant of realistic tendencies."³⁰ Similarly,
*Returning to the Trenches* (1914-15) uses angular shapes and "force-lines" of rifles
reminiscent of Boccioni's *Elasticity* (1912), but it noticeably lacks Boccioni's Futurist bravado. Instead, *Returning to the Trenches* suggests the war's dehumanizing brutality, and for this reason, drew a hostile reaction during its March 1915 exhibition from a chauvinistic British press and citizenry.\(^{31}\)

Undeterred by the criticism, however, Nevinson painted *La Mitrailleuse* (1915), a darkly realistic portrait of French soldiers manning a machine post. French poet and art critic Guillaume Apollinaire (1880-1918) complimented *La Mitrailleuse* in his weekly column in *L'Europe Nouvelle* because of Nevinson's "way of rendering and making palpable the soldiers' suffering, and of communicating to others the feeling of pity and horror that have driven him to paint," and for "the way in which man and machine are fused in a single force of nature."\(^{32}\)

By this point, war had eroded Nevinson's Futurist convictions as well as futurist style and he formally repudiated them in a letter to Marinetti.\(^{33}\) Nevinson had encountered too much human tragedy as an ambulance driver in France to sustain his early Futurist militancy. His conversion began with his upsetting experience of attending countless wounded and dying soldiers at a makeshift Red Cross shelter in Dunkirk after his initial crossing from Dover.\(^{34}\) Following a medical discharge from the Royal Army Medical Corps due to acute rheumatic fever, Nevinson returned to the subject of the Dunkirk shelter, nicknamed the "Shambles," in his compassionate and moving painting with the bitterly ironic title *La Patrie* (1916).

Having wholly abandoned his futurist style by then, Nevinson painted *La Patrie* (Figure 9) in a representational style that conveys the stricken faces and unrelieved
agony of the gravely injured and dying soldiers in the Dunkirk shed. Nevinson himself best describes the scene:

They lay on dirty straw, foul with old bandages and filth, those gaunt, bearded men, some white and still with only a faint movement of their chests to distinguish them from the dead by their side. Those who had the strength to moan wailed incessantly. . . . The sound of those broken men crying for their mothers is something I shall always have in my ears.35

The stylistic innovations and techniques and the dynamic principles and aspirations of Futurism had proven inadequate for Nevinson to convey the personal misery and degradation of service on the Western Front.

In April 1917, the British Department of Information appointed Nevinson an official artist, which unfortunately prompted him to depart from the moral outrage of his earlier war canvases and to venture into depictions of the heroic exploits of aircraft. Nevertheless, he created one further controversial painting entitled Paths of Glory (1917), which depicts two dead British soldiers. He exhibited the painting over the objection of the War Office, pasted a brown paper on it bearing the word "censored," and incurred an official reprimand under the Defense of the Realm Act.36 Thereafter, Nevinson's work never returned to Futurism or achieved the effectiveness of his representational art from the earlier war years.

In 1905, after finishing architectural school in Dresden, Ernst Ludwig Kirchner (1880-1938) inaugurated Germany's first modern movement, Die Brucke (The Bridge), an artists' association with four fellow architectural students seeking freedom from the constraints of Wilhelminian society.37 The most gifted and best trained of the Die Brucke artists, Kirchner initially painted in a Fauve style heavily influenced by Matisse.38
1911, following *Die Brücke*'s split over stylistic differences, Kirchner moved to Berlin and developed his own expressive style, combining harsh, non-naturalistic color, angular hatchings, geometric shapes, and elongated human figures. He created eleven paintings as well as numerous pastels, drawings, and prints of Berlin street scenes exemplified by *The Street* (1913), discussed in Chapter 2. *The Street* (Figure 3) depicts the moral hypocrisy of prewar Berlin with its fashionable yet predatory prostitutes (cocottes) and their prospective bourgeois Johns.

After war broke out, Kirchner volunteered for military service on July 1, 1915, was assigned to the field artillery, but failed to cope with the military's physical regimen. He was discharged in September on grounds of mental illness and on condition that he enter a sanatorium. Thereafter, Kirchner deteriorated mentally and physically in various sanatoria, while remaining mortally fearful until the war's very end of being recalled to frontline duty. During the same period, however, Kirchner created some of his most powerful paintings, like *Artillerymen in the Shower* (1915) and *Self-Portrait as a Soldier* (1915). As one observer wrote in a letter dated November 25, 1916, "His art grows the more his body fails."

*Artillerymen* (Figure 11) portrays naked soldiers crammed together in a small, low-ceilinged shower room, and shorn of their uniforms and their dignity. They look jaundiced and emaciated, with elongated thin legs and orange hash marks emphasizing their exposed rib cages. They seem anonymous and fungible, with their dark eyes and stylized faces, and, except for the two on the far left, all stand largely isolated and alone despite their physical proximity. Dodging the shooting streams of shower water as if
they were enemy gunfire, the soldiers appear completely vulnerable. The blue floor and green walls and ceiling give the shower room a cool, oppressive atmosphere, evocative today of photographs of World War II concentration camps. The presence of an overseeing officer wearing a uniform with cap and boots and apparently barking orders intensifies the scene, as does the sinister, devilish-looking soldier in the foreground, crouching to stoke the flaming boiler. Kirchner depicted the Kaiser's formidable military as frail, gawkish, anonymous youths, vulnerable to both their autocratic military superiors and their mechanized foreign adversaries.

While the Artillerymen implies Kirchner's own personal isolation, physical deterioration, and mental depression, his Self-Portrait as a Soldier (1915) unmistakably expresses his steep emotional decline and loss of the artistic optimism from the Die Brücke period. Self-Portrait as a Soldier (Figure 12) places Kirchner in the foreground, looking gaunt, sickly, depressed, and blank-eyed. He wears his old blue uniform with its 75th Artillery Regiment designation and his military cap with its target-like insignia. He stretches toward the viewer his gangrenous right arm severed at the wrist, while in the background stands an unfinished canvas and a nude model (probably his lifelong companion from the Berlin years, Erna Schilling). Kirchner's grisly fantasy of permanent maiming and artistic impotency from military service accurately captured his mental state.44

Kirchner never truly recovered from his brief war experience. His mental instability led him away from Berlin to pastoral Davos, Switzerland, and also away from his prior artistic self-confidence to a postwar state of "self-dissolution." 45 In
Davos, Kirchner developed a "new style" that departed from his expressive, figurative idiom toward a more abstract idiom and pastoral subject matter, a largely unsuccessful phase of his art. In 1933, the Nazis began interfering with his artistic opportunities, and in 1937, they declared his art degenerate, removed more than 600 of his works from German museums, and then ridiculed, sold, or destroyed them. When the German Army marched into Austria in March 1938 to effect the Anschluss and bivouacked barely 20 kilometers from Davos, Kirchner destroyed his art to avoid its falling into German hands and killed himself.

Trained initially as a decorative painter, Otto Dix (1891-1969) entered Dresden's School of Applied Arts in 1910 to study ornamental design, soon became a fervent disciple of Friedrich Nietzsche, and produced a life-size bust of Nietzsche, his only known sculpture. In 1914, Dix volunteered enthusiastically for military service, believing that war would revitalize staid Wilhelmian Germany. Dix provides a fitting conclusion to this discussion of Expressionist soldier-artists because his war art displays a dramatic transition from Nietzschean bravado to moral disgust about the war and because his brief postwar flirtation with Dada provides a useful transition to that subject.

Dix's Self-Portrait as a Soldier (1914), painted soon after his assignment to the Dresden artillery regiment, pictures a fierce, pugnacious, bull-necked, baldheaded brute, itching for a fight (Figure 13). As his head turns, he stares menacingly at the viewer, the white of his eyes magnified against the dark shading and pronounced sculpting of his head. The blood-red cloak wrapped about his shoulders and his name and year
scratched like graffiti on the wall behind him create a portrait of the blood-thirsty German warrior. Dix’s several self-portraits painted during the war, however, suggest increasing doubt about his Nietzschean convictions. *Self-Portrait with Artillery Helmet* (1914) shows a more restrained and cautious soldier, defensively hiding in the shade of his elaborate artillery helmet; his narrowed, barely visible eyes look defensive and uncertain. *Self-Portrait as Mars* (1915) is a Futurist painting of the square- and clenched-jawed god of war, who seems composed under his star-studded helmet, but also is being dissected from every angle by the chaotic scenes of death and destruction reeling about him.

Dix's *Self-Portrait as Shooting Target* (1915) indicates a significant attitudinal change (Figure 14) and deserves comparison with Kirchner's *Self-Portrait as a Soldier* (Figure 12). In the two self-portraits both men appear in the same artillery uniforms and soft visor-less military hats with their two central, round insignia one above the other. Kirchner appears sickly, emaciated, maimed, and traumatized, already a casualty of war by 1915. Dix is no longer the warrior god Mars and more like a war victim, wide-eyed and stoically awaiting execution by enemy fire. Cork considers Dix "torn between seeing himself as aggressor and victim," presenting "a nihilistic image, where despair is countered by an obstinate ability to mock the mortal danger he confronts."² By this time, Dix's experience on the Western Front has chastened his combative Nietzschean spirit into a sober awareness of war's absurd self-destructiveness.

Trained as a heavy machine gunner, Dix fought in the 1915 autumn campaign in Champagne, in several 1916 battles on the Somme, and in the March 1918 final German
offensive, with intermittent duty during 1917 on the Eastern Front. He incurred multiple wounds, one almost fatal, and rose to the rank of vice-sergeant-major, earning the Iron Cross (second class), the Friedrich-August medal, and the Saxon Service medal with swords.\textsuperscript{53} Through the war's end Dix retained his conviction about the restorative effect of Nietzsche's life-and-death cycle, but amid pauses in hostilities during the war Dix made hasty gouache paintings on paper, like \textit{Signal Flair} (1917) and \textit{Setting Sun} \textit{(Ypres)} (1918), that portrayed the ferocity and bestiality of battle like no other artist.\textsuperscript{54}

Dix's growing sense of war's horrible futility finally became a primal scream in graphic postwar drawings and paintings. Tormented by his wartime memories, Dix targeted the callous military elites and indifferent civilian population in his later Dada-inspired works, which depict horribly maimed soldiers. Dix's most macabre painting of this genre, \textit{Skat Players} (1920), shows three grotesquely deformed war veterans playing cards indoors (Figure 15). The one on the left is hideously scarred by a burn that cost him his right ear, most of his hair, and probably his right eye. He holds his cards between the toes of his one uninjured right leg, hears through a long snaking listening device resting on the card table, wears a permanent grimace exposing teeth on the right side of his mouth, and crosses the wooden stump serving as his left leg with the two wooden stumps of the card player to his left. The center player has neither arms nor legs and holds a card between his teeth. He has an artificial left eye that stares rivetingly at the viewer and he has a scar circling half his head and down his brow that knits in place a large plaster covering. The legless player on the right proudly wears his Iron Cross, together with an artificial jaw and a patch over his missing nose. He deftly plays a card
with an artificial right limb craned over his bald head, while holding his remaining cards in his intact left hand.

The contrast between Dix's and Léger's card players could not be more striking: Dix's hideously maimed soldiers with their artificial limbs have lost their former military swagger, since technology could not restore their war-ravaged bodies. Their very presence in society serves as an indictment of the war and those responsible for it. Léger's machinomorphic card players (Figure 9), by contrast, are products of the modern technological age, physically capable of enduring the brutality of industrialized warfare.

Dix's intense moral revulsion against the war and its consequences attracted the interest of Berlin Dada, but Dix soon gravitated toward a more realistic interpretation, the *Neue Sachlichkeit* (New Objectivity), in antiwar drawings and paintings of immense power. Hamilton calls Dix's painting *The Trench* (1920-23), which the Nazis destroyed after making it the centerpiece of their 1938 exhibition of Degenerate Art, and his great War Triptych (1932) "perhaps the most powerful as well as the most unpleasant anti-war statements in modern art." Dix's *War Triptych* cost him his professorship at the Dresden Art Academy in 1933, after which Dix retreated to his German country estate near Lake Constance where he pursued his antiwar art, including the mesmerizing *Flanders (After Henri Barbusse "Le Feu")* (1934-36).

In summary, all four artist-soldiers recorded war's terrible reality in their art, but none more graphically than Expressionists Kirchner and Dix. Kirchner's own physical and psychological trauma is hauntingly displayed in *Self-Portrait as a Soldier*, as is the
abject vulnerability of the ordinary soldiers in *Artillerymen in the Shower*. Similarly, Dix's four self-portraits convey his psychic transition from brutish warrior to stoic target, and his *Signal Flair* and *Setting Sun (Ypres)* convey front line brutality and carnage like no other artist. War changed Kirchner from a confident artistic innovator to a terrified artistic émigré, and Dix from a swaggering militarist to an outraged pacifist.

Both Léger and Nevinson recognized that war turns men into machines, but Léger interpreted this dehumanization as a helpful adaptation to industrialized war and modern society, whereas Nevinson thought it stripped man of his dignity. In *Soldier Smoking* and *The Card Players* Léger used his Cubist style to convey his respect and admiration for the strength and determination of the French poilu. In *Returning to the Trenches*, by contrast, Nevinson used Futurist lines of force to display the same poilu as dynamic cogs in the dehumanizing war machine. *La Mitrailleuse* and *La Patrie* show Nevinson in full retreat from Futurism since the Futurist aesthetics of velocity and dynamic sensation proved inadequate to convey war's awful human toll. Nevinson's full moral outrage at British war policy surfaced in *Paths of Glory*, a disturbing portrait of dead soldiers exhibited courageously despite war censorship.

Léger's anomalous embrace of mechanized man notwithstanding, the dominant effect of the artwork by these other, more representative soldier-artists is war's destructive and dehumanizing effect on man's body and soul. Kirchner symbolized war's toll on his mental stability and artistic talent with his blank stare and severed hand in *Self-Portrait as a Soldier*. Dix displayed his moral disgust at war's gruesome human injuries in the Dadaist *Skat Players*, and his moral revulsion over war itself in the *War
Triptych and Flanders. The indictment by these soldier-artists of the apocalyptic war and the civilization responsible for it is unequivocal, graphic, and compelling.

Dadaism: Zürich, New York, Hanover, Berlin, Cologne, and Paris

Dada arose primarily from outrage over the unprecedented and senseless slaughter of the Great War and the civilization that initiated and could not stop it. Dada arrived independently and simultaneously in Zürich in February 1916, and in New York in October 1915, when Marcel Duchamp and Francis Picabia debarked there from France. The Zürich Dadaist Richard Huelsenbeck claimed that he and Hugo Ball discovered the word Dada in a dictionary and deemed it appropriate: "the child's first sound expresses the primitiveness, the beginning at zero, the new in our art." Ball added the following: "Dada is 'yes yes' in Romanian, 'rocking horse' and 'hobbyhorse' in French. For Germans it is a sign of foolish naïveté, joy in procreation, and preoccupation with the baby carriage." Dada "paradoxically stood for everything and nothing," according to art history professor David Hopkins: "It amounted to a kind of absurd admixture of affirmation and negation, a kind of pseudo-mysticism. Art was a dead religion. Dada was born."

Dada had no specific creed except to attack the cultural, political, and social forces responsible for the crisis and to provide a kind of shock therapy to redeem man through a moral revolution. "Dadaists assailed the Western humanist belief in the supremacy of reason, the efficacy of the rational ego, and the essential goodness of human nature," according to art critic and Oxford Fellow Richard Sheppard. They
especially targeted Western aesthetic values, which they regarded as decadent, bourgeois, and egotistical. "We were seeking an art based on fundamentals to cure the madness of the age," wrote Zürich Dadaist Hans (Jean) Arp, "and the new order of things that would restore the balance between heaven and hell."62

While owing much to Cubism, Expressionism, and Futurism, Dadaism focused on lived experience rather than avant-garde aesthetics. Dadaists ignored concerns about art's relationship with reality, innovations in autonomous art, investigation of nonobjective art, or art about art.63 Dadaists and their successor Surrealists rejected art's autonomy and refused to separate art from modern human experience and the "praxis of life."64 According to Hopkins, Dada and Surrealism "shared the defining avant-garde conviction that social and political radicalism should be bound up with artistic innovation. The artist's task was to move beyond aesthetic pleasure and to affect people's lives; to make them see and experience things differently."65

Although Dada ranged from Romania to Japan, its most important centers were Zürich, New York, Hanover, Berlin, Cologne, and Paris. The Dada artists in Zürich focused on cabaret performances by dislocated expatriates; New York on modern machinery, commercialism, and the human psyche; Hanover on recreating a new postwar culture; Berlin on radically critiquing postwar politics and society; Cologne on the psychic underpinnings of modern culture; and Paris on disrupting the postwar normalcy through art.66 Using circulated texts and personal contacts, Dada artists spread their works and messages widely through group dynamics that fostered radical innovation. For art curator Leah Dickerman, this helped to explain "why so many of
those artists who have had the greatest impact on 20th-century art founded their careers, and defined the terms of their mature practice, within the crucible of Dada."

Born in the Alsacean city of Strasbourg to a German father and French mother (hence his German and French given names), Hans (Jean) Arp (1886-1966) studied art in Strasburg, Weimar, and Paris and made wide connections in French and German art circles. When war broke out, Arp dodged the German draft by moving to Paris only to have the French suspect him as a German spy and force him to move to neutral Zürich. There, in 1915, he met and later married Sophie Taeuber, a professor of textile design at the Zürich School of Applied Arts who collaborated with him and influenced his significant innovations in abstract art. A central figure in Zürich Dada, Arp created what he and Taeuber called "applied" rather than fine art in an effort to "approach the pure radiance of reality" by avoiding traditional artistic constraints and personal subjectivity.

In a series of collages, including *Untitled (Collage with Squares Arranged According to the Laws of Chance)* (1916-1917), Arp tried to eliminate rational control and to engage unconscious forces by dropping torn pieces of paper on a grid and pasting them where they fell (Figure 16). Holding human reason and egoism responsible for the war, Arp sought new meaning through art that involved his own unconscious and nature's unpredictability. "The 'law of chance,'" Arp later wrote, "which comprises all other laws and surpasses our understanding . . . can be experienced only in a total surrender to the unconscious." Chance, however, was not mere randomness because
Arp assumed some world-ordering power lay behind the inscrutable flux of nature, some "unfathomable raison d'etre . . . and order inaccessible in its totality."\textsuperscript{71}

Arp's metaphysical conviction about nature's underlying order arose out of his early attraction to the pre-Socratic philosophers like Heraclitus who viewed reality as a paradoxical mixture of form and flux, and to Eastern mysticism which considered reality a balance of the warring factions of creation and destruction.\textsuperscript{72} Arp tried to achieve this balance of conflicting natural energies in his art, and in late 1917, he began experimenting with freeform or "automatic" processes, evidence of his increasing faith in Nature's formative powers.\textsuperscript{73} Seeking to avoid conscious control, he moved his hand quickly across a paper and then had a carpenter cut the spontaneously drawn shapes with a handsaw.\textsuperscript{74} The resultant organic forms in his reliefs reflect his faith in natural chance over human logic.

In summary, Arp engaged the unconscious and mistrusted reason; he encountered reality mystically rather than rationally; and he created applied art intended to reflect the inaccessible order that underlies the flux of reality. Consistent with his artistic approach, Arp explained Dada's mission as follows:

Dada is aimed to destroy the reasonable deceptions of man and recover the natural and unreasonable order. Dada wanted to replace the logical nonsense of the men of today by the theologically senseless. . . . Dada is for the senseless, which does not mean nonsense. Dada is senseless like nature. Dada is for nature and against art.\textsuperscript{75}

Arp's mystical theories and artistic approach contributed to Zürich Dada's relatively more constructive Dada image.\textsuperscript{76} Ultimately, Arp came to see God's influence as the ordering principle in the material world and converted to Roman Catholicism.
The youngest of three brothers in a family of artists, Marcel Duchamp (1887-1968) worked as an illustrator after graduating from the Julian Academy in Paris, began exhibiting in 1909, and embraced Cubism as a member of the Puteaux group. The group's doctrinaire leaders embarrassed Duchamp by asking him to remove his *Nude Descending a Staircase No. 2* (1912) from the Independents Salon because of its title. Exempt from military service because of a minor heart defect, Duchamp abandoned warring Europe and chauvinistic Paris in 1915 and headed for neutral New York, where his *Nude* already had created a sensation at the Armory Show exhibition in 1913. In New York Duchamp invented Dada and shook up the conservative American art scene until his return to Paris in mid-1921.

By the time of his New York arrival, Duchamp had abandoned Cubism and other painting innovations of color and form because he considered such "retinal" art as self-deluding humanism, inconsistent with the impersonal culture of modern industrialized society. Instead, Duchamp determined to create art that employed the following three elements: (1) radical Cartesian doubt ("doubt in myself, doubt in everything. In the first place never believing in truth"); (2) science against science ("the precise and exact aspects of science . . . in order to discredit it, mildly, lightly, unimportantly. But irony was present"); and (3) intellectual rather than physical dexterity ("painting once again at the service of the mind").

Duchamp's most curious application of the intellectual over the physical in art was his so-called "ready-made," a bold challenge to reigning aesthetics in which he substituted an ordinary, mass-produced article for a hand-made work of art. Starting
with his *Bicycle Wheel* (1913) and then his famous *Fountain* (1917), Duchamp's ready-mades usurped the place of sculpture. The *Bicycle Wheel*, a so-called assisted ready-made, consists of a bicycle wheel placed atop a stool. Simultaneously, *Bicycle Wheel* impugnes the hierarchical convention of a sculpted object resting upon a base and aestheticizes two ordinary objects from the world of mass production. Duchamp's ready-mades posed a basic question about the nature of art itself. Etymologically, as Hopkins noted, art means "to make," but Duchamp had done little of that with his "conceptual provocations" like the *Fountain* (Figure 17).  

In April 1917, as an elaborate joke undertaken for its shock value, Duchamp submitted his now iconic *Fountain* (signed "R. Mutt") to the New York Society of Independent Artists exhibition, which supposedly was available to any artist willing to pay the exhibition fee. Duchamp had dual goals: to discredit the organizers' claims for aesthetic democracy, and to offend the current standards of propriety. With his thought-objects, like *Fountain*, Duchamp intended not only to attack artistic and social norms but also to preserve individuality in a mass society indifferent to the ongoing human slaughter taking place in a brutal world war – a war that, in April 1917, the US was just entering.

Both Duchamp and his friend Francis Picabia equated human sexuality with mechanism, as illustrated in Duchamp's *The Bride Stripped Bare by her Bachelors, Even* (or *Large Glass*) (1915-23) (a composition of oil, water, and lead foil on two glass panels) and in Picabia's *Portrait of a Young American Girl in a State of Nudity* (1915) (a line drawing of the spark plug equating it with female sexuality). Duchamp's *Bride* (and
her suitors) and Picabia's *Young American Girl* are depicted as mechanisms. In *Bride* (Figure 18) Duchamp uses mucus-colored mechanomorphs to deconstruct human sexuality, especially in the nine male bachelors whom he described as "malik molds" that are trapped and "will never be able to pass beyond the mask." Duchamp's and Picabia's artistic characterization of human sexuality as mechanical (man-as-machine) is a shockingly anti-humanist position, and characteristic of New York (and Berlin) Dada.\

Born into a family of well-to-do shopkeepers, Kurt Schwitters (1887-1948) attended the Hanover School of Applied Arts and the Dresden Art Academy, and when war broke out, Schwitters avoided the draft by feigning insanity and bribing a doctor. He spent the war years in the auxiliary military service and used his free time to paint and write poetry, both influenced by Cubism and Expressionism. At the war's end Schwitters developed a different form of abstract collage (or assemblage) made from urban detritus, such as discarded bus tickets, wrappers, newspapers, string, and other refuse. He labeled his collages and other art, "Merz" (after the word "Commerzbank" used in one of his collages). In addition, Schwitters composed and widely publicized an expressionistic parody of a sentimental love poem, "An Anna Blume" (To Eve Blossom), and a long, wordless sound poem, "Ursonate" (The Primal Sonata). He also built an enormous, organic "Merzbau" (Cathedral of Erotic Misery) throughout his house, which he described as an "abstract (cubist) sculpture in which people can go." Schwitters'
ultimate aesthetic goal was to develop a total artwork (*gesamtkunstwerk*) that encompassed all of the arts.

"Art is a primordial concept," declared Schwitters, "exalted as the godhead, inexplicable as life, indefinable and without purpose." Believing that art served an important spiritual function, he called his art "a prayer about the victorious end of the war, victorious as once again peace has won in the end; everything had broken down in any case and new things had to be made out of the fragments: and this is Merz" 88

Schwitters' *Revolving* (1919) exemplifies his artistic viewpoint and technique (Figure 19). In the tradition of Synthetic Cubist collage, *Revolving* employs both painting and construction with discarded material -- wood, metal, cord, cardboard, wool, wire, leather, and oil on canvas. The circles and rods in *Revolving* constitute the artist's effort to make a new conceptual mechanism out of the fragmented parts of a broken machine, as if to create a new culture from the shattered cultural remains of postwar Germany. 89

The reconstructed mechanism in Schwitters' *Revolving* evokes the indomitable human spirit to pick up the pieces of the old world broken by war and to use them to rebuild a newer world.

Although Schwitters came late to Dada, he persisted the longest. 90 In 1923, Schwitters launched his Merz magazine, which characterized his Merz art work as anti-Dada: "We are Kurt Schwitters, not dada, but MERZ." Drawing an implicit contrast with the political negativity of Berlin Dada, Schwitters emphasized the redemptive purpose of his art: "Merz, and only Merz is able to transform . . . the entire world into a work of art." 91 In 1937, however, the Nazis interrupted his mission by confiscating his
art works in German museums and exhibiting them as Degenerate Art. This prompted Schwitters to emigrate from Germany to Norway where he began a new Merzbau, and then to Britain where he remained for the rest of his life.

Born Georg Gross in Berlin, George Grosz (1893-1959) anglicized his given name and slavicized his family name in 1916, as an anti-German protest. When he was nine years old, his widowed mother became manager of an officers' casino where Grosz had an early association with German officers. After the war broke out, Grosz enlisted but soon was released for medical reasons. In 1917, he was drafted, then transferred to a mental hospital, and finally discharged as unfit for service. He studied at the Dresden Art Academy and the Berlin Museum of Applied Arts, among other art schools. During and after the war Grosz painted and produced photomontages that were anti-military, resulting in his being charged several times with insulting the German Army and committing public offense. After the war Grosz joined the German Communist Party and Club Dada, which ended after its notorious "Dada Fair" in June 1920, lampooning the German military and its war policy. When the Nazis came to power, Grosz left Germany for the United States where he taught at the Colombia University School of Fine Art.92

Dada reached Berlin in 1918, following Richard Huelsenbeck's arrival from Zürich, and unsurprisingly, became politically radical, given the societal turmoil from losing the war, the economic crisis from war reparations, and the brutal suppression of communist sympathizers, including the murders of Rosa Luxembourg and Karl Liebknecht. Berlin's Club Dada consisted of two highly political types: communist
sympathizers, like George Grosz, Wieland Herzfelde, and John Heartfield, and anarchist sympathizers, like Raoul Hausmann and Johannes Baader.\textsuperscript{93}

Like New York Dadaists, Berlin Dadaists openly opposed Expressionism and prewar avant-garde art as humanistic, spiritual, and "retinal art," and Huelsenbeck lambasted it in his \textit{1920 Berlin Dada Manifesto}.\textsuperscript{94} Berlin Dadaists rejected traditional painting in favor of sonic poetry and photomontage, new art forms which they pioneered, and they often depicted humans as machinery in the manner of their New York counterparts. Grosz and Otto Dix exhibited paintings in Berlin, drawing attention to their art with posters that declared: "Art is dead: Long live the new machine art of Tatlin," a reference to the Russian Constructivist considered the antithesis of Expressionism's bogus spirituality.\textsuperscript{95}

Grosz's Dada painting \textit{The Funeral (Dedicated to Oskar Panizza)} (1917-18), for example, depicts a hellish carnival of grotesques in a riotous funeral procession hurtling down a thoroughfare amid bars, strip joints, and skyscrapers towards fiery damnation. \textit{The Funeral} is typical of Grosz's highly critical images of Berlin as the depraved locus of brutish militarists, despicable profiteers, pitiful war wounded, and myriad destructive forces. "No one since Daumier," asserts Hamilton, "has left such a complete record of a particular historical situation, a horrifying, intensely circumstantial German report on Berlin between 1914 and 1924."\textsuperscript{96}

In his self-critical watercolor/photomontage, \textit{Daum marries her pedantic automaton 'George' in May 1920. John Heartfield is very glad of it} (1920), Grosz displayed his strong anti-humanist view of modern man as a hybrid machine. \textit{Daum
(Figure 20) refers in part to Grosz's own recent marriage to Maud (Daum plays on her name), and in part to Berlin's decadence as the city of prostitutes and automatons. Daum (on the left) looks like a barroom floozy, and George (on the right) looks like a ridiculous machine. Grosz’s Club Dada colleague Wieland Herzfelde (John Heartfield's brother) considered Daum to be an attack on the bourgeois institution of marriage, which "unfailingly transforms the man into a constituent part of itself, into a small cog within a larger system of wheels and gears," partially freeing the woman, while the man "addresses other sober, pedantic and calculating tasks." Unlike Duchamp’s Bride, however, Grosz's Daum still shows woman as human and at least semi-autonomous; by contrast, Duchamp's bachelors and Grosz's husband remain inhuman mechanisms.

Although Berlin Marxists, like George Grosz, embraced a kind of Sartrean existentialism and rejected the idea of Geist or spiritual beings guiding the world, the non-Marxist Berlin Dadaists, like Raoul Hausmann and Johannes Baader, found an elusive and fluid pattern within nature's chaos. Synthesizing Christianity, Buddhism, and Taoism, like Arp in Zürich, Hausmann believed that pattern underlies matter and leads to spirit. Similarly, Johannes Baader held a monistic pantheism, curiously based on the monist materialism of the German Darwinian biologist Ernst Haeckel. In the first issue of The Dada (June 1919), Hausmann made his famous statement:

Dada is the only savings bank that pays interest in eternity. The Chinaman has his tao and the Indian his brama. Dada is more than tao and brama. . . . Gotama thought of entering Nirvana and after he was dead, he stood not in Nirvana but in dada. . . . The dada hovered above the waters before God created the world and when he spake: let there be light! lo there was not light, but dada. And when the Twilight of the Gods broke in upon us, the only survivor was the dada.
The secular mysticism espoused by the anarchist side of Berlin Dada (as well as Arp and Schwitters) never touched New York, Cologne, or most of Paris Dada. 102

From Dada to Surrealism

Surrealism evolved from Dada in Paris and was largely a French movement, although Max Ernst gave it a German footprint after moving from Cologne to Paris in 1922. Born into a well-to-do Catholic family with a father who was an amateur painter, Max Ernst (1891-1976) enrolled in Bonn University in 1910, became influenced by Cubism, Futurism, and Expressionism, and joined a group of painters in 1912. When the war broke out, Ernst enlisted in the field artillery, and his subsequent meritorious service on both the Western and Eastern Fronts earned him the Iron Cross, first and second class. After the war he pursued art rather than university studies, joined Cologne Dada along with Hans Arp, who moved to Cologne from Zürich, and in 1922, moved to Paris where he became a major force in the surrealist movement. 103

In Cologne, Dada jelled around the "Cologne Dada Fair" of April 1920, where Ernst exhibited startling collages and photomontages of colliding images that bitterly attacked traditional art and religious iconography. Unlike Berlin Dada, however, Cologne Dada was essentially apolitical. 104 Hopkins explains that "employed by Ernst in Cologne, collage had summoned up a world that was profoundly inimical to human control; whole systems of ideas and regimes of representation appeared to be in conflict." 105 For example, in a slightly later work, Santa Conversazione (Sacred Conversation) (1921), Ernst uses anatomical diagrams, photographs, and bird
illustrations in a blasphemous collage of the Virgin's Immaculate Conception, placing a dove as the Holy Spirit over the principal woman's exposed womb (Figure 21).  

Ernst focused specifically on the civilization rather the politics responsible for the current turmoil, as he explained:

Contrary to general belief, Dada did not want to shock the bourgeoisie. The bourgeoisie were already shocked. No, Dada was a rebellious upsurge of vital energy and rage; it resulted from the absurdity, the whole immense stupidity of that imbecilic war. We young people came back from the war in a state of stupefaction, and our rage had to find expression somehow or another. This it did quite naturally through attacks on the civilization responsible for the war. Attacks on speech, syntax, logic, literature, painting and so on.

Consistent with his apolitical agenda, Ernst downplayed the physicality of the disparate materials in his ideational photomontages. Instead, he painted over and re-photographed them to give the works a seamlessness. The photomontages of Berlin Dadaists, by contrast, display the cutting and reassembling of newspaper and magazine imagery, thereby emphasizing their rending of the depraved social fabric.

Ernst's artwork bridged Dada and Surrealism in three respects: First, his collages, like Santa Conversazione, created disturbing new worlds, or counter-realities, using fragments of materials from daily life. As a Dadaist, he rejected the old world, but as a Surrealist, he created a new world. Whereas Braque and Picasso introduced fragments of newspaper clippings and sheet music into their collages as witty allusions, Ernst used such familiar materials to evoke a strange new reality with troubling psychological implications. Indeed, with his painterly technique, Ernst created collages that effectively became "dream painting," Surrealism's very keystone.
Second, Ernst made what he called "frottages," using surface rubbings over wood-graining to conjure images of flora and fauna. Ernst discovered this rubbing technique on a rainy evening in August 1925, after being struck by the symbolism in the floorboards of his seaside room. Deriving them in this way, Ernst considered his frottages just like the "automatic writing" being developed in Surrealist prose and poetry. Thus, the frottages bridge the two movements by implicating Surrealist psychic as well as Dadaist chance operations. Third, Ernst's Dadaist collages involved overpainting to produce a seamless, dreamlike space and an imaginative illusionism. Dada manifestoes generally proscribed painting in artworks because of its elitist implications, but Ernst used painting to suggest the "individual reverie" of Surrealism rather than the "political edge" of Dada.

Ernst completed his transition from Dada to Surrealism by the time of his move from Cologne to Paris in August 1922. In his oil painting, Pieta or Revolution by Night (1923), for example, Ernst introduced Freudian dream psychology into his work and, thus, into Surrealism (Figure 22). Using the Christian iconography of the Pieta, presumably inspired by Michelangelo's famous sculpture, Ernst portrays a father holding his son -- an undoubted reference to Ernst’s own father Philippe, a pious Catholic, who had painted his young son Max as the infant Jesus. Ernst's Pieta suggests a dream state in which subconscious fears and desires become manifest, and also conflates Christian iconography with personal biography.

Like Santa Conversazione, Pieta is a blasphemous work in which Ernst evokes Philippe as God the Father holding his Son, but, by implication from the son's gray
coloration, the father has turned his son into stone.\textsuperscript{112} As typified by Ernst's \textit{Pieta}, Surrealists focused on the unconscious in order to emphasize human irrationality rather than to redress human psychoses. Indeed, Surrealists accepted man's riven subconscious, as is, and used their art to increase public awareness of the unconscious and to dissect bourgeois morality, especially as regards sexuality.\textsuperscript{113}

Dada arrived in Paris with Francis Picabia from New York in 1919, followed and reinforced by Duchamp in 1921, and by Ernst from Cologne in 1922. Parisian Dada, however, galvanized around the French poet Andre Breton (1896 -1966), who gradually assumed Guillaume Apollinaire’s role as catalyst for the avant-garde after the latter's death in 1918. Breton admired the 1918 \textit{Dada Manifesto} published in the Zürich group's magazine \textit{Dada} because of its highly critical yet potentially redemptive posture:

\begin{quote}
The Principal 'Love thy neighbor' is hypocrisy. 'Know thyself' is utopian but more acceptable because it includes malice. No pity. After the carnage we are left with the hope of a purified humanity.\textsuperscript{114}
\end{quote}

The Manifesto's author Tristan Tzara reached Paris in 1920, following Zürich Dada's demise the prior year, and thereafter Paris became the principal Dada center.

Paris Dadaists opposed France's conservative government, but were less overtly political than Berlin Dadaists, and were outspokenly negative about traditional art. Duchamp brought with him to Paris his \textit{L.H.O.O.Q.} (1919), a reproduction of the \textit{Mona Lisa} with a penciled-in mustache and goatee mocking reproductions and questioning the concept of a masterpiece. Spoken in French the letters LHOOQ become "\textit{Elle a chaud au cul}," roughly "She has a hot ass." Breton publicized Duchamp's assisted ready-made \textit{L.H.O.O.Q.} with the rhetorical question: "Could it be that Marcel Duchamp reaches the
critical point of ideas faster than anyone else?" Breton thereby firmly established the concept of the cerebral Duchamp. In a similar vein, Picabia published a 1920 journal containing his illustration Tableau Dada consisting of a stuffed monkey surrounded by the words "Portrait of Cézanne, Portrait of Rembrandt, Portrait of Renoir…".

In its second season Dada experienced a rift that ultimately proved fatal. The 1921 mock trial of Maurice Barres, a radical libertarian turned ultra-nationalist during the war, drove a wedge between Tzara and Breton (who conceived of the trial) that foretold Dada's demise. Tzara protested any claim of moral authority over another, and Breton rejected Dada's "acknowledged commitment to indifference." Tzara's (and also Picabia's) objection to a collective moral code constituted a critical fault line between Dadaism and Surrealism. In May 1922, Breton organized a Congress of Paris to respond to Dada's pursuit of "insolent negation" and "scandal for its own sake," and to set the future direction of avant-garde activity.

During a two-year hiatus (1922-24), called "movement flou" (hazy, indistinct movement), Dada artists explored the irrational through self-induced trances, assimilated Freudian theories of the unconscious, and developed techniques of automatic writing (rapid flurries of drafting without preconceived ideas). Then, in 1924, Breton issued a manifesto that gave birth to Surrealism "based on the belief in the superior reality of certain previously neglected associations, and the omnipotence of dreams, and the disinterested play of thought." Breton's Surrealist manifesto rejected self-referential and autonomous art, embraced the irrational, exempted itself from aesthetic concerns, and erased any distinction between "art" and "life" – all clearly
legacies of Dada.\textsuperscript{121} Although initially focused on poetics rather than visual arts, Surrealism increasingly embraced the visual arts, especially Ernst's kind of "dream painting."

Surrealist painting took one of two directions: either realistic "dream painting" that creates alternative realities with academic exactitude, like the work of Ernst, Salvador Dali (1904-1989), and Yves Tanguy (1900-1955), or spontaneous blotches of forms, or "automatic drawings," like the work of Joan Miro (1893-1983).\textsuperscript{122} Breton defended surrealist painting, despite its strong appeal to bourgeois taste at odds with his Marxist leanings, and despite its obvious need for aesthetic technique whether in dream painting or automatism.\textsuperscript{123} Because of Breton's inability to provide an adequate theoretical justification, Hopkins thinks that painting "ends up as Surrealism's Achilles heel."\textsuperscript{124}

In his pioneering work, \textit{The History of Surrealism}, Maurice Nadeau described Surrealism as "the heir and extender" of Cubism, Futurism, and Dada, convinced that man produced the "terrible civilization" responsible for the Great War by becoming "a cerebral monster with hypertrophied rational faculties."\textsuperscript{125} For the Surrealists, man was more than reason and logic, reality was more than what the senses could reveal, and man's "unknown realm" of dreams was "the true source of his acts, his thoughts, his life."\textsuperscript{126} Surrealism asserted that man was a dreamer as well as a "reasoner" and "was not the creature molded by a century of positivism, of associationism, of 'scientism,' but a being of desires, instincts and dreams as psychoanalysis revealed him."\textsuperscript{127} In short, Nadeau concludes that Surrealism tried to restore the whole man by placing emphasis
"on the night side of being, on the imagination, on instinct, desire, and the dream, on the irrational or merely ludic forms of behavior. . ."  

Dada, Surrealism, and Scientific Materialism

The crisis of war triggered a radically energized, albeit short-lived movement, Dadaism, and a similarly iconoclastic but longer-term, successor movement, Surrealism. Dadaists declared themselves anti-art, challenging the prewar avant-garde aesthetics as decadent, bourgeois, egotistical, and divorced from the lived experience of ordinary people. Consequently, Dada challenged the very movements that influenced it, like Cubism, Expressionism, and Futurism, as self-indulgent efforts serving only the artists and their discredited society that caused the catastrophic war. Dada "became an instrument of ballistics" and "hit the spectator like a bullet," observed art critic Walter Benjamin, and, therefore, was useless for "contemplative immersion." Dadaists produced spectacles that engaged the audience, forced a reaction, and reenacted the wartime chaos. Cultural saboteurs, they militarized art to combat the smug and destructive reasoning that spawned "a botched civilization."

Dadaists were utterly dismissive of philosophic reason in human affairs. In his 1918 Dada Manifesto Tristan Tzara castigated logic as a disease, and in his 1920 Berlin Dada Manifesto Richard Huelsenbeck savaged Kant's noumena by declaring, "The urinal, too, is a thing in itself," no doubt in reference to Duchamp's Fountain. Having assimilated Bergson's views on intuition, Dadaists aimed at liberating man's intuition and unconscious as man's more dynamic and fundamental faculties for coping with a
mysterious universe.\textsuperscript{131} They emphasized the body over the Cartesian ego, the unconscious over the conscious, and the irrational over the rational side of human nature ostensibly to bring human nature into balance and to cope with the chaotic flux of reality.\textsuperscript{132}

Following the Great War, man certainly needed to gain new psychic balance, but Dada's shock therapy for Western man was incapable of providing the stable setting needed for sound inquiry into man's ultimate concerns. Moreover, German and French Dadaists differed over Freudian psychology: the Berlin Dadaists suspected Freudianism as an attempt to adjust man to a defective society and to suppress man's Dionysian impulses needed to reform society; and the Parisian Dadaists, including Max Ernst from Cologne, accepted Freud's diagnosis of man's unconsciously directed and conflicted self and favored man's social adaptation to an essentially Marxist model.\textsuperscript{133} Neither view of Freud, however, emphasized reason or focused upon metaphysical concerns.

Berlin and New York Dadaists also characterized man as a machine committed to a mechanized world, as elaborated in their human-machine iconography or mechanomorphs, e.g. George Grosz's \textit{Daum marries}, Marcel Duchamp's \textit{The Bride Stripped Bare}, and Picabia's \textit{Portrait of a Young American Girl}. Their anti-humanist rendition of the body as a machine separated mind from matter, portrayed mind as mechanical and untrustworthy, and discredited individualism in favor of Marxian collectivity. Although some Berlin and Zürich Dadaists mystically aligned body and soul in a curious philosophical monism, most Berlin Dadaists, according to Hopkins,
"sought a robust materialism and shunned humanist platitudes". This is essentially the worldview of scientific materialism.

Dada's riotous exposé of man's innate irrationality responsible for the war evolved into Surrealism's more constructive effort to put humanity in touch with those same irrational forces, and Surrealism survived well into the 1940s. While placing humanity in touch with its unconscious, however, Surrealism continued Dada's denigration of human reason in man's search for meaning. Thus, by challenging man's reliance upon reason and emphasizing man's non-rational side, both Dadaism and Surrealism effectively disengaged from metaphysical concerns. Furthermore, they portrayed man as a mindless mechanism in a meaningless material world, a metaphysical viewpoint wholly consistent with scientific materialism. Consequently, these war-inspired artistic movements provided essentially no support, and discounted any value, for a reasoned critique of scientific materialism. Indeed, they sided with it.
CHAPTER 8

POSTWAR SCIENTIFIC MATERIALISM

With me the horrid doubt always arises whether the convictions of man's mind, which has been developed from the mind of the lower animals, are of any value or at all trustworthy. Would anyone trust in the convictions of a monkey's mind, if there are any convictions in such a mind?

– Charles Darwin, Letter to W. Graham (1881)

In his 1925 Lowell Lectures, Alfred North Whitehead (1861-1947) coined the phrase "scientific materialism" for his Harvard audience and defined it as "the fixed scientific cosmology which presupposes the ultimate fact of an irreducible brute matter, or material, spread throughout space in a flux of configurations. In itself such material is senseless, valueless, purposeless." The abstract system of concepts that successfully guided science since the Enlightenment had now become the reigning conception of the entire universe in every university in the world. "We have mistaken our abstraction for concrete realities," warned Whitehead, declaring this dominant cosmology "quite unbelievable." After a brief introduction describing its postwar emergence, this chapter undertakes a critique of scientific materialism as advanced by several of its current leading advocates.

Following the Great War, some men of letters, like Aldous Huxley, criticized the evil consequences of scientific materialism. Yet scientific materialism "persisted as a philosophy of nature, among Marxists, and, no doubt, also among many men of science." In this regard, Baumer cites the opinion of F. Sherwood Taylor, Director of the Science Museum, South Kensington, London, that, as of 1947, most scientists
adopted materialism as their working hypothesis.\(^5\) This was not the case, however, for all scientists. By changing the predictable and deterministic Newtonian world order, quantum and relativity physics supported non-materialistic, organismic interpretations of nature, like Whitehead’s, and Baumer cites efforts by several European scientist-philosophers seeking to bridge the mind-matter dualism and to oppose materialism.\(^6\) Bertrand Russell even developed the novel view that mind and matter share some common substance.\(^7\) Nevertheless, scientific materialism reigned supreme in postwar metaphysics.\(^8\)

During the last quarter of the 20th century to the present, moreover, scientific materialists have become even more outspoken. The popular writings of Jacques Monod, Richard Dawkins, Daniel Dennett, and Stephen Hawking, among others, declare that science is the only road to truth, that science proves reality to be essentially mindless matter, and that the universe has neither meaning nor purpose. After a brief review of some basic scientific terminology, this chapter will turn to these writers.

*Scientific Reasoning: the Problems of Induction and Reductionism*

Chapter 1 defines scientism as the belief that the scientific method, i.e., inductive reasoning, is the only reliable means of acquiring objective or true knowledge about reality. Chapters 1 and 2 also reference David Hume's critique of inductive reasoning for lacking any rational justification because it rests upon the unproven assumptions that nature is uniform and causation is observable. Since inductive
reasoning underlies the opinions of the several scientific materialists discussed below, Hume's critique warrants further consideration.

By way of comparison, a *deductive* inference concerns the appropriate relationship between two premises and the conclusion such that two true premises necessarily produce a true conclusion because the premises themselves contain the conclusion: e.g., all men are mortal; Socrates is a man; therefore, Socrates is mortal.\(^9\)

By contrast, an *inductive* inference concerns premises that do not necessarily contain the conclusion such that a conclusion drawn from two true premises may well be false: e.g., the first five eggs in a box are rotten; all eggs in the box have the same "sell by" date; therefore, the remaining eggs in the box are rotten. The inductive inference from two true premises is logical but may be false since the common "sell by" date does not guarantee the rottenness of the remaining eggs.\(^{10}\)

Scientists can and do sometimes draw incorrect inferences from their observations involving limited amounts of data.\(^{11}\) Of course, scientists routinely use inductive reasoning to form hypotheses, which have produced some of our most important scientific theories. For example, Newton's theory of gravity is an inductive inference from limited data involving a few specific bodies to a generalization involving all such bodies. Similarly, Darwin's theory of evolution is an inference from limited observation of similarity among a few species to a generalization that no species were separately created. While the observations concerning limited data may be correct, those limited observations do not *prove* that the inference holds for all such data; rather, it simply provides *good evidence* or a *high probability* that the theory is true.\(^{12}\)
As Hume pointed out, the inductive inference assumes that what we have examined and found to be true will hold true for what we have not examined, and this assumption rests entirely on the presumed uniformity of nature. The observation that the sun always rises in the east does not mean that it will inevitably do so, as Hume argued, since the sun could explode or the Earth leave its orbit. A non-uniform universe is conceivable, therefore, even though good empirical evidence supports the assumption that nature's past is a reliable guide to its future. Furthermore, inductive reasoning cannot *prove* that nature is uniform because inductive reasoning assumes this very premise and, therefore, cannot provide evidence of its truth without begging the question. This proves Hume's point that inductive reasoning is not rationally provable but rather is premised on a fundamental faith in the uniformity of nature.

Hume interposed a related challenge to the theory of causation, namely, that one cannot observe or experience a causal relationship. Rather, one sees a temporal and proximal relationship such as B consistently following A – not causation per se. Hume’s challenges to the methodology of induction and the theory of causality raise fundamental questions about whether science can hope to explain everything, such as the origin of life, the nature of consciousness, and gravity, given science's ultimate reliance upon unprovable generalizations and assumptions. For example, the law of gravity must be accepted without proof to explain the motions of the planets. Since nothing can explain itself, however, it follows that some scientific laws like gravity will remain forever unproven. Therefore, as a logical matter, science cannot hope to explain everything because science employs an inductive methodology that inevitably relies
upon some unprovable assumptions in order to infer its ultimate conclusion or generalization.\textsuperscript{17}

Modern science has relied upon inductive reasoning and causation theory since the Enlightenment with truly remarkable success. But precisely because of its success, i.e., the pragmatic test that "it worked," science has taken little interest in its underlying philosophical rationale.\textsuperscript{18} As Whitehead stressed, however, "there can be no living science unless there is a widespread instinctive conviction in the existence of an Order of Things, and, in particular, of an Order of Nature."\textsuperscript{19} If nature were not uniform, inductive reasoning would lack any rational justification, leaving every purported effect without a provable cause. "If the cause in itself discloses no information as to the effect, so that the first invention of it must be entirely arbitrary, it follows at once that science is impossible, except in the sense of establishing entirely arbitrary connections which are not warranted by anything intrinsic in the natures of either causes or effects."\textsuperscript{20}

Science has tacitly removed Hume's "philosophic mountain," however, by simply adopting an instinctive faith in the order of nature. This conviction about nature’s order and rationality has deep roots in Western civilization. As Whitehead pointed out, the classical Greeks refused to accept "an ultimate irrationality" and "endeavored to explain all phenomena as the outcome of an order of things which extends to every detail."\textsuperscript{21} Similarly, the medieval rationalists held an instinctive conviction about the order in nature, about "the rationality of God," and about "the search into nature," vindicating their "faith in rationality."\textsuperscript{22}
When venturing into philosophy, as scientific materialists do, they ignore the need to develop a metaphysical justification for induction. But "induction presupposes metaphysics" and "rests upon an antecedent rationalism," so unless your metaphysics first establishes a rationally ordered universe with a reliable past and predictable future, "you have made nonsense of induction." 23 Neither science nor scientific materialism, however, has ever adequately rationalized its complete reliance on the inductive method or acknowledged the method’s fundamental incapacity to prove nature’s inherent order. 24

Methodological reduction in scientific reasoning is another issue warranting preliminary consideration because of its implications for scientism and scientific materialism. Physics is generally regarded as the most fundamental science because all of the other branches of science ultimately rely on physical particles. But this does not mean that the other higher-level sciences are ultimately reducible to physics. For example, the cells which make up living organisms are composed of nucleic acids (DNA and RNA), proteins, sugars, fats, and water, which consist of molecules made up of atomic particles. It is not possible, however, to reduce the laws of biology to those of physics or to define the cell entirely in terms of its basic physical particles. Rather, as philosopher of science Samir Okasha contends, the cell and other objects studied by the higher-level sciences are "multiply realized" at the physical level and cannot be fully explained by fundamental physics. 25

Science’s use of methodological reduction to understand the chemical and physical constituents of phenomena is a standard investigative procedure, but it must
not be confused with metaphysical reductionism, which is the belief that those constituents constitute a full explanation of the phenomena. Metaphysical reductionism maintains that understanding the physicochemical makeup of an entity fully explains its reality, whether that entity be a plant cell, the human brain, or the cosmos. "At bottom," explains theologian John F. Haught, "reductionism is just an unproved and unprovable belief that the only valid way to understand things as complex as life and mind is to specify their chemical and physical constituents." Such reductionism is the handmaiden of both scientism, with its epistemological conviction that science is the only way to truth, and also of scientific materialism, with its metaphysical conviction that reality is merely the mindless hurrying of matter. Reductionists cannot prove scientifically that the increasing hierarchies of life, from plants, to animals, to man, are entirely explainable by their constituents. This is a matter of belief and not science, but it is advanced as a matter of objective, scientific truth.

**Monod's Chance and Necessity – The DNA explanation**

In *Chance and Necessity*, French biochemist and Nobel laureate Jacques Monod (1910-1976) advanced the thesis that chance alone guides the universe and is responsible for all living things, including man, based upon his inspection of "the more general properties that characterize all living beings." "From the bacterium to man," Monod states, "the chemical machinery is essentially the same, in both its structure and its functioning"; DNA is the "fundamental biological invariant" and genetic code that faithfully replicates itself from within each living organism and thereby "guarantees the
invariance of the species." Further, this reproductive invariance enables living beings to fulfill their purpose, which Monod calls teleonomy.29

The teleonomic character of living things, however, implies no purpose in nature because it "owes almost nothing to the action of outside forces," but rather is "a secondary property deriving from invariance."30 Thus, for Monod, DNA is at once the product of a unique chance event and also the means "of preserving the effects of chance and thereby submitting them to the play of natural selection."31 Once incorporated in the DNA, the chance mutation is faithfully replicated, and, hence, "the accident enters into that of necessity, of the most implacable certainties."32 For Monod then, DNA is not only the "secret of life," but the key to "the origin and descent of the whole biosphere."33

From its origin with the first macromolecules to emerge in the prebiotic soup to its inevitable end in increasing entropy, the biosphere is ruled by chance. Monod urges that this explanation of the universe "is today the sole conceivable hypothesis, the only one that squares with observed and tested fact."34 Thus, he concludes that "objective knowledge" disproves the idea that nature has purpose by showing it to be only the subjective "animist projection" of the teleonomic character of living organisms and an intellectually indefensible effort "to render nature decipherable and morally meaningful."35 Objective knowledge, "the only authentic source of truth" for Monod, demonstrates man’s "total solitude, his fundamental isolation."36 This realization prompts Monod to espouse the "ethic of knowledge," the "transcendent kingdom of
ideas" as a means of personal fulfillment amidst man’s existential struggle "alone in the universe’s unfeeling immensity, out of which he emerged only by chance."³⁷

Monod’s scientific materialist thesis is disarming and initially confusing because it employs the language and to some extent the approach of a rationalist thinker: he begins with a general observation of the nature of things, namely, that living organisms are teleonomic and "in their structure and performance they act projectively – realize and pursue a purpose."³⁸ Whereas the medieval rationalists assumed that "everything must have a purpose," philosopher W. T. Stace observes that since Galileo the scientific movement has "consciously and deliberately expell[ed] the idea of purpose as controlling nature" and has concerned itself not with purpose but with "exclusively an inquiry into causes."³⁹ For all his rationalist trappings, however, Monod is a thoroughgoing scientific materialist.

"Living beings are chemical machines," according to Monod, and their teleonomic functioning "in the final analysis" depends upon the ability of proteins "to 'recognize' other molecules (including other proteins) by their shape, this shape being determined by their molecular structure."⁴⁰ For Monod, therefore, living matter (and a fortiori non-living matter) consists essentially of atoms and molecules operating according to certain arbitrary laws. Indeed, Monod sees little qualitative difference in the higher animals, including man ("Nothing warrants the supposition that the basic interactions are different in nature at different levels of integration").⁴¹ Thus, as with other scientific materialists, Monod "presupposes the ultimate fact of an irreducible brute matter, or material, spread throughout space in a flux of configurations."⁴²
Like Descartes, Monod divides reality into mind and matter. His initial epistemological dualism, however, gives way ultimately to the metaphysical monism of matter, characteristic of scientific materialists:

There lies the frontier, still almost as impassable for us as it was for Descartes. Not until that barrier has been passed will dualism cease to be a force, and to that extent a truth, in the lives of all of us. We today are no less in the habit of differentiating between brain and mind than they were in the eighteenth century. Objective analysis obliges us to see that this seeming duality within us is an illusion.43

In other words, Monod believes that the scientific method, i.e., inductive reasoning from empirical facts, will prove eventually that the mind, with its ineffable capacity to know and its insatiable desire for truth, is merely brain matter and fully explainable in terms of physics and chemistry.

Monod’s scientific materialism is vulnerable, first, to Whitehead’s critique of its inherent illogic. Monod’s basic and admitted postulate is that nature is "objective" and interpretable only through use of the scientific method ("The cornerstone of the scientific method is the postulate that nature is objective").44 As Whitehead points out, however, this postulate from which materialists propound their cosmology is a metaphysical statement based upon "a simple faith in the order of nature."45 In other words, when Monod presumes to be "abolishing Aristotelian physics and cosmology" by applying to nature the inductive reasoning of modern science, he in fact is relying upon an antecedent rationalism, namely, a metaphysical conviction that nature is rationally ordered.46 As Whitehead says: "There can be no living science unless there is a wide-spread instinctive conviction in the Order of Things."47
Not only does Monod fail to recognize that his basic premise is a metaphysical statement about the existence of a rational order in nature, but his argument thereafter relies exclusively upon a scientific method which is inherently incapable of proving the underlying assumption of nature's rational ordering. Thus, Monod's choice of investigative methodology effectively predetermines his contrary result, i.e., that nature lacks purpose or meaning. Whitehead demonstrates that teleology "cannot be justified by any inductive generalization," and that a broader use of reason than simply induction is required to perceive the meaning and purpose in nature. Monod admits, moreover, that his postulate about nature's objectivity is "forever undemonstrable," but he still fails to recognize either its implicit rationalist underpinnings or its admission about the inadequacy of his chosen method to validly test his thesis that nature has no meaning or purpose. Hence, Monod's exclusive reliance upon the scientific method as the means of interpreting nature predetermines the result; the method cannot demonstrate purpose, and thus nature inevitably is found meaningless.

Monod's "thoroughly Cartesian" view that the cell and all living beings are "chemical machines" also suffers an additional logical failure which Whitehead calls the "fallacy of misplaced concreteness." Whitehead would charge that Monod has mistaken his abstractions for concrete realities. In effect, Monod has taken what Descartes and Locke call primary qualities of matter, essentially those which are quantifiable, and has accepted them "as the most concrete rendering of fact." After abstracting the physical and chemical elements from the living organism, Monod has
failed to recognize that these scientific abstractions are only logical constructs and not the whole of the organism.

To take Whitehead's critique a little further, Monod has assumed that by identifying the physicochemical constituents of the brain and identifying the neurochemical processes by which it works, he can fully explain subjectivity and critical intelligence. For Monod, these subjective qualities of mind, for example, qualities which lead him to value and pursue scientific truth, are wholly explainable simply by reducing the brain to its physicochemical constituents and processes. These subjective qualities of mind, however, are as undeniably real as the brain matter itself. They are inextricably interwoven with, but different from, the brain. Yet Monod has reduced them entirely to matter, as if mind itself had no intrinsic reality.

Science performs an immensely valuable service to our understanding by performing a reductive analysis of the brain to its smallest physicochemical constituents and neurological processes. But having performed that reductive analysis as a scientist, the scientist-philosopher commits a metaphysical fallacy when he assumes that by doing so he has fully explained the essential reality of human subjectivity and critical intelligence. In effect, Monod has unjustifiably conflated scientific reduction with metaphysical reductionism by proffering this metaphysical reductionism as scientific truth when it is only his belief.

Monod’s reductionism of all living creatures to their constituent elements is also vulnerable to the logical critique of philosophers like Michael Polanyi (1891-1976), who contends that life and mind are "emergent" phenomena which cannot be explained
fully in terms of lower or chronologically precedent phenomena. Polanyi analogizes nature to a hierarchy, each successive layer of which relies upon, but is not reducible to, the lower. Rather, each higher level is composed of higher organizational principles, which harness the lower processes, as living organisms harness physical and chemical processes, but are not fully explainable in terms of these lower levels.

Polanyi would contend that Monod’s reductionist thesis that biology is merely physics and chemistry is an illogical statement for the same reason that it is illogical to attempt to reduce a town to bricks and mortar, a painting to brush strokes and pigments, or a book to words and phrases. Something more is at work in the higher life forms than can be fully explained simply by identifying their constituent elements. Using such analogies, Polanyi argues that some higher organizational principle (the architect, artist, or writer) has imposed extraneously an order upon the lower processes. Thus, he concludes that physical and chemical processes are necessary but not sufficient conditions for life, which emerges but does not result from these lower processes.

Monod directly addresses Polanyi’s argument that physical forces and chemical interactions "do not fully account for" living systems by contending that Polanyi is merely hiding in "our present day ignorance alone." Similarly, Monod charges religions (a "disgusting farrago of Judeo-Christian religiosity") with hiding in those areas not yet elucidated by the scientific method and relying in effect on "the God of the gaps." Monod’s defense of metaphysical reductionism, namely, that the scientific method will eventually "reduce the properties of a very complex organization to the ‘sum’ of the properties of its parts," seems both a naive faith in the scientific method,
and an admission that he lacks an adequate answer for Polanyi’s emergence thesis. Indeed, Monod admits that in a "very real sense the organism does effectively transcend physical laws – even while obeying them – thus achieving at once the pursuit and fulfillment of its own purpose.”\(^56\)

Just as letters and words are necessary to write this thesis, and the words must follow grammatical rules, this thesis is not reducible solely to the words and sentences or explainable solely by the grammatical rules. Rather, this thesis also has meaning and purpose conveyed by those words and sentences, which are susceptible to critical analysis and responsible judgment by the reader. In order to determine its meaning and purpose, moreover, the reader must apply his critical intelligence, which takes into account but does not limit itself to words and grammatical rules, and which interprets and judges the significance of its contents over which there may be legitimate disagreement. So too, metaphysics is not appropriately limited solely to reductionist thinking but rather invites the application of one's critical intelligence to a wider empirical view of reality than inductive reasoning allows. That wider empiricism, moreover, must take into account the fact of human subjectivity and critical intelligence, which science overlooks in focusing solely on the materiality of the brain.

By enlarging one's field of vision beyond reductionist empiricism, critical intelligence can logically and credibly find a larger significance to evolutionary biology. For example, both Polanyi and the vitalist philosopher E.F. Schumacher (1911-1977) explain that the ontological discontinuity of emergence is fully consistent with
evolution and temporal continuity. Haught capsulizes their argument as follows:

. . . there is no logical incoherence in thinking of nature as a hierarchy of distinct dimensions integrating a continuous, unbroken chain of physico-chemical occurrences, (just as the architect’s designs do not interrupt the continuity of the bricklaying process, but simply impose a determinate structure onto it.) In fact, allowances can also thus be made for the role of chance in the emergence of life and in the mutations that are required for the evolution of new species.

In other words, it is logically possible to accept science's methodological reduction of life and mind to physics and chemistry without necessarily concluding that such reduction is their entire explanation.

While philosophers like Schumacher and Polanyi challenge the logic of reductionist metaphysics with arguments about ordering principles and emergence, organismic philosophers such as Teilhard de Chardin and Whitehead challenge its analytic illusion, namely, the thesis that you can fully understand and explain the whole simply by breaking it down. In their view, any whole organism necessarily transcends the sum of its parts. These organismic philosophers depart from both vitalists and materialists by avoiding dualism altogether; they integrate mind and matter at every level and eschew the scientific abstraction "foisted onto philosophy" by dualism, namely, that matter with simple location in space and time is "the most concrete rendering of fact." Whereas vitalists consider consciousness apart from and not intrinsic to matter, and materialists consider consciousness as an epiphenomenon explainable by and reducible to matter, organismic philosophers permeate matter with consciousness (Teilhard) or mentality (Whitehead).
The purpose of the foregoing discussion is not to advocate the emergent, vitalist, or organismic viewpoints per se. Rather, the purpose is to show that non-materialist metaphysics are consistent with scientific analysis and evolutionary theory when viewed through a non-reductionist lens and, further, that Monod cannot justifiably dismiss such philosophers as hiding in "our present day ignorance." Monod's latter contention rests on his own fallacy of misplaced concreteness, i.e., his erroneous belief that quantitative scientific abstractions constitute essential reality. An additional purpose is to show that Monod's reductionist metaphysics overlooks the intrinsic reality of his own subjectivity and critical intelligence. Monod considers them essentially epiphenomena, which do not factor in his reductionism and therefore constitute a major gap in his materialist metaphysics.

Once Monod separates mind from matter, matter becomes mindless and leads inexorably to a meaningless and purposeless universe. Hence, Monod, like most scientific materialists, adopts a tragic vision of the universe as mindless and indifferent. For Monod, chance and necessity become the decrees of fate, and science and objective knowledge become his ultimate concern. They ward off chaos, provide meaning, certainty, and security amid life’s "enormous lottery" and man’s "total solitude, his fundamental isolation." Yet, for all his railing against "the invention of myths and religions," and against ideologies foisting themselves upon science and its quest for objectivity, Monod seems naively unaware of the myths to which he has submitted.60

Another irony about Monod’s thesis is his repeated wonder at "the stunning richness of the biosphere and the amazing variety of forms and behavior it displays,"
and at "the unfathomable profundity of the genetic and cultural heritage and of the personal experience, conscious or otherwise, which together constitute this being of ours." While rhapsodizing about the beauty of the biosphere, however, Monod denies any intrinsic metaphysical value or validity to this aesthetic quality. Since such qualitative values do not factor in the quantitative world of science, which he believes to be the only source of objective truth, Monod considers such qualitative values epiphenomenal and accords them no intrinsic reality. For Whitehead, by contrast, this aesthetic quality has intrinsic value and constitutes a deeper reality than the "clear" or "objective" materiality which science abstracts from the whole. Monod’s own crabbed view of reality limited to inductive reasoning causes him to deny the metaphysical significance of his own perceptions.

Monod contends that the efficiency of living organisms does not violate the second law of thermodynamics (or increased entropy), i.e., that the quantity of matter/energy deteriorates over time. Monod contends that the order in the universe purchased by evolution is paid for ultimately by the increased disorder of matter as a whole, destined inevitably toward a cold death through entropy. Such scientific laws, however, do not preclude a world of meaning and purpose in the view of scientist-philosophers like Teilhard and Whitehead. Teilhard would accept Monod’s premise that life does not violate physical or chemical laws or the second law of thermodynamics, but still contend that evolution is not due entirely to chance. For Teilhard, evolution is borne along by the forces of tangential and radial energy to increasing levels of consciousness and ultimately to point omega, Christ.
While admitting the possible destruction of the universe through entropy, Teilhard takes an optimistic view that evolution’s struggle from fragmentation through increasing levels of consciousness will progress towards unity. Indeed, for Teilhard, the purpose of evolution is to maximize consciousness, the product of increasing complexity. Complexity in turn is a product of the law of recurrence, which holds that matter diverges and converges towards a critical threshold at which a new intensity or qualitative level of complexity emerges. Thus, Teilhard predicts the future of man as evolving with the aid of radial energy towards a new level of consciousness in ultimate union with Christ.

Whitehead also sees purpose in nature, not as progress toward a predetermined end of evolution, but rather toward aesthetic value. For Whitehead, moreover, a teleological universe is wholly consistent with the element of chance and the possibility of chaos. Perfection within the universe, however, is the integration of intensity with harmony, novelty with stability, and complexity with order. In Whitehead's process metaphysics God lures the universe towards perfection, and thus is both a source of order and of novelty in increasing levels of complexity. Whitehead’s conception of God as a persuasive, rather than a coercive force, is thus compatible with chance and accident in the universe. For the organismic philosophers, therefore, religion and science are compatible and complementary.

Again, the point here is not to advocate the organismic and process metaphysics of Teilhard and Whitehead. Rather, it is to show that Monod's arguments from evolution and increased entropy do not prove a meaningless and purposeless universe. As the
views of Teilhard and Whitehead illustrate, evolution and the possibility of chaos can be considered compatible with religion, optimism, and purpose in nature, and their contentions are at least as intellectually defensible as Monod's materialist metaphysics.

In summary, Monod’s thesis suffers fundamentally from an absence of perspective. He gives science alone the role of "clarify[ing] man’s relationship to the universe" and accords to biology "a central position" in this effort. As Whitehead emphasizes, however, science, including biology, provides only a partial view of reality, abstracted from the whole. It is for philosophy "to harmonize the ultimate concepts of science with the ideas drawn from a more concrete survey of the whole of reality." Indeed, philosophy is "the critic of abstractions"; it is not merely one among sciences; it is "the survey of sciences, with the special object of their harmony, and of their completion." Science in general and biology in particular are incapable alone of fully clarifying man’s relationship to the universe. Thus, Monod has not proven and cannot prove the truth claims for his materialist metaphysics. He has extrapolated from reductionist empiricism to the whole of reality, when this scientific methodology inevitably produces only a limited understanding and deliberately omits human subjectivity and critical intelligence. Monod has turned science's inductive methodology into a metaphysical truth, but his metaphysical reach is beyond the grasp of his scientific discipline.
In his 1996 Introduction to a new edition of *The Blind Watchmaker* (1986), Richard Dawkins asserts that Darwinism "provides the only satisfying explanation for why we all exist, why we are the way we are. It is the bedrock on which rest all the disciplines known as the humanities." Dawkins adds that "all human works are the products of brains, brains are evolved data processing devices, and we shall misunderstand their works if we forget this fundamental fact." Thus, Dawkins sets out to explain "not just that the Darwinian world-view happens to be true, but that it is the only known theory that could, in principle solve the mystery of our existence . . . Not just on this planet but all over the universe wherever life may be found." Darwinism explains that the apparently premeditated design of complex living organisms resulted from a slow cumulative process over immense time, obviating the need for a supernatural deity.

Challenging the argument from design advanced by the 18th-century theologian William Paley, Dawkins asserts that "the only watchmaker in nature is the blind forces of physics, albeit deployed in a very special way." Whereas the watchmaker has foresight, Dawkins explains:

natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind. It has no mind and no mind’s eye. It does not plan for the future. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is the *blind* watchmaker."
Dawkins considers that David Hume’s rebuttal to the argument from design was persuasive but not fully satisfying to atheists because Hume offered no alternative explanation for nature's apparent design. For Dawkins, Darwin provided the full explanation, and "made it possible to be an intellectually fulfilled atheist." 69

Although he attributes all living matter to the laws of physics, Dawkins resists being labeled a reductionist since he does not try "to explain complicated things directly in terms of the smallest parts," or "as the sum of the parts"; rather, he considers himself a "hierarchical reductionist," who "explains a complex entity at any particular level in the hierarchy of organization, in terms of entities only one level down the hierarchy; entities which, themselves, are likely to be complex enough to need further reducing to their own component parts; and so on." 70 Thus, the hierarchical reductionist explains things in terms of their successively smaller units, "which are ultimately explained in terms of the smallest fundamental particles. Reductionism, in this sense, is just another name for an honest desire to understand how things work." 71

Noting the improbability that any single act of chance produced nature’s complexity, Dawkins undertakes to "explain its coming into existence as a consequence of gradual, cumulative, step-by-step transformations from simplest things, from primordial objects sufficiently simple to have come into being by chance." 72 Genetic mutations at each evolutionary stage are random, but their natural selection is a nonrandom survival process: "Each successive change in the evolutionary process was simple enough, relative to its predecessor, to have arisen by chance. But the whole sequence of cumulative steps constitutes anything but a chance process, when you
consider the complexity of the final end-product relative to the original starting point."^73

Thus, the physical process of *cumulative selection*, for Dawkins, "is the blind watchmaker, blind because it does not see ahead, does not plan consequences, has no purpose in view. Yet the living results of natural selection overwhelmingly impress us with the appearance of design as if by a master watchmaker, impress us with the illusion of design and planning."^74

Having dealt with the "philosophical aspects" of Darwinism, Dawkins turns to the details: DNA patterns, or genes, arranged along chromosomes accurately transmit genetic information in a process aimed "selfishly" at their own survival and the propagation in their gene pool. Genes also program individual organisms to be selfish.^75 Cumulative selection following random genetic mutations over immense time explains all of life, for Dawkins, and seems "powerful enough to make the evolution of intelligence probable, if not inevitable."^76 Furthermore, Dawkins adds that "to explain the origin of the DNA/protein machine by invoking a supernatural Designer is to explain precisely nothing, for it leaves unexplained the origin of the Designer. You have to say something like 'God was always there', if you allow yourself that kind of lazy way out, you might as well say 'DNA was always there', or 'Life was always there', and be done with it."^77

Leaving nothing to chance, Dawkins next undertakes to prove that either of two theories potentially explains the emergence of life itself: (1) the inorganic mineral theory which suggests that the DNA/protein machinery may have come into existence as recently as three billion years ago based upon self-replicating inorganic crystals such
as silicates; and (2) and the organic primeval soup theory which suggests that carbon chemistry suitable for life produced large molecules that became self-replicating. Given that the universe consists of 100 billion billion planets, Dawkins reasons that the calculated chance of spontaneous self-replication once in about a billion years seems "if anything in danger of erring on the side of being too plausible!" Consequently, for Dawkins, "the present lack of a definitively accepted account of the origin of life should certainly not be taken as a stumbling block for the whole Darwinian worldview. . . ."

In his Preface to The God Delusion (2006), Dawkins ramps up his attack on God as a "spectacularly weak" "scientific hypothesis about the universe," and lays into the pseudoscientific fundamentalist Christian challenges to Darwinian evolution based upon special creation, intelligent design, and irreducible complexity in nature. Citing his book Climbing Mount Improbable (1996), Dawkins argues:

. . . one side of the mountain is a sheer cliff, impossible to climb, but on the other side is a gentle slope to the summit. On the summit sits a complex device such as an eye or a bacterial flagellar motor. The absurd notion that such complexity could spontaneously self-assemble is symbolized by leaping from the foot of the cliff to the top in one bound. Evolution, by contrast, goes about the back of the mountain and creeps up the gentle slope to the summit: easy! The principle of climbing the gentle slope as opposed to leaping up this precipice is so simple, one is tempted to marvel that it took so long for a Darwin to arrive on the scene and discover it. Given his view of the implausibility of "the God hypothesis," Dawkins searches out the natural selection pressures that favored such misguided religious behavior and concludes that it is probably a "misfiring" of several brain organs, an aberrant byproduct of a once useful childhood propensity to believe what one's parents or tribal elders believed because it favored the child's survival. These misfirings have promoted the
"natural tendency towards a dualistic theory of mind," which "acknowledges a fundamental distinction between matter and mind" and "believes that mind is some kind of disembodied spirit that inhabits the body and therefore conceivably could leave the body and exist somewhere else." By contrast, Dawkins identifies himself as an "intellectual monist" who "believes that mind is a manifestation of matter – material in a brain or perhaps a computer – and cannot exist apart from matter." He then offers a four-fold Darwinian explanation of altruism: man's genetic kinship, generosity motivated by the expectation of returned favors, benefits derived from a reputation for kindness, and personal stature from such reputation. Thus, for Dawkins, Darwinism fully explains man, mind, religion, and morality.

In Darwin's Dangerous Idea (1995), American philosopher Daniel C. Dennett reinforces Dawkins' atheistic neo-Darwinian view of reality. "In a single stroke," Dennett asserts, "the idea of evolution by natural selection unifies the realm of life, meaning, and purpose with the realm of space and time, cause and effect, mechanism and physical law." Since neo-Darwinian evolution is now undisputed among scientists, Dennett declares we must accept "that God is, like Santa Claus, a myth of childhood, not anything a sane, undeluded adult could literally believe in. That God must either be turned into a symbol for something less concrete or abandoned altogether." For Dennett, as for Dawkins, Darwinism answers not only the "how" questions about the development of life but also the "why" questions about teleology and final cause, providing "for the first time, a stable system of explanation" – "the Principle of Accumulation of Design."
Dennett considers Darwin's "dangerous idea" to constitute a simple reductionism, namely, an algorithmic process that demystifies existence and dispatches the need for a "sky hook" – traditional belief in God.\textsuperscript{89} "Darwin's dangerous idea is that Design can emerge from mere Order via an algorithmic process that makes no use of pre-existing Mind."\textsuperscript{90} Citing Dawkins' "selfish gene" which uses an organism as a survival machine to enhance its continued replication, Dennett identifies the ruthless process of natural selection among random genetic variations as the machinery of nature that "unifies all of biology and the history of our planet into a single grand story."\textsuperscript{91} Since Darwinian evolution addresses "questions of ultimate origins," Dennett sees a fundamental conflict between science and religion, and religion is the loser.\textsuperscript{92}

Although they focus and elaborate on neo-Darwinian evolution, the biologist Dawkins and the philosopher Dennett add little to the materialist argument of the biochemist Monod in \textit{Chance and Necessity} and, therefore, are susceptible to the same critique. They have erroneously assumed that inductive reasoning can answer metaphysical questions about meaning and purpose; they have mistaken their reductionist scientific abstractions about physicochemical matter for concrete reality; they have overlooked human subjectivity and creative intelligence in their analysis of "objective" reality; they have blithely assumed that their minds can contribute meaningful insight into reality while simultaneously attributing their minds entirely to a mindless evolutionary process; they have failed to recognize that their inductive reasoning presumes, but cannot prove, the rational ordering of the universe and, therefore, necessarily leads to a meaningless and mindless metaphysics; and they have
failed to apply their full critical intelligence to the broad empiricism required for any comprehensive metaphysics.

Whereas Dennett is an unabashed metaphysical reductionist, Dawkins declares his reductionism to be "hierarchical" in order to argue that random mutations at successive stages in evolution can produce increasingly complex life forms through natural selection over eons of time. At bottom, however, the evolutionary process, for Dawkins, boils down to mindless matter, his ultimate reality. Furthermore, Dawkins declares that he is a material monist, folding mind into matter, but he ignores the inner world of his own cognitive subjectivity from which he analyzes the world "out there."

Thus, his Darwinian approach to reality reverts to the very dualism he opposes; he has separated his own analytical mind from the "external" matter he undertakes to analyze.

Dawkins claims that neo-Darwinian evolution "provides the only satisfying explanation for why we all exist, and why we are the way we are," and Dennett claims that it shows us "a new way to make sense of the 'why' questions." It does nothing of the sort. For all its purported explanatory powers, neo-Darwinian evolution cannot tell us why there is anything rather than nothing, why there is evolution in nature, why we have a mind, why our minds seek understanding, why we trust our minds to interpret reality, or why we think reality is worth investigating. These fundamental questions of meaning and purpose in life and universe require our use of reason and a broad empiricism beyond the explanatory reach of merely scientific analysis, much less evolutionary theory. Furthermore, they require taking account of our own subjectivity and critical intelligence.
Dawkins and Dennett obviously have undertaken more than a scientific defense of neo-Darwinian evolutionary theory. They also have proclaimed what they consider the theory's metaphysical implications, namely, the death of the untenable and illusory "God hypothesis." As missionaries for evolutionary materialism, Dawkins and Dennett have pointedly issued a major challenge to theism. They assert that a providential God is illusory in light of neo-Darwinian evolution since random genetic mutation, blind natural selection, and immense cosmic time fully account for all of life. Furthermore, they have directly challenged the pseudoscientific responses to neo-Darwinian evolution by "scientific" creationists and intelligent design (ID) theorists who argue for God's special creation of life and complex life forms. While it is the province of theology and not this thesis to harmonize the idea of God with neo-Darwinian evolution, Dawkins' effective rebuttal has dignified these misguided, anti-scientific explanations as if they represented mainstream theology. Consequently, the omission in this thesis of some comment on the controversy might unintentionally imply that scientific materialism has left no intellectual room in the universe for belief in God.

Creationists believe that the Bible is divinely inspired and therefore inerrant even on matters of science. Young-Earth Creationists (YEC) read the Bible literally to mean that God created the universe in six days between 6000 and 10,000 years ago, whereas Old-Earth Creationists (OEC) construe Genesis to mean six "God-sized" days and accept both the Big Bang theory and 13.7 billion year age of the universe. Thus, the YEC and OEC alike reject Darwinian evolution outright under the biblical test of truth, but the OEC accept some evolution with strategic Divine interventions.
"Scientific creationism," however, is not science at all because it fails to consider the wide array of information from multiple scientific disciplines supporting Darwinian evolution and, instead, considers the Bible to be a scientifically accurate and superior account of life, irrespective of scientific discoveries. By comparing the Bible to the *Origin of Species*, creationism "trivializes religion," according to Haught, "by artificially imposing scientific expectations upon the sacred text whose objective is in no sense one of satisfying scientific curiosity," and by overlooking the real Biblical message about trust and gratitude for the gift of life and about openness "to the ultimate mystery of the universe."  

In contrast with scientific creationists, ID theorists eschew biblical authority and instead advance an alternative, purportedly scientific argument that the "irreducible complexity" of many biochemical systems belie "Darwin's gradualist process of natural selection sifting random mutations." In his new twist to Paley’s old argument from design, the biochemist Michael Behe asserts that gradual evolution by natural selection cannot alone account for the irreducible complexity discovered in biology. Mathematician and philosopher William A. Dembski adds a statistical argument to Behe’s biochemical argument by asserting, as a matter of statistical probability, that "biological complexity is not exclusively the result of material mechanisms but also requires intelligence." Additionally, philosopher of science Stephen C. Meyer asserts that intelligent design provides a better explanation than neo-Darwinism for the specific and complex information needed to account for the sudden appearance of new animal body parts and organization during the Cambrian explosion 350 million years ago.
Like creation science, however, ID theory is religion masquerading as science. The ID argument – that conscious intelligence rather than blind natural selection is necessary to account for the otherwise improbable and "irreducible complexity" of genes, proteins, and body organization – offers no explanation of evolution's obvious imperfections. Thus, ID theory effectively insulates itself from empirical testing and consequently is not proper science. ¹⁰² Harvard biologist E.O. Wilson asserts that ID theory rests entirely upon a default argument with no positive supporting evidence and offers no mechanism "to explain the transcription from supernatural force to organic reality." ¹⁰³ Although ID theorists like Behe and Dembski assert that intelligent design rests on empirical evidence and deductive logic presupposing no Creator or theology, Haught convincingly demonstrates that ID theory is fundamentally a religious explanation of the mystery of existence. ¹⁰⁴

Dawkins has argued that neo-Darwinian evolution fully accounts for the design in nature, rendering atheism intellectually fulfilling and theism rationally untenable, as if Darwinism and God occupied the same explanatory slot and defeating the argument from design eliminated the existence of God. Creationists and ID theorists bit on Dawkins' sophistic bait by conflating science and metaphysics themselves, just as the scientific materialists do. Consequently, they responded to Dawkins's atheism as if their only choice were between God and Darwinian science.

Both sides to this misbegotten debate have fixated on nature's design rather than its drama and meaning. Consequently, they have missed the essential point that a perfect world would be finished, static, deadening, and futureless. ¹⁰⁵ By associating
teleology or purpose with design or order in the universe, the debaters have overlooked
the potential existential significance and intrinsic value of evolution itself. Evolution,
for scientists-philosophers like Teilhard and Whitehead, renders the universe self-
actuating, gives mankind a creative role in its development, and characterizes God as a
lure and inspiration and not a micro-manager of a cosmic adventure toward aesthetic
harmony, beauty, and perfection. In a word, the debaters have overlooked the
teleological possibilities of neo-Darwinism, trivialized the idea of God, and fallen
woefully out of step with mainstream theology, which fully accepts neo-Darwinian
evolution.

*Hawking's Grand Design – the Gravity Explanation*

Stephen Hawking until recently was Lucasian Professor of Mathematics at
Cambridge, a position formerly held by Sir Isaac Newton. In *The Grand Design* (2010),
Hawking maintains that "philosophy is dead. Philosophy has not kept up with modern
developments in science, particularly in physics. As a result scientists have become the
bearers of the torch of discovery in our quest for knowledge." For Hawking, the
recent discoveries in physics are indeed profound, for he attributes the whole of creation
to the laws of physics, specifically the law of gravity: "Because there is a law like
gravity, the universe can and will create itself from nothing. . . . Spontaneous creation is
the reason there is something rather than nothing, why the universe exists, why we
exist. It is not necessary to invoke God to light the blue torch paper and set the universe
going." Gravity provides the entire explanation; God is superfluous.
Hawking elaborates that M-theory is the "candidate for the ultimate theory of everything"; it is "a whole family of different theories" which "predicts that a great many universes were created out of nothing," obviating the requirement for "the intervention of some supernatural being or God." M-theory "is the most general supersymmetric theory of gravity," involving highly sophisticated concepts such as eleven space-time dimensions able to contain both vibrating strings and point particles, among other dimensions. Thus, M-theory constitutes "the unified theory Einstein was hoping to find" and "the only complete theory of the universe." In short, M-theory explains the Big Bang 13.7 billion years ago and the laws of nature that govern every aspect of the universe since then, including man.

Hawking admits no exceptions to the laws of nature and asserts that "scientific determinism must hold for people as well," including human behavior. Thus, any belief in man's free will is untenable:

Though we feel that we can choose what we do, our understanding of the molecular basis of biology shows that biological processes are governed by the laws of physics and chemistry and therefore are as determined as the orbits of the planets. Recent experiments in neuroscience support the view that it is our own physical brain, following the known laws of science, that determines our actions, and not some agency that exists outside those laws. . . . It is hard to imagine how free will can operate if our behavior is determined by physical law, so it seems that we are no more than biological machines and that free will is just an illusion.

Only because we find it "impractical" to apply underlying physical laws to predict human behavior do "we use the effective theory that people have free will." Hawking's contention that "scientists have become the bearers of the torch of discovery in our quest for knowledge" is unabashed scientism. He contends that science
has outstripped philosophy, and presumably other ways of knowing, as the primary means of discovering ultimate truth. While Hawking’s epistemology and metaphysics are similar to those of Jacques Monod, Richard Dawkins, and Daniel Dennett, Hawking apparently is unaware that he is practicing philosophy, even as he disparages it. His book begins by posing, and ends by answering, some of philosophy’s most fundamental questions:

How can we understand the world in which we find ourselves?
How does the universe behave?
What is the nature of reality?
Where did all this come from?
Did the universe need a Creator?
Why is there something rather than nothing?
Why do we exist?
Why this particular set of laws and not some other?115

Only the second of his foregoing eight questions is a "how" question ("How does the universe behave?") that characteristically falls within the domain of science. The rest are the "why" questions fundamental to the whole history of Western philosophy.

Perhaps not surprisingly, given his apparent ignorance of his philosophical undertaking, Hawking’s answers to the questions he poses are full of contradictions.

Take, for example, Hawking’s concluding statement quoted earlier: "Because there is a law of gravity, the universe can and will create itself out of nothing." As mathematician and philosopher John C. Lennox explains, Hawking has just contradicted himself at least twice: first, by asserting that nothing existed before the universe while simultaneously asserting that gravity existed (and gravity certainly is not nothing), and, second, by asserting that the universe created itself, which clearly is a logical
Lennox summarizes his critique of Hawking's statement: "He says the universe comes from nothing that turns out to be a something (self-contradiction number one), and then he says the universe creates itself (self-contradiction number two)."\textsuperscript{117}

But Lennox notes yet a third Hawking's contradiction: "His notion that a law of nature (gravity) explains the existence of the universe is also self-contradictory, since a law of nature, by definition, surely depends for its own existence on the prior existence of the nature it purports to describe."\textsuperscript{118} A law of nature is descriptive and predictive of observed phenomena, which the law itself does not create but presupposes. Thus, gravity predicts the rotation of the earth around the sun, but it does not create the sun or the earth and, furthermore, gravity cannot not explain or create itself. Newton discovered the law of gravity; he did not create gravity or cause the celestial bodies to behave in accordance with it. Thus, the idea that the law of gravity (or M-theory) could bring the universe into existence is nonsensical, or in Lennox's phrase "pure (science) fiction."\textsuperscript{119}

Hawking has attributed creative powers to a natural law (gravity) as if it were a causative agent, when the two ideas (law and agency) are wholly distinct. In effect, Hawking has conflated Aristotle's four types of causes, illustrated by the following example of a house: (1) the \textit{material cause} is the raw material such as bricks and boards of which the house is made; (2) the \textit{formal cause} is the architect's blueprint for the house; (3) the \textit{efficient cause} is the contractor's construction to the architect's blueprint;
and (4) the final cause is the purpose for building the house, for example, the prospective owner's desire for a roof over his head.

Science traditionally asks the "how" questions, focusing on the material cause, and the "why" questions, limited to the functions of raw materials. But science does not ask and it cannot hope to answer the "why" questions about purpose, such as why the prospective owner wanted a house, because inductive reasoning is not equipped to answer such questions. Hawking has equated gravity or M-theory to an efficient cause as if a law of nature caused the universe, just as the construction contractor caused the house to be built, and also equated it to a final cause as if the law of nature decided to create a universe, just as the contracting party decided to order a new house. As Lennox points out, "on their own, the theories and laws cannot cause anything, let alone create it."\(^\text{120}\)

Hawking also challenged the theism of scientific pioneers like Descartes and Newton who believed that the laws of nature are the work of God. Hawking asserts that "this is no more than a definition of God as the embodiment of the laws of nature. Unless one endows God with some other attributes, such as being the God of the Old Testament, employing God as a response to the first question [What is the origin of the laws?] merely substitutes one mystery for another."\(^\text{121}\) Putting aside Hawking's mischaracterization of these scientists’ view of God as merely a law of nature (rather than the source and sustainer of the universe), Hawking has effectively defined the law of gravity as a god with creative powers, while never answering the obvious question of who created gravity.
Like Monod, Dawkins, and Dennett, Hawking writes admiringly about the exquisite design of the universe:

The laws of nature form a system that is extremely fine-tuned, and very little in physical law can be altered without destroying the possibility of the development of life as we know it. Were it not for a series of startling coincidences in the precise details of physical law it seems, humans and similar life-forms would never have come into being.\textsuperscript{122}

Like these other scientific materialists, Hawking also attributes this extraordinary design, including human life, solely to the basic stuff of the universe, i.e., matter and energy, rather than to God or any ultimate mind or agency. Such extreme reductionism, however, inevitably undermines human rationality; mind becomes no more than the meaningless firing of neural synapses.

Physicist John Polkinghorne explains the logical implications of such reductionism:

For, not only does it relegate our experiences of beauty, moral obligation, and religious encounter to the epiphenomenal scrapheap, it also destroys rationality. Thought is replaced by electro-chemical neural events. Two such events cannot confront each other in rational discourse. They are neither right nor wrong. They simply happen. . . . The very assertions of the reductionist himself are nothing but blips in the neural network of his brain. The world of rational discourse dissolves into the absurd chatter of firing synapses. Quite frankly, that cannot be right and none of us believes it to be so.\textsuperscript{123}

The idea that the rational arises from the irrational gives us no reason to trust our minds, including the assertion of Hawking and the other scientific materialists that our minds and our world are entirely reducible to matter.
The Inherent Contradictions of Scientific Materialism

By now it should be clear that scientific materialism is not a scientific truth but a belief system, a worldview resting on the conviction that the scientific method is wholly adequate to elucidate reality. The foregoing discussion has shown the limits of the inductive method and reductionism, and the need for a broader empiricism and a broader use of reason as the basis for sound metaphysical inquiry. The acid test of any worldview, however, is whether it is compatible with the trust that its proponents place in their own critical intelligence. Is the scientific materialists' worldview consistent with their desire to know the world? The key question, then, is how does scientific materialism measure up to this test of consistency with the mind’s search for truth?

As described in Chapter 1, human reason, man's critical intelligence, engages the four distinct mental acts (being attentive, intelligent, critical, and responsible) characteristic of the mental imperative to seek the truth about reality. Critical intelligence proceeds through the five primal fields of meaning characteristic of our engagement with the world (feelings, aesthetics, interpersonal involvements, narratives about our place in the world, and the theoretic world of science). Scientism and scientific materialism, however, limit critical intelligence to the theoretic and narrowly empirical approach of science alone, suppressing these other basic ways of seeing nature. Thus, in reasoning to a universe without mind or meaning, the scientific materialists deliberately narrow the inherent capacities of their own minds in deriving their metaphysics. They entirely overlook and implicitly mistrust their non-theoretic cognitive capacities.
Over cosmic time something less has clearly given rise to something more in reality – the purportedly lifeless and unconscious universe has given birth to life and mind. This radical innovation might suggest something about the character of the universe as a whole, especially given the emergence of man's critical intelligence with its inherent desire to know the truth. Because critical intelligence is fully part of nature, however, it is relevant to understanding the mind's emergence. But scientific materialism limits itself to the empirical method, which deliberately omits such subjective mental data and the striving characteristics of all life. These are the very characteristics, however, that distinguish mind and life from inanimate entities. Thus, the scientific materialists' claim for absolute metaphysical truth is belied by their obvious omissions of an essential part of reality, namely, their own subjectivity and desire for truth.

Monod, Dawkins, Dennett, and Hawking explain the mind's emergence on the basis of earlier and simpler physical processes, abstracting from the mind's critical intelligence and its inherent desire to seek and know the truth. Such reductionist explanations, however, provide only a partial understanding of this emergent phenomenon, which science can never hope to explain. By relying solely upon inductive reasoning, scientific materialism cannot account for why such possibilities become actualities, why subjectivity and intelligence emerged, or, in Haught's words, "why the universe harbors a being with an insatiable desire to know." Mankind cannot hope to engage these "why" questions through inductive reasoning alone. They require application of man's critical intelligence to all his primary sources of
knowledge, including feelings, aesthetics, interpersonal involvements, and narratives about his place in the world. Thus, the limited inductive methodology of scientific materialism is inconsistent with its large metaphysical ambitions.

Various scientific disciplines (e.g., neuroscience and evolutionary biology) study mind, of course, but none of these scientific disciplines examines critical intelligence from within because such study would require a wider field of vision and a new form of attentiveness beyond the limited scope of empirical science. With its narrow empiricism and reductionism, however, scientific materialism disregards the mind's imperatives as a valuable item of data. This oversight occurs, moreover, even as scientific materialism places its unquestioned trust in the mind's capacity to understand and make correct judgments about the nature of reality. Thus, there is a fundamental inconsistency between the absolute metaphysical claims of scientific materialists and their failure to accord any essential reality to their own minds on which they confidently make those claims.

Like most thoughtful people, scientific materialists accept the value of truth as an ultimate good. For Monod, "the ethic of knowledge" is paramount; and for Dennett, "love of truth" is central to a meaningful life. But if truth is merely a human construct, man's own arbitrary invention, a cultural artifact of man's own conditioned consciousness, then a serious question arises about whether it is entitled to universal acceptance and respect that scientific materialists give it. Scientific materialists "clearly treat truth as a value that judges their own work, and therefore as something they did not invent." Nevertheless, as Haught points out, they "deny in their philosophy of nature
what they implicitly affirm in their actual ethical and intellectual performance. . . . They generally fail to see the logical contradiction between their almost religious obedience to truth-telling on the one hand and their evolutionary debunking of it on the other." In short, the absolute value they place on truth is inconsistent with their implicit characterization of that very truth as the accidental byproduct of man's mindless evolutionary conditioning.

Making a case for God is not the intent of this thesis, but exposing the naïve assumptions and obvious contradictions underlying scientific materialism surely opens the door to a meaningful and trustworthy universe, which is prerequisite to belief in God, or gods, or some higher power. Dennett claims that evolutionary biology and materialist physics would dominate Western culture and eliminate any remaining traces of belief in God, but for the resistance of religion. Irrespective of such religious resistance, however, this thesis contends that the inherent contradictions of scientific materialism leave ample room for God because they make room for a meaningful and purposeful universe.

Such a universe is accessible to man's primary perception, which Whitehead described as a combination of man's reason and a broad empiricism. This combination enables man to grasp nature's bottomless depth and its quest for aesthetic value – a depth and value which mere sense perception overlooks, filters out, and abstracts from nature's organic whole. Bernard Lonergan (1904-84) advocated attentiveness to attentiveness itself since one's cognitive interiority is part of nature that science overlooks. Similarly, Teilhard stressed the interiority, subjectivity, and increasing
complexity of the natural world. These scientist-philosophers advocated a richer and wider empiricism that takes into account man's primal ways of knowing and provides a greater access to reality than science can offer. Such broad empiricism, however, attends to more than the outside world. Unlike scientific materialism, it also focuses on the mental acts by which we make contact with the natural world through seeing, understanding, and knowing.

Every mental event is part of reality, asserted Whitehead, although scientific reasoning of scientific materialists assumes otherwise. While science is completely justified in overlooking the subjective in its narrow empirical methodology, philosophers must understand and take into account science's limited way of seeing, and scientific materialists obviously have failed to do so. Human subjectivity and critical intelligence are intrinsic to reality; they are not dualistically separated phenomena but are an integral aspect of the life process. Yet scientific materialism ignores or devalues them.

In arguing for the lack of a cosmic purpose, scientific materialists' omission of subjectivity and critical intelligence is significant. As Haught notes, "purpose (understood as a process of bringing to actuality something of lasting and intrinsic value) may itself be coextensive with, though not reducible to, the long story of intensifying subjectivity in the cosmos – and, along with it, freedom and critical intelligence." While asserting "there is much more to life's meaning and cosmic purpose than the emergence of subjectivity," Haught properly concludes that "any process that gives rise to increasingly intense modes of subjectivity – and eventually to our own
undeniably valued critical intelligence – may plausibly be called purposeful."\textsuperscript{131} By excluding consideration of man's critical intelligence and desire to know, therefore, scientific materialists overlook the potential connection between the cosmos and critical intelligence.

By overlooking such potential cosmic backing, moreover, scientific materialists leave critical intelligence with a seemingly inadequate explanation. First, they ignore man's critical intelligence and subjectivity as if they did not exist or were merely epiphenomenal, and then they assert that mindless matter alone produced intelligent life. Their conclusion, however, seems unscientific, if not magical, especially given scientific materialism's claims to objective scientific truth. Indeed, their approach invites the very basic questions which Haught has raised about their conclusions, namely, "how mindless objects can be transformed into sentient, intelligent and critical subjects" and "how intelligence arises out of unintelligence without citing a proportionate cause for such a prodigious feat."\textsuperscript{132}

If a blind, unconscious, and mindless universe is solely responsible for the human mind, even if it were explainable by an accident of evolution emerging from the physically simpler and earlier forms and processes of nature, the human mind would seem unworthy of the confidence that scientific materialists place in it to arrive at truth about reality. Furthermore, Haught has credibly argued:

Only a world that I anticipate to be completely intelligible could ever be a fully adaptive environment for my desire to know. And only a completely intelligible world can ensure that science will have a future as well. Scientific naturalism cannot provide such a world. If taken consistently, it would suffocate critical
intelligence. Fortunately, most self-avowed naturalists do not consistently follow their own creed. Thus, the very faith that scientific materialists place in the human mind and the mind’s quest for ultimate truth seems incompatible with their metaphysical assertion of an ultimately unintelligent and mindless universe.

In summary, evolution certainly explains something important about the emergence of mind, but it also invites a further, layered explanation beyond that of simple, theoretic empiricism and reductionism. Indeed, it requires a richer and broader empiricism that takes into account the fact of man's critical intelligence and the mind's imperative for seeking truth, both of which lie beyond the confines of empirical science. Such expanded empiricism necessarily would consider the totality of nature, inevitably would suggest the possibility of meaning and purpose in the universe, and potentially would invite a theological explanation. Unless some cosmic intelligence pre-existed the Big Bang, it is difficult to believe that human intelligence ever could emerge solely from mindless matter. In short, the emergence of mind suggests the possibility of a rational cosmic precedent in some permanent intelligence. Conversely, the attribution of mind to a blind, mindless, evolutionary accident suggests a magical, miraculous event inconsistent with the empirical explanatory basis upon which scientific materialism rests.
CHAPTER 9

SUMMARY and CONCLUSION

The aim of science is to seek the simplest explanations of complex facts. We are apt to fall into the error of thinking that the facts are simple because simplicity is the goal of our quest. The guiding motto in the life of every natural philosopher should be, Seek simplicity and distrust it.


I want to urge you as much as I can, dear friend, to be patient toward all that is unsolved in your heart and to try to love the questions themselves like locked rooms and like books that are written in a very foreign tongue. Do not seek to have answers, which cannot be given to you because you would not be able to live them. And the point is to live everything. Live the questions now. Perhaps you will then gradually, without noticing it, live along some distant day into an answer.

– Rainer Maria Rilke, *Letters to a Young Poet* (1903)

This thesis has argued that the Great War enabled scientism and scientific materialism to dominate postwar thought by undermining Western confidence in man's reason and diverting Western culture from critical engagement with this narrow epistemology and its materialist metaphysics. Although they have shadowed the development of science ever since the historical revolt of the 17th century, scientism and scientific materialism never dominated Western culture until after the Great War. The giants of Enlightenment thought had pursued their scientific investigation of the physics and mechanics of nature firmly convinced of its rational ordering and divine creation. Belief in God also withstood Descartes's radical doubt and his division of reality into mind and matter. Furthermore, the two resultant schools of epistemology, rationalism and empiricism, initially cooperated in pursuing knowledge of a divinely ordered universe.
In the 18th century, David Hume questioned the objective validity of causation, which provided the common foundation of both rationalist proofs of God based upon order in the universe and empiricist reliance on inductive reasoning based upon proof of cause and effect. Hume also limited the human mind to a passive aggregation of atomistic sense impressions, which reinforced Cartesian dualism. Immanuel Kant promptly rose in defense of both rationalism and empiricism with his Copernican revolution in epistemology. The mind is active, Kant declared; it shapes sensory experience using conceptual categories like causation, and it develops moral principles enabling postulates like God and immortality. Thus, Kant restored mind within the cosmic setting and gave reason an active role in empirical science and rationalist philosophy. By harmonizing reason and science again in a fundamentally rationalist world, Kant kept scientism and scientific materialism at the margins of 18th-century thought. Kant's successor Georg Hegel co-opted scientific materialism by enfolding it among the many theses that arise within the grand dialectic of a wholly rational universe.

In the early 19th century, Romanticism launched a further challenge to scientism and materialism. The Romantics emphasized man's subjectivity and his rational, emotional, and unconscious modes of experience, and they also emphasized nature’s organismic qualities and intrinsic aesthetic value, which the Newtonian worldview overlooked. The theologian Friedrich Schleiermacher called upon man's "intuition and feeling" to perceive God's revelation in the world, and he described true religion as a "sense and taste for the Infinite." William Blake urged man "To see a world in a grain
of sand/ And heaven in a wildflower," and William Wordsworth warned mankind about science’s narrow reductivist perspective: "Our meddling intellect/ Mis-shapes the beauteous forms of things: –/ We murder to dissect." Whereas Hume took a spectator view of human consciousness as if it were not a part of reality, the Romantics made consciousness a centerpiece of reality, stressing man's subjective experience as an intrinsic part of nature's organic beauty.

When Charles Darwin published *On the Origin of Species* (1859) and *The Descent of Man* (1871), which seemed to vindicate materialism’s claim that nature is solely the product of impersonal laws and blind chance, Henri Bergson responded with *Creative Evolution* (1907). Bergson distinguished between the intellectual and intuitive modes of thought and emphasized the vital impulse underlying evolutionary development. He urged philosophy to apply intuition as well as analysis in order to grasp the duration, vitality, and novelty inherent in evolution and to appreciate the radical change that occurred with the advent of man and human consciousness.

From the Enlightenment to the Great War, therefore, Western culture actively responded to scientism's epistemology and scientific materialism's metaphysics. Much of philosophy, theology, and the arts argued for a broader kind of cognition than that of inductive reasoning and for a broader conception of nature than mere mechanism. They kept scientism and scientific materialism cornered by challenging their claims that science provided the sole access to truth and matter constituted the basic stuff of reality. After the Great War, however, cultural engagement with scientism and scientific materialism came to an abrupt end.
Characterized as the greatest catastrophe since the fall of Rome and the cause of an unprecedented revolution in European thought, the Great War was the great turning point in modern Western civilization. The war shook the very foundations of Western civilization; it destroyed the remaining illusions about inevitable progress, impugned traditional confidence in human rationality, and cast man adrift on a dark and threatening sea of uncertainty, bereft of any stable cultural landmarks. George Bernard Shaw likened the war to nature's revenge for human negligence: "nature gave us a very long credit; and we abused it to the utmost. But when she struck at last she struck with a vengeance. For four years she smote our firstborn and heaped on us plagues of which Egypt never dreamed."

Before the war, the West had truly ruled the world, producing most of its economic output, controlling most of its population and land mass, and developing its most vibrant culture. Then, in a cataclysmic war, the West devoured itself and sacrificed its young. Within the first two weeks at Lorraine, the French had suffered their highest casualties of the entire war, and within the first month at the Marne, the war had already cost one million casualties. On a single day, July 1, 1916, on the Somme, Britain suffered 60,000 casualties, including 20,000 dead. This obscene human toll is six to eight greater than the 10,000 casualties, including 2500 dead, that the Allies suffered on D-Day in World War II, the largest amphibious invasion in the history of the world. The casualty rate among major combatants of the Great War was almost 50 percent; France lost half of its male population between the ages 20 and 32, and half of those who survived were wounded; British casualties were three to four times greater
than those in World War II; and by war’s end the grim toll was 15.4 million wounded and 9.45 million dead – averaging 6000 deaths per day for 1500 days.  

After a full century of war we tend to become jaded about such monstrous human casualties. But for the Europeans who greeted war with near universal enthusiasm in 1914, including its leading intellectuals, the gruesome butcher's bill by 1918 was a hideous embarrassment and unimaginable catastrophe. The war destroyed four Imperial Dynasties (the Habsburgs, the Hohenzollerns, the Romanoffs, and the Ottomans); caused massive labor, economic, and political strife throughout postwar Europe; disenfranchised sizable ethnic minorities within the newly created European nations; and spawned a virulent postwar indifference to human life, from the Bolshevik programs against Russian and Ukrainian Jews to the Turkish genocide of Armenians. The Great War changed Western reality and caused a radical discontinuity between the prewar civilization and the postwar wasteland.

Cultural disillusionment quickly set in and imagination took hold of the war experience in the guise of memory. Postwar writing and art gave the war an image of betrayal, loss, and alienation. The civilian and military leaders who started and managed the war had deceived and betrayed the returning soldiers. War dead became sacrifices rather than heroes. In Ezra Pound's words, they had died "For an old bitch gone of the teeth,/ For a botched civilization." Postwar Europe had become a barren, cultural wasteland, which T.S. Eliot's described as a "heap of broken images" and "stony rubbish," where "death had undone so many." The cultural image of the disastrous war and its resulting wasteland resonated completely with scientific materialism's
worldview – nature as a selfish genetic struggle for survival, man as descended from a common ancestor with the apes, mind as conditioned evolutionary byproduct, and reality as mindless, meaningless, and indifferent matter. In short, the postwar wasteland was strewn with existential uncertainty and cosmic alienation and became the natural breeding ground for materialism’s godless metaphysics.

To find meaning and purpose in the shattered postwar world the Western mind needed to reengage the eternal questions about how and what we can know about existence, how we can understand the truth about our world, and what that truth reveals about our universe. Theology rests fundamentally on the conviction that nature has meaning and purpose, so restoring such a worldview after the crisis seemed to be theology's obvious postwar mission. But rather than engaging scientific materialism and restoring meaning to the cosmos, theology disregarded modern scientific developments altogether, in what historian Franklin L. Baumer calls a "patent failure of religion to encompass, or even to fit satisfactorily into, the scientific worldview."13

The Crisis theologians reacted strongly to the 1914 "Manifesto of the Intellectuals" in support of the Kaiser's war. They emphatically rejected not just the Kaiser's war policy but the whole of 19th century liberal Protestant theology represented by the Manifesto’s religious signatories. Finding the symbiotic relationship between religion and culture untrustworthy, the Crisis theologians urged man to avoid the philosophical and anthropological influence of Liberal theology, to awaken to the limitations of human thought, and to approach God in abject surrender. Karl Barth led this generational revolt by presenting God as Wholly Other and knowable only through
biblical revelation and divine grace – not through "awe in the presence of history" advocated by Liberal theology but through awe for the Word of God in Scripture. Throughout his distinguished and courageous career as the dominant influence in 20th century Protestant theology, Barth continued to reject the use of reason in man's quest to understand God and God's world and to marginalize the human project of scientific and metaphysical inquiry as an unhelpful and misguided reversion to natural theology.

As Crisis theology waned following Barth’s withdrawal in 1933, Emil Brunner and Friedrich Gogarten became leaders in Protestant neo-orthodoxy and attempted to relate Christianity and anthropology, which had caused them to break with Barth. Brunner considered that God reveals himself in Creation, that faith is not knowledge but trust in God, and that man comes to know himself in relationship to God. Although he challenged scientific positivism, Brunner centered his theology upon man's need for a personal relationship with God revealed in Creation rather than upon integrating theology with modern science. By contrast, Gogarten emphasized man's responsibility for the divinely created world through the exercise of his reason and pursuit of science. But, as Heinz Zahrnt explains, Gogarten maintained that "faith must not subject knowledge to itself, nor must knowledge attempt to eliminate faith," effectively disengaging Gogarten’s neo-orthodoxy from scientific developments and their significance for cosmic meaning and purpose.¹⁴

Protestant existentialism took two prominent theological forms in relating the gospel message to man's postwar anxiety over death and impermanence: the de-mythologized Christianity of Rudolf Bultmann and the transcendent and immanent God
of Paul Tillich, neither of which focused upon modern scientific developments. Rather than considering the Bible to be God's self-revelation, as it was for Barth, Bultmann considered the Bible to be God's message and inspiration for authentic Christian existence – God's relationship with man, and man's self-transcendence by experiencing the divine presence. Tillich conceived of God as the depth dimension, as the God above the traditional God of theology, and as the inspiration for human authenticity – the ground of man's courageous act of will to overcome his existential anxiety about his finitude, meaninglessness, and unfulfilled possibilities. Hence, existentialist theology remained concerned with the personal relationship between God and man in overcoming man's postwar alienation and estrangement rather than with the relationship between Christianity and the modern scientific worldview.

Instead of maintaining indifference or separateness, Roman Catholicism displayed genuine hostility toward modern scientific developments and reverted to a dogmatic neo-Thomism after rejecting the prewar Modernist movement as "agnosticism." The neo-Thomist Jacques Maritain attacked Henri Bergson's ideas about creative evolution and dynamic reality as presumptuous human speculation, and attacked Pierre Teilhard de Chardin's evolutionary thought as "Christian gnosis" and "theology-fiction." As a scientist and a Jesuit, Teilhard believed he had a mission to integrate Christianity with modern evolutionary science, envisioning God and man as having a dual role in the cosmic evolutionary progress. Yet the Church constantly thwarted Teilhard's efforts, charged him with "irresponsible speculations" about human evolution, and insisted instead upon God's "instantaneous creation." The Church
prohibited publication of Teilhard's magnum opus *The Phenomenon of Man*, and denied Teilhard university chairmanship and public speaking opportunities.¹⁶

Teilhard urged the Church to embrace the modern spirit which he considered "pantheistic in tendency, immanent, organistic, evolutionary," to replace the outdated image of Christ as "hidden in the clouds," to present Christ as "clothed in the energies of the world in which he is immersed," and to break down age-old barriers between faith and reason.¹⁷ Teilhard considered that a religion of progress and evolution was "exactly in line with what the modern world is looking for as its God"; it created "a place where Catholics and non-Catholics could meet Christ together"; and it fostered belief in an earthly progress toward Christ and in "a divine guarantee that, in spite of all death, the fruit of our labour is irreversible and cannot be lost."¹⁸ Catholicism remained resistant to evolutionary theory, however, until Pope Pius XII finally gave it conditional support in 1950, and John Paul II ultimately declared it "more than a hypothesis" in 1996.¹⁹ Catholicism's postwar resistance to evolutionary theory and its hewing rigidly to neo-Thomistic philosophy undermined efforts like Teilhard's to promote Catholicism's engagement with scientific materialism.

In short, the war led Barth and Teilhard in opposite directions: Barth away from rational engagement with the world and toward the Otherness of God, and Teilhard toward religious engagement with modern evolutionary theory. Barth effectively directed postwar Protestant theology away from reasoned engagement with modern science, and Catholic officials consistently thwarted Teilhard's efforts towards such engagement. Barthian neo-orthodoxy considered human reason incapable of
understanding God or his relationship to the world; Protestant existentialism focused on man's psychic needs rather than his metaphysical concerns; and Catholic neo-Thomism reverted to the medieval world of being and God as First Cause. Teilhard and Whitehead resisted this anti-metaphysical climate, reinterpreted theistic faith in light of modern scientific developments, and constructed a modern cosmology infused with mind, meaning, and purpose. But the two major Christian denominations largely ignored or resisted their efforts, and, consequently, Christian theology interposed no serious challenge to scientism and scientific materialism.

With the default of Christian theology, this thesis considered philosophy's response only to find that philosophy’s two prominent postwar movements, logical positivism and existentialism, also had turned away from metaphysics and even had lent support to scientism and scientific materialism. The logical positivists considered science the surest route to truth, subjected synthetic propositions to verification through empirical observation, and denigrated metaphysical propositions as "completely outside the field of knowledge, of theory, of the discussion of truth or falsehood." Similarly, the existentialists generally ignored metaphysical questions and focused instead on how to live authentically in an impersonal and indifferent universe. At the forefront of these two movements stood three great European philosophers of postwar era, Ludwig Wittgenstein, Edmund Husserl, and Martin Heidegger, who became the fulcrum in philosophy’s turn away from reasoned inquiry into cosmic meaning and purpose.

During his wartime service, Wittgenstein had an epiphany about the meaning of life as a non-philosophical quest. Consequently, he redirected his philosophy away from
such transcendental concerns in order that man could "see the world aright."\textsuperscript{21} In his wartime opus \textit{Tractatus Logico-Philosophicus} (1921), Wittgenstein stripped philosophy of any doctrines, redefined philosophy as only "the logical clarification of thoughts," and separated philosophy entirely from ethics, value, and meaning in life, which philosophy "must pass over in silence."\textsuperscript{22} When seeking "what is higher" and viewing the world "as a whole," Wittgenstein maintained that we enter the realm of the "mystical" and "transcendental," and must throw away the philosophical ladder. The arts can \textit{show} us about metaphysical matters, but philosophy cannot \textit{say} anything about them.\textsuperscript{23} In short, Wittgenstein sought to end rationalist engagement with metaphysics.

Ironically, the Vienna Circle of logical positivists adopted the logical, atomistic picture of the world presented in the Wittgenstein's \textit{Tractatus} as their blueprint to develop further philosophical doctrines, claiming that philosophy is what really matters and rejecting transcendental matters as meaningless. Indeed, Wittgenstein's \textit{Tractatus} inadvertently supported scientific materialism by picturing a Humean world of disconnected and atomistic facts. Although Wittgenstein eventually abandoned this picture theory of language as reflecting the world of facts, he continued to relegate philosophy to the limited role of clarifying language and dissolving philosophical problems as misconceptions or misuse of language. Yet, he never directed his critique toward scientific materialism.

Husserl tried to preserve rationalism and metaphysics and to bridge the impasse between idealism and materialism through phenomenology, which he considered the "ultimate science" for comprehending the world.\textsuperscript{24} Husserl thought that the essence of
reality lay within consciousness, that pure reason could gain absolute knowledge about what is intentionally constituted in consciousness, and that the phenomenological process produced the essential intuition and necessary knowledge of fundamental reality. The positive sciences had blinded man by their products and prosperity and had caused the "seeming collapse of rationalism." They had made man indifferent to life's ultimate questions about life's meaning and had given man a meaningless world – a materialist world of mere physics and chemistry devoid of spiritual content or intrinsic value.\textsuperscript{25}

Husserl used his significant influence as the leading German philosopher in the 1920s to advocate a "higher humanism" that extended a moral order beyond national boundaries, to present phenomenology as the safeguard of reason in accessing reality, and to challenge positive science's usurpation of reason as a betrayal of Western man.\textsuperscript{26} The rise of Nazi anti-Semitism in the mid-1930s halted Husserl's efforts by removing him from his faculty position and German citizenship. Husserl finally despaired of restoring reason to a postwar culture dominated by positivism which "decapitates philosophy," and he declared that "the dream is over."\textsuperscript{27}

Despite his emphasis of human subjectivity and his resistance to materialism, however, Husserl succumbed to the influence of scientism himself by approaching phenomenology itself as a science, objectifying human consciousness and the object of consciousness, and limiting man's critical intelligence to a narrow empiricism. Thus, Husserl never bridged the dualism of mind and matter, and he hobbled his metaphysical inquiry by overlooking the other non-theoretic fields of meaning through which man
accesses nature and grasps essential reality. Ultimately, Husserl's circumscribed concept of reason, a hybrid of rationalism and empiricism, undermined his efforts to resist the influence of the positive sciences and the metaphysics of materialism.

In *Being and Time* (1927), Heidegger applied Husserl's phenomenology to ontology by focusing initially on man, *Dasein*, because "in its Being this being is concerned about its very Being." Heidegger faulted traditional metaphysics for focusing on beings and forgetting Being, and in his 1929 inaugural lecture at Freiburg University, he declared that metaphysics no longer belonged in philosophy. Instead, metaphysics belonged to the "nature of man" rather than to philosophy. Therefore, it is for Dasein and not the philosopher to answer the ultimate question: "Why are there beings at all, and why not rather nothing?" Rationalist metaphysics was over and hereafter inquiry into reality required a new type of thinking.

Heidegger thought that Western philosophy had taken a wrong turn with Plato and Aristotle by emphasizing human values over existence itself, by exalting human reason as the source of truth, and by forgetting Being in its difference from beings. Consequently, Heidegger finally turned away from *Dasein*, considering his anthropocentric focus a mistake characteristic of all Western philosophy. Thus, he declared that "reason, glorified for centuries, is the most obstinate adversary of thinking." Truth was no longer an exercise of mind or will but an exercise of freedom, the receptivity to and acceptance of Being as Being reveals itself. Furthermore, for Heidegger, the artist replaced the philosopher as source of such truth, and the work of art effected the disclosure of Being.
Like Wittgenstein, Heidegger had removed metaphysics from philosophy and substituted the insights of poets and artists for those of rationalist philosophers in man's search for answers to his most fundamental existential questions. Despite their necessary corrective to rationalist metaphysics, however, Wittgenstein and Heidegger both inappropriately curtailed man's critical intelligence simply to being attentive and intelligent, and they overlooked his need to be critical and responsible. They both properly emphasized the importance of being attentive to what reality can show to the intelligent observer, like the artist and poet. But they failed to acknowledge the importance of being a critical judge and a responsible decision-maker about the significance of that experience. By not exercising judgment and responsibility in metaphysics, philosophy no longer served as the critic of abstractions like materialism or the harmonizer of such scientific concepts with a broader empirical survey of the whole of reality. In short, Wittgenstein and Heidegger both failed in their responsibility as philosophers to critically judge and make responsible decisions about the materialist viewpoint.

The existentialists accepted Husserl's emphasis on man's consciousness of the life-world but not his rationalist pursuit of essential reality, and they accepted Heidegger's emphasis on human authenticity but not his ontological interest in Being. Indeed, Heidegger declared that he was not an existentialist for the very reason that existentialism focused on man's ethical struggle for authenticity, whereas Heidegger’s interest in man was essentially as a vehicle for ontological inquiry. Rather, the existentialists considered their metaphysics a given rather than a subject for philosophic
inquiry. Wittgenstein, Husserl, and Heidegger effectively had bequeathed them a materialist understanding of reality, a determinist world without freedom. Hence, in their quest for authenticity existentialists had to find some other space to live in since materialism left nature devoid of freedom. Rather than confront materialism, therefore, existentialists escaped it. Atheists like Jean-Paul Sartre took a heroic stance before an indifferent universe; and theists like Gabriel Marcel made human authenticity a genuine response to a caring Deity. In short, existentialism focused on man, not nature, and on ethics, not cosmology because it accepted and never stood up to scientific materialism.

With rare exceptions like Whitehead, therefore, postwar philosophy abandoned metaphysics and critical judgments about metaphysical claims like scientific materialism. Indeed, the logical positivists actively supported verification of factual statements through empirical reasoning and effectively endorsed the epistemology of scientism. Despite their interests in the world as a whole and in Being, Wittgenstein and Heidegger called for transformation of man's reason into a kind of thinking that was inadequate to preserve and foster their ontological commitment. They left the mystery of the transcendent and the meaning of Being to the attentive intelligence represented by poets and artists and disregarded reason's essential role as a critical judge and responsible voice in metaphysics.

For their part, the luminaries of literature and art became traumatized by the Great War, estranged from the "botched civilization" responsible for it, and faced with a dark, forbidding, and indifferent postwar universe. Literature turned inward upon a troubled human psyche, portraying war-damaged characters like Virginia Woolf's
Septimus Smith and Ernest Hemingway's Jake Barnes who struggled to find their place in the indifferent postwar world and to learn "how to live in it." Franz Kafka's Joseph K. cannot prove his innocence because he is inherently unworthy, and Kafka's K. cannot understand, access, or communicate with Lord of the Castle, and so he remains estranged and homeless. Jean-Paul Sartre's Antoine Roquentin eased his nauseating self-doubt and metaphysical anguish upon discovering the contingency of all existence, including his own.

Within Western literary culture only science seemed to survive the war intact, and it came to dominate the literati. British philosopher Bertrand Russell thought science could help mankind to cope with the dismal realization "that the whole temple of man's achievement must inevitably be buried beneath the debris of the universe in ruins." American journalist and critic Joseph Wood Krutch thought science had unmasked prewar metaphysical certitudes as mere phantoms, had established scientific materialism as the true reality, and had left man without "any more meaning than the life of the humblest insect that crawls from one annihilation to another." American journalist and critic Max Eastman thought poetry must "yield up to science the task of interpreting existence, and finding out what we call truth, of giving men reliable guidance in the conduct of their lives." And British psychologist and literary critic I.A. Richards credited science with exposing the "countless pseudo-statements – about God, about the universe, about human nature," identifying spiritual notions of the universe as "probably nonsense," and leaving poetry with the role of helping man to
cope with the indifferent universe of scientific materialism by offering "a perfectly possible means of overcoming chaos."³⁴

Some voices did sound religious resistance to, or accommodation with, the newly hegemonic science. American poet John Crowe Ransom turned to fundamentalism in God without Thunder (1930); Harvard geologist Kirtley F. Matter advocated "a religion developed by rigidly scientific methods of thought"; philosopher William Pepperell Montague proposed a religion with non-sacrosanct dogmas, which "would be transformed into hypotheses"; and New Republic founder Herbert Croly advocated reconciliation between science and religion.³⁵ But science mostly held the upper hand, and literary critics gave it pride of place. Science overshadowed literature itself and diminished literature's traditional role and value as an important source of truth about reality. Indeed, the leading creative voices of the postwar era, exemplified by novelists from England, America, and continental Europe, described the very cosmos propounded by scientific materialists – mindless, meaningless, and indifferent.

In Mrs. Dalloway Virginia Woolf portrays the shell-shocked Septimus Smith disintegrating within a callously unconcerned postwar world that is possibly "without meaning."³⁶ Into this same indifferent world Ford Maddox Ford introduces Christopher Tietjens, the Tory ideal and Anglican saint who is endlessly tormented by society for his virtuous character. Ernest Hemingway pictures the war as a human slaughterhouse, which prompts Frederick Henry, the American volunteer in the Italian ambulance corps, to declare, "abstract words such as glory, honor, courage, or hallow are obscene."³⁷ E.E. Cummings describes the existential hell of French prison life, John Dos Passos the
dehumanizing slavery of military life, and Hemingway the indifferent world that "kills the very good and very gentle and very brave impartially." Thus, postwar literature offers a world without meaning or purpose, a world where men like Nick Adams suffer wounds, make a separate peace, search for healing, and develop a stoic code to live by. The postwar literary giants had found and accepted a world without transcendent meaning, the indifferent and hostile world of scientific materialism.

Prominent contemporary artists painted the same picture, both those who went to war and faced its horrors and those who avoided war and railed against an indifferent world. Christopher Nevinson enthusiastically entered the ambulance corps to experience war as an English Futurist. Then he saw firsthand and began painting war’s dehumanizing brutality in *Returning to the Trenches* (1914-15), its wanton human toll in *La Patrie* (1916), and its utter absurdity in *Paths of Glory* (1917). Ludwig Kirchner volunteered for war but the military regimen caused his physical and mental breakdown. Kirchner conveyed his breakdown in the expressionistic *Self-Portrait as a Soldier* (1915), a grisly fantasy of his artistic maiming by military service. Kirchner’s *Artillerymen in the Shower* (1915) literally exposes the German war machine as emaciated, anonymous, and frail young soldiers vulnerable to their own leadership as well as to their foreign adversaries.

Otto Dix welcomed war as a pugnacious militarist with a Nietzschean fervor to revitalize conservative Germany and captured his fierce attitude in the expressionistic *Self-Portrait as a Soldier* (1914). But Dix gradually morphed from self-confident aggressor to a stoic victim, pictured in his wide-eyed *Self-Portrait as Shooting Target*
(1915). For all this courage, wounds, and awards as a senior noncommissioned officer on both the Eastern and Western Fronts, Dix ultimately supplanted war’s promise of patriotic glory with its fierce bestiality in his late war paintings. By the war’s end Dix had become as rabidly antiwar as he was militantly pro-war at its beginning, depicting horribly maimed and grossly deformed war veterans playing cards in his Dada-inspired *Skat Players* (1920).

Dada arose simultaneously in Zürich and New York to attack the cultural, political, and social forces responsible for the disastrous war and "to cure the madness of the age."\(^{39}\) Tristan Tzara asserted that Dada wanted "to make a clean sweep of existing values," and his *1918 Dada Manifesto* castigated logic as a disease.\(^{40}\) Dadaists targeted man's irrationality, portrayed the human mind as mechanical and untrustworthy, and "aimed to destroy the reasonable deceptions of man and recover the natural and unreasonable order."\(^{41}\) Berlin Dadaists Raoul Hausmann and Johannes Baader found inspiration in the materialist universe of the Darwinian biologist Ernst Haeckel, and Zürich Dadaists found inspiration in the unconscious and unpredictable "law of chance."\(^{42}\) New York Dadaists Marcel Duchamp and Francis Picabia and Berlin Dadaist George Grosz portrayed man as a mindless sexual machine and marriage as a demeaning bourgeois product of a mechanized postwar world. Chance ruled the universe, and madness ruled the age.

For all their radically divergent and iconoclastic excesses, however, Dadaists could not escape the influence of their own unconscious upon their art, and the artists’ unconscious assumed a central role in Dada's successor movement, Surrealism. As
explained by its pioneering historian Maurice Nadeau, Surrealism placed its primary emphasis "on the night side of being, on the imagination, on instinct, desire, and the dream, on the irrational or merely ludic forms of behavior. . . ." Max Ernst made the transition from Dada to Surrealism by creating disturbing new worlds and counter realities with troubling psychological implications, like his blasphemous works Santa Conversazione (Sacred Conversation) (1921) and Pieta or Revolution by Night (1923), satirizing, respectively, the Immaculate Conception and God the Father holding his Son. Like Dada before it, Surrealism continued to denigrate human reason and to struggle for meaning in a troubled, materialist world.

In summary, the Great War shattered the stable world inherited from the Enlightenment and left Western culture in disarray. The war shook man's belief in the transcendent, rendered the old theological questions irrelevant, undermined man's confidence in reason, left man alienated, anxious, and adrift in a changing and unfathomable universe. In response to this unsettling and insecure postwar state of affairs, scientism offered certainty about the facts of nature, assuring mankind that science and science alone could disclose objective truth. Similarly, scientific materialism offered certainty about the universe, assuring mankind that science had proven reality to be utterly materialist. Neo-Darwinian evolution had shown that life and mind had evolved solely from natural selection of inheritable, random mutations over immense time, and that the universe consisted basically of mindless matter following indifferent physical laws.
In effect, scientific materialists had revived the ancient pre-Socratic Greek world of the Fates, the remorseless and indifferent world of necessity, but with a significant difference. The scientific materialists claimed that this respectable 5000-year-old worldview was no longer just a matter of belief, but a matter of scientific truth. Furthermore, those who considered the world to contain intelligence, meaning, and purpose were intellectually naïve or disingenuous, indulging in the "God delusion," believing in the "sky hook," and denying objective, scientifically proven facts. No one with intellectual integrity, they claimed, could credibly disagree with them. Yet their philosophic methodology is wholly inadequate to their truth claims, and their philosophic worldview is fundamentally inconsistent with their own cognitive desire for truth.

Scientific materialists entirely overlook their own critical intelligence as part of reality; they limit and implicitly mistrust their rich cognitive capacity by employing only inductive reasoning; they reduce everything to its physical constituents and assume that those constituents fully explain the complexity of life and the world; they mistake these reductionist abstractions for concrete, organic reality; they fail to recognize that inductive reasoning presumes but cannot prove the world's rational ordering; they unquestioningly trust their mind’s cognitive capacity but simultaneously undermine that very trust by attributing their minds to a mindless evolutionary process; and they idolize truth but then implicitly denigrate it as the arbitrary invention and cultural artifact of their mindlessly conditioned consciousness. In essence, the scientific materialists
myopically turned the inductive and reductionist methodology of science into an overarching metaphysic, a scientific worldview beyond the capacity of science alone.

The scientific materialists' fixation on epistemological and metaphysical certainty arises from what philosopher Richard J. Bernstein calls "Cartesian Anxiety," referring to Descartes' effort to find a "fixed foundation" for knowledge. Their objectivist state of mind and desire for certainty basically seeks to avoid Cartesian Anxiety and to "escape the forces of darkness that envelop us with madness, with intellectual and moral chaos," by seeking the certainty of empirical science. To escape anxiety about this mystery of existence intensified by the Great War, they have fled to the false epistemological security of scientism, which "leaves out something vitally important, or fails to recognize that there are other legitimate forms of experience and knowledge." Fundamentally, their approach represents a lack of courage to face honestly the mystery of existence.

Scientific materialists assume that because science is reductionist and aims "to seek the simplest explanations of complex facts," reductionism is the infallible and exclusive guide to complex reality. But, as Whitehead warns, philosophy must not "fall into the error of thinking that the facts are simple because simplicity is the goal of our quest. The guiding motto in the life of every natural philosopher should be, Seek simplicity and distrust it." Scientific materialists have fallen into this oversimplification error by believing that science’s reductionist abstractions about complex facts constitute a full explanation of ultimate reality. They have failed to criticize their scientific abstractions and to distrust their metaphysical conclusions. In
short, they have forsaken their philosophical duty to harmonize the concepts of science with a broader empirical survey of the whole reality.\textsuperscript{48}

Recognizing that scientific materialism abstracts from reality as a whole and that induction limits the field of knowledge, the Western mind must open itself to other forms of knowledge and experience beyond the limited bounds of science alone when addressing questions of meaning and purpose in existence. This broader concept and application of reason involves what Bernstein describes as "a continuous dialectical tacking" between the details of inductive discovery and the global mystery of reality.\textsuperscript{49} While advances in evolutionary biology can explain the causal mechanism for the organization of living beings, neo-Darwinian evolution itself cannot convey ultimate meaning. It does not predetermine the kinds of organisms, or address the origin of life or the universe, or explain nature’s constant, creative striving for newer and higher forms of order. In other words, empirical science looks only for cause and not for purpose in nature. It can explain \textit{how} neo-Darwinian evolution constitutes the mechanism but cannot explain \textit{why} neo-Darwinian evolution happens to be the mechanism for development of life on earth. In seeking to understand reality and our existence, we must learn to ask different questions than science allows.

Science does not investigate and cannot account for the nothingness and its transition into being, although they are among man's fundamental existential concerns.\textsuperscript{50} Rather, such fundamental existential inquiry is the province of man's critical intelligence, man's being attentive, intelligent, critical, and responsible in drawing upon a wide empirical survey of his experience, including but not limited to the theoretic
explanations of science. Evolution may explain how nature produced the human mind, but it cannot explain why we have a mind, why our minds seek understanding, why we trust our minds to interpret reality, or why we think reality is worth investigating. Yet these basic questions command attention in any meaningfully examined life.

Mind and understanding are an inseparable part of nature, and meaning does not simply stand out "there" to be discovered, but instead arises through a "happening" of understanding. To ascertain meaning and purpose in nature, therefore, we must become open to, and have an encounter with, reality – letting reality "speak to us" in a continuous process that never achieves finality. As the Austrian existentialist poet Rainer Maria Rilke stressed about our quest to understand the truth about reality, we must "try to love the questions themselves," indeed, "to live them." Then perhaps we will "live along some distant day into an answer." This happening of understanding from an encounter with reality requires more than scientific inquiry, which cannot even provide assurance that our own inquiring minds are genuine features of reality.

In short, scientific materialism with its absolute reliance on science as the sole avenue to truth is fundamentally incapable of addressing ultimate meaning and purpose in nature. To the contrary, its exclusive reliance upon the inductive method and insistence upon "objective" knowledge inevitably biases its results towards finding a mindless, purposeless, and meaningless universe because science is methodologically incapable of providing a comprehensive understanding of reality. Therefore, scientism is an epistemological and metaphysical dead end because the investigation of meaning
and purpose requires broader modes of inquiry and different ways of seeing into the mystery of existence than the scientific method alone can provide.

The search for truth requires critical judgment rather than objectivity and the exercise of critical judgment in turn requires responsibility in making decisions. Although absolute truth is elusive, the quest for such truth is existentially liberating. The quest gives a vitality to life that is lost by retreating to the false security of misguided truth claims on the one hand or by despairing of reason's capacity to grasp truth on the other. Scientific materialists have sapped the vitality from life by hiding from the mystery of existence under the mask of empirical science. They have truncated man's critical intelligence to inductive reasoning and limited man's experience of existence to a narrow empiricism.

The application of man's full critical intelligence to a wider empiricism, by contrast, would not only heighten and enrich man's experience of existence but would enliven and broaden his quest for truth. Importantly, the process would free man from of thrall of scientific materialism. First, it would disclose that scientific materialism's view of reality is its own invention due to its narrow empiricism and theoretical approach to reality. Secondly, it would recognize that scientific materialism deliberately overlooks the fundamental beauty of creation and inevitably engenders cosmic pessimism. Third, it would suggest a different concept of reality than the colorless, odorless, senseless, and valueless metaphysics that scientific materialism has foisted on the modern mind. Indeed, the full application of man's critical intelligence to a wider empirical experience might suggest the inherent goodness, truth, and beauty of the
universe that the medieval philosophers advocated and the dramatic coherence and aesthetic teleology that Whitehead described. Instead of assuming cosmic indifference or unfathomable mystery, moreover, this critical intellectual process might well reveal an inherent beauty and futurity to the universe. Furthermore, the backing of such a universe might well inspire a more optimistic attitude toward human existence and a more profound ethics toward one's fellow man.
Figure 1. William Blake, *Newton*, 1795, Tate, Liverpool.
Figure 2. Pablo Picasso, *Les Demoiselles d'Avignon*, 1907, Museum of Modern Art, New York.
Figure 3. Ludwig Kirchner, *The Street*, 1913, The Museum of Modern Art, New York.
Figure 4. Christopher Nevinson, *Returning to the Trenches*, 1914-15, National Gallery of Canada.
Figure 6. Umberto Boccioni, *Elasticity*, 1912, Pinacoteca di Brera, Milan.
Figure 7. Ludwig Meidner, *Apocalyptic Landscape*, 1913, Westfalisches Landmuseum, Munster.
Figure 8. Fernand Léger, *Soldier Smoking*, 1916, Kunstmmlung Nordrhein-Westfalen, Dusseldorf.
Figure 10. Christopher Nevinson, *La Patrie*, 1916, Birmingham Museums and Art Gallery, UK.
Figure 11. Ernst Ludwig Kirchner, *Artillerymen in the Shower*, 1915, Solomon R. Guggenheim Museum, New York.
Figure 12. Ernst Ludwig Kirchner, *Self-Portrait as a Soldier*, 1915, Allen Memorial Art Museum, Oberin College, Ohio.
Figure 13. Otto Dix, *Self Portrait as a Soldier*, 1914, Municipal Gallery, Stuttgart.
Figure 14. Otto Dix, *Self-Portrait as Shooting Target*, 1915, Otto Dix Foundation, Vienna.
Figure 15. Otto Dix, *Skat Players*, 1920, Staatsgalerie, Stugart.
Figure 17. Marcel Duchamp, *Fountain*, 1917, Tate Modern, London.
Figure 18. Marcel Duchamp, *The Bride Stripped Bare by her Bachelors, Even (or Large Glass)*, 1915-23, Philadelphia Museum of Art.
Figure 20. George Grosz, *Daum marries her pedantic automation ‘George’ in May 1920. John Heartfield is very glad of it*, 1920, Berlinische Galerie, Museum of Modern Art, Bonn.
Figure 21. Max Ernst, *Santa Conversazione (Sacred Conversation)*, 1921, Collection Particuliere (private collection).
Figure 22. Max Ernst, *Pieta or Revolution by Night*, 1923, Tate Gallery, London.
NOTES

CHAPTER 1

1 III, ii, lines 104-05 (from Mark Anthony's oration at Caesar's funeral).

2 "August 1914 is the axial date in modern Western history, and once past it we are directly confronted with the present-day world," William Barrett, Irrational Man (Garden City: Doubleday Anchor Books, 1958), 28; "The Great War was to be the axis on which the modern world would turn," Modris Eksteins, Rites of Spring (Boston: Houghton Mifflin Company, 1989), 237; the Great War "was a hideous embarrassment to the prevailing Meliorist myth which had dominated the public consciousness for a century. It reversed the Idea of Progress," Paul Fussell, The Great War and Modern Memory (Oxford: Oxford University Press, 1975), 8; "The first half of the twentieth century, especially after 1914, marked a revolution in European thinking almost beyond compare," Franklin L. Baumer, Modern European Thought: Continuity and Change in Ideas, 1600-1950 (New York: McMillan Publishing Co., 1977), 402; "The First World War . . . altered the ways in which men and women thought not only about war but about the world, about the culture and its expressions . . . it changed reality," Hynes, Samuel. A War Imagined, The First World War and English Culture (New York: Atheneum, 1991), xi.


4 H.G. Wells concludes that the war had destroyed "fixed ideas, prejudices, and mental limitations unparalleled in all history" and that we have not yet begun "to realize yet how much of the pre-war world is done with for good and all, and how much that is new is beginning." H.G. Wells, The Outline of History, Vol. II (London: 1920), 748, in Hynes, Samuel. A War Imagined, 323.


7 Warren Wagar, H.G. Wells, 30-31, in Stromberg, Redemption by War, 194.


9 "Their vision of fate, remorseless and indifferent, urging a tragic incident to its inevitable issue, is the vision possessed by science. Fate in Greek Tragedy becomes the order of nature and modern thought." Alfred North Whitehead, Science and the Modern World (New York: The Free Press, 1967), 10. "It was because of this firm faith in [the moral] Law that Whitehead called the Greek tragic poets, rather than the early Greek philosophers, the true founders of scientific thinking." Kitto, The Greeks, 177.


13 Russell, Science and Religion, 7-18, 189. Drawing upon the second law of thermodynamics, Russell foresees an end to evolution in entropy: "There is no law of cosmic progress but only an oscillation upward and downward, with a slow trend downward on the balance owing to the diffusion of energy." Consequently, Russell concludes that "no ultimately optimistic philosophy can be validly inferred." Ibid., 81.


18 Friedrich Nietzsche, The Gay Science (1882) in The Portable Nietzsche, trans. Walter Kaufmann (New York: Vintage Books, 1967), 95. Nietzsche writes the story of the madmen who entered the marketplace in daylight carrying a lantern and crying, "I seek God!" As everyone turned and laughed at him, the madmen declared: "God is dead... And we have killed him." Recognizing from the silence of the people that he had "come too early," the madmen asks, "are we not straying as through an infinite nothing?"

19 Nietzsche, The Twilight of the Idols (1889) in L. Nathan Oaklander, Existentialist Philosophy, an Introduction, 2d ed. (Prentice Hall, 1996), 122. Nietzsche considers Christianity inherently unworthy of belief because divinely inspired altruistic love is irrational: "No man has ever done anything that was done wholly for others and with no personal motivation whatever; how, indeed, should a man be able to do something that had no reference to himself, that is to say lacked all inner compulsion..." Nietzsche, Human, All Too Human in Oaklander, Existentialist Philosophy, 130. Personally lacking God's altruistic love, we feel sinful and guilty by comparison and search for the external rather than the internal causes for our bad feelings, which Nietzsche calls a "psychology of error." Nietzsche, Human, All Too Human (Part Two, Volume 2, The Wanderer and His Shadow), in Oaklander, Existentialist Philosophy, 139. Similarly, Nietzsche considers the Christian distinction between man's soul and his actions irrational. The agent and the deed are the same, for Nietzsche; "there is no 'being' behind the doing, effecting, becoming: 'the doer' is merely a fiction added to the deed – the deed is everything." Nietzsche, On the Genealogy of Morals in Oaklander, Existentialist Philosophy, 118. The soul is essentially man's free will because otherwise man's action would be unintentional or irrational and, consequently, not punishable. To the contrary, says Nietzsche, the freedom to act is inherent and man is the sum total of his actions. In short, Nietzsche considers the Christian notion of the soul as the creation of the weak, who refuse to accept existential reality and need another world to reward their suffering life's tribulations.
Steven E. Aschheim, *The Nietzsche Legacy in Germany 1890-1990* (Berkeley: University of California Press, 1992), 86, 203-05, 213. German Protestants construed Nietzsche’s critique of decadence as an impetus for regeneration and a call for church reform; and some Catholics invoked Nietzsche’s revaluation of values as a call for a “Dionysian Catholicism.” According to Aschheim, “in Nietzsche’s system of thought, the Catholic, Protestant and mystic streams of Christian experience all found their place.” Ibid., 206. All these religions had to channel Nietzsche’s potentially anarchic notions of will, vitalism, immoralism, and individualism into manageable sociopolitical and intellectual frameworks.” Ibid., 210.

Nietzsche, *The Will to Power* (1895) in Oaklander, *Existentialist Philosophy*, 106; Nietzsche, *Beyond Good and Evil* (1886) in Oaklander, *Existentialist Philosophy*, 108, 115. Although power is the essence of reality for Nietzsche, the exercise of violence constitutes a failure of self self-mastery; it is a low grade expression of the will to power because it is other-directed rather than inner-directed and because action that depends for its value on the reaction of others is lower on the scale of self-mastery. Nietzsche’s ethical test is whether the action is overtly serving one’s self interest or covertly serving some external impetus, goal, or standard.


Ibid., 153.

Stace, "Man against the Darkness," 54.


Ibid., 12-14; Tom Sorell, *SCIENTISM, Philosophy and the Infatuation with Science* (London: Routledge, 1991), 24-40, 176. Although he disputes that scientism began with empiricism, Sorell recognizes that the views of Bacon, Descartes, and other 17th-century scientists and philosophers genuinely anticipated the 20th century rise of scientism and its confidence in scientific reasoning.


Ibid. Comte ranked the sciences according to their entry into the positivist stage, ranging from mathematics through physics, chemistry, and biology, to the final stage of sociology. Comte does not claim that the final stage is ultimately reducible to the earlier stages, but rather the recognition of a wider application of the earlier stages.

Ibid., 525; Baumer, *Modern European Thought*, 315-16.


Ibid., 14.


37 Barrett, *Death of the Soul*, 36.

38 Ibid., 42.

39 “If the cause in itself discloses no information as to the effect, so that the first invention of it must be entirely arbitrary, it follows at once that science is impossible, except in the sense of establishing entirely arbitrary connections which are not warranted by anything intrinsic in the natures of either causes or effects,” Whitehead, *Science and the Modern World*, 4. Barrett also makes this point about Hume's view of causation: “There is no logical justification at all; our inference from cause to effect is merely an expression of human habit. We have made the inference in the past, and it worked; and we continue to do so out of the inertia of human habit. Thus the whole edifice of science – that stunning edifice of the New Science, of which Hume's contemporaries stood in such awe – becomes merely a highly formal expression of human habit,” Barrett, *Death of the Soul*, 45.

40 Whitehead, *Science and the Modern World*, 4-5. As Whitehead points out, scientific faith has "tacitly removed the philosophic mountain" with its instinctive faith in the Order of Nature that has deep roots in Western civilization: "Certainly from the classical Greek civilisation onwards there have been men, and indeed groups of men, who have placed themselves beyond this acceptance of an ultimate irrationality" and "have endeavored to explain all phenomena as the outcome of an order of things which extends to every detail."

41 Barrett, *Death of the Soul*, 44.

42 Stumpf, *Philosophy, History & Problems*, 314-15, 324-25, Georg Hegel (1770-1831) transformed Kant's rationalist philosophy into metaphysical idealism by asserting that Kant's mental categories have objective being, that the real is the rational and the rational is the real, that everything is a product of mind and knowable, including Kant's thing-in-itself. Hegel's philosophy integrated nature, history, and religion in a dialectic view of history as a the unfolding of Absolute Spirit (God). Indeed, Hegel considered the history of philosophy itself a dialectical process in which the Absolute unfolds itself in the mind of man.

43 Baumer, *Modern European Thought*, 312 (John Dalton's atomic theory; Antoine Lavoisier's persistence of matter through chemical change; and Helmholtz's view of the constancy of energy).

44 Ibid., 342.

45 Ibid.

46 Ibid., 313.


48 Ibid., 160-61, 174-77. Anselm argued from the premise that everyone believes God is "that than which nothing greater can be thought." This idea of being greater than that which the intellect conceive of must have actual existence because it would be a contradiction to deny the existence of an idea of God that the mind is already posited. By contrast, Aquinas bases his proof of a First Cause by
pointing out that there must be a first mover in a series of causes, rather than an infinite series of regressions, and this actuality is God.

49 The pervasive medieval belief in "the rationality of God, conceived as with the personal energy of Jehovah and the rationality of a Greek philosopher," sets Europe apart from Asia, says Whitehead, where "the conceptions of God were of a being who was either too arbitrary or too impersonal for such ideas to have much effect on the instinctive habits of mind." Whitehead, *Science and the Modern World*, 12-13.

50 Ibid., 39.

51 Ibid.

52 Ibid.


55 Ibid., 44 (emphasis in original).

56 Ibid., 16.

57 Ibid., 51.

58 Ibid., 55.


61 Ibid. 18. According to Whitehead: "Faith in reason is the trust that the ultimate nature of things live together in a harmony which excludes mere arbitrariness. It is the faith that at the base of things we shall not find mere arbitrary mystery. The faith in the order of nature which has made possible the growth of science is a particular example of a deeper faith. This faith cannot be justified by any inductive generalization. It springs from direct inspection of the nature of things as disclosed in our own immediate present experience. . . . To experience this faith is to know that in being ourselves we are more than ourselves: . . . to know that the system includes the harmony of logical rationality, and the harmony of aesthetic achievement: to know that, while the harmony of logic lies upon the universe as an iron necessity, the aesthetic harmony stands before it as a living ideal molding the general flux in broken progress toward finer, subtler issues."


64 Ibid., 43-50.
CHAPTER 2


5 René Descartes, *Meditations on the First Philosophy*, Meditation III, *Of God: That He Exists* in *Descartes Selections*, ed. Ralph M. Eaton (New York: Charles Scribner's Sons, 1955), 118. Descartes defined God as "infinite, eternal, immutable, independent, all-knowing, all-powerful, and by which I myself and everything else, if anything else does exist, have been created."

6 "It is certain that I no less find the idea of God, that is to say, the idea of a supremely perfect Being, in me, than that any figure or number whatever it is..." René Descartes, *Meditations on the First Philosophy in Which the Existence of God and the Distinction between Mind and Body Are Demonstrated*, Meditation V, *Of the essence of material things, and, again, of God, that He exists*, in *Descartes Selections*, 139.

7 Ibid., *Modern European Thought*, 73-75.

8 Ibid., 78.

9 Ibid., 62.


13 Ibid., xxxii.

14 Stumpf, *PHILOSOPHY, History & Problems*, 270-77; Theodore M. Greene, "Introduction" to *Kant Selections*, xxxii-iv. I base the following analysis of Hume primarily on these two sources.

18 Barrett, *Death of the Soul*, 45.


20 Ibid., 46.


22 Ibid., 143.

23 Ibid., 146.

24 Ibid., 146-47.


27 Greene, Introduction to *Kant Selections*, xxxiv-xxxv.


30 Immanuel Kant, *Critique of Pure Reason* in *Kant Selections*, 22. Kant also concludes that the moral law can provide a rational basis for theology; he "found it necessary to remove knowledge in order to make room for belief."


32 Livingston, *Modern Christian Thought: The Enlightenment and The 19th Century*, 63. Kant, *Theory of Ethics* in *Kant Selections*, 360-68. Because perfect concordance of virtue and happiness (the *supremum bonum*) is not achievable in a single lifetime, Kant postulates that the soul is immortal; and because moral duty requires pursuit of moral perfection, Kant postulates that "it is morally necessary to assume the existence of God" to meet out the level of happiness in the hereafter appropriate to the individuals dutiful performance in the here and now. Livingston, *Modern Christian Thought: The Enlightenment and The 19th Century*, 64.


34 Barrett, *Death of the Soul*, 75.

"The locus of moral value," writes philosopher Theodore M Green, "is man's own mind, and moral goodness is, in essence, the tone and quality of his inner life," but because it applies equally to all rational people, the \textit{categorical imperative} "is therefore at once the safeguard of human individuality and the basis of social cooperation." Greene, Introduction to \textit{Kant Selections}, li, liv.

Our beliefs about the universe do enter into our views of morality. Our ethical being is projected against some imagination of the cosmos as a whole. This is true for the atheist as for the theist, for a Nietzsche as well as a Kant. Thus Nietzsche is right to project his atheism so boldly into his discussions of human values, for those values are shaped and colored, and deliberately so, by his atheistic convictions. What Nietzsche experienced as 'the death of God' had the profoundest effect upon his moral convictions." Barrett, \textit{Death of the Soul}, 111.

Quoted in Barrett, \textit{Death of the Soul}, 90.


Ibid., 64.

Ibid., 64-74, 93-94.


Baumer, \textit{Modern European Thought}, 260.

Ibid., 161-62.

Ibid., 162-63, 302-14.

Ibid., 263.

Ibid., 264.

Ibid. 444-45, 445n10. Since his complete works were not translated into German until 1909-1911, Kierkegaard had his greatest influence in postwar Germany, with theologians like Karl Barth.


Søren Kierkegaard, \textit{Philosophical Fragments Johannes Climacus}, ed. and trans. with introduction and notes by Howard V. Hong and Edna H. Hong (Princeton: Princeton University Press, 1987), 9, 11, 13, 19. Socrates thought that "all learning and seeking are but recollecting," that truth resides in man himself ("self-knowledge is God-knowledge"), that the teacher is only an occasion of achieving such understanding, and that the goal of Socratic questioning "is that the person asked must
himself possess the truth and acquire it by himself." In contrast to such Socratic idealism, Kierkegaard interposes an entirely different hypothesis, namely that the learner cannot recollect the truth because he is in untruth, that the learner caused his untruth through his own fault (sin), that a single teacher (the god himself) must provide both the condition for understanding the truth (a savior) and also the truth itself, that this occurs at a unique moment in the fullness of time, Christ's Incarnation, and consequently that the learner experiences sorrow for his sin (repentance) and conversion (rebirth) into a new person. Unlike the Socratic teacher, who is merely a midwife for man's discovery of an immanently residing truth, Kierkegaard's teacher is Christ the Redeemer, and mankind "owes that divine teacher everything."

55 Ibid., 78.

56 Livingston, Modern Christian Thought, 388.

57 Ibid., 222.

58 Ibid.

59 Ibid., 223-24.


62 Ibid., lines 29-37, in The Norton Anthology of English Literature, 1492-93.

63 Arnold, Stanzas from the Grande Chartreuse" (1852), lines 85-6, in The Norton Anthology of English Literature, 1493-98.


65 Ibid., section 55, lines 17-20 in The Norton Anthology of English Literature, 1251.

66 Ibid., section 54, line 18; section 56, line 15 in The Norton Anthology of English Literature, 1250-51.

67 Ibid., stanza 96, lines 11-12, in The Norton Anthology of English Literature, 1266.

68 James C. Livingston, Modern Christian Thought: The Enlightenment and The 19th Century (Minneapolis: Fortress Press, 2006), 200; The Norton Anthology of English Literature, 1448-51. Hopkins followed his spiritual mentor, John Henry Newman, into the Catholic Church. Newman, a leader the Oxford movement (1833-1845), sought reform within the Church of England, but came to see Roman Catholicism, rather than Anglicanism, as the preserver of Christian truth. In 1845, Newman converted to Catholicism and subsequently became a priest. In 1866, Newman received Hopkins into the Catholic Church, after which Hopkins decided to become a priest, entered the Jesuit order, and was ordained in 1877. Although Hopkins had burned all his poetry upon joining the Jesuits, he resumed composing at the request of his Jesuit superiors and produced poetry of unique diction and rhythm, and of ecstatic faith and abject despair.
Gerard Manley Hopkins's "The Windhover," dedicated "To Christ our Lord," exemplifies both his belief system and his innovative poetic technique. In the octet the poet's heart is stirred upon seeing a kestrel (the Windhover, a "dapple-dawn-drawn Falcon") riding and rebuffing the heavy wind currents, its rippling wing seeming to strain against an imaginary rein as it circled in air like a skate on ice. Hopkins describes his heart as "in hiding," presumably beneath his modest priestly cassock, as he reacts emotionally to the Falcon's achievement and mastery of the air. In the sextet, Hopkins makes his poetic insight explicit. He sees Christ in the "Brute beauty and valour and act" of the Falcon (capitalized in the poem), and then prays: "oh, air, pride, plume, here/ Buckle!" "Buckle" has multiple meanings—fasten together, collapse, and gird for action—that capture the bird's complex inspiration of Hopkins' religious faith, surrender, and fervor—"lovelier, more dangerous." Even as a humble priest, Hopkins still can experience Christ intensely, just as plowing of a field ("sheer plod") can cause a furrow to shine, and falling "blue-bleak" coals can burst into "gold-vermillion." Observed closely by Hopkins, then, the Falcon reveals the divine attributes of mysterium, tremendum, et fascinans.

In "Felix Randal" (1880), Hopkins describes the slow ("pining") death of a powerfully built ("big-boned and hardy-handsome") blacksmith placed in Hopkins' spiritual care. By offering Randal the Church's last rites (anointment, confession, and communion), Hopkins had calmed Randal from cursing of his disease-fed body, and upon Randal's death Hopkins asked God's forgiveness for all Randal's offenses. In the sextet Hopkins observes that Randal's sickness had endeared Hopkins and Randal to one another, and that Randal's farrier life unconsciously had served God. The drayhorse and sandal in the sonnet's last line ("Didst fettle [prepare] for the great grey drayhorse his bright and battering sandal?") refer to Christ. Like a drayhorse pulling his load, Christ had dragged His cross to Golgotha, and after His death on the cross, Christ had battered down the gates of hell to free souls awaiting His redemptive crucifixion. Randal has served Christ by shoeing the drayhorse, just as Hopkins serves Christ, by ministering to his flock. Ibid., 1655.

In "God's Grandeur" (1877), Hopkins finds God's revelation everywhere in nature—at times it appears suddenly, like an epiphany ("shining from shook foil"), as when St. Paul was knocked from his horse on the road to Damascus, and at other times it "gathers to a greatness" gradually, like "the ooz of oil," as when St. Augustine slowly matures into the Christian faith. The quotidian concerns of toil and trade distract and numb man from the ways of God ("Why do men then now not reck his rod?"). God the Holy Ghost nonetheless hovers constantly over the world, caring like a brooding bird and inspiring like tongues of fire. "God's Grandeur" is Hopkins act of faith, emphasized by means of his powerful rhythms, alliterative Welch vernacular, condensed syntax, and constrained sonnet form. Ibid., 1651.

In "I Wake and Feel the Fell of Dark, Not Day" (1885), for example, Hopkins sees his entire life as a bitter nightmare ("I am gall, I am heartbroken"), his desperate cries to God as unanswered "dead letters," his troubled flesh as cursed, and his spirit as "lost." His priestly vocation seems fled ("God's most deep decree/ Bitter would have me taste: my taste was me"); his creative spirit seems dulled and soured ("Selfyeast of spirit a dull dough sours"). Ibid., 1657.


Having considered becoming an Anglican priest up until the age of 25, Hardy reluctantly accepted a mechanistic worldview based upon Darwinian evolution and a loss of his belief in divine governance, with stoic endurance and sad irony infused throughout his poetry.

In "The Darkling Thrush" (1900) the poet leans alone on the garden gate in the bleak winter, when suddenly a thrush begins a full-throated, joyous song over this desolate landscape, suggesting hope where the poet can see none. Employing a ballad form, with four eight-line stanzas in alternating iambic
tetrameter and trimeter, the poem evokes Keats's "Ode to a Nightingale," the "immortal Bird" whose song and species endures over centuries and who helps Keats overcome his fear of death. By contrast, Hardy finds little cause for the thrush "to fling his soul/ Upon the growing gloom" of the "Century's Corpse." Ibid., 1871.

75 The skeletons conclude that the world will never become saner, and the parson-skeleton remarks that he should have "stuck to pipes and beer" rather than wasting 40 years on sermons. The gunfire sounds as far away as three historic monuments, Stourton Tower (where King Alfred defeated the Danish invasion in 878), Arthur's seat in Camelot, and Stonehenge, suggesting that such cultural artifacts may be all that will survive man's mad, destructive impulses. Ibid., 1877-78.


77 Whitehead, Science and the Modern World, 75, 146.


79 Ibid., 37-39.

80 Ibid., 41.

81 Ibid., 45.

82 Ibid., 45-46.

83 Ibid., 72-73.

84 Ibid., 78-79.

85 Livingston, Modern Christian Thought: The Enlightenment and The 19th Century, 93.


89 Baumer, Modern European Thought, 274.

90 Whitehead, Science and the Modern World, 81-86.

91 William Wordsworth, "The Tables Turned, An Evening Scene on the Same Subject" (1798), lines 29, 20, 25-28, in The Norton Anthology of English Literature, 228.

92 Wordsworth, Preface to Lyrical Ballads, with Pastoral and Other Poems (1802) in The Norton Anthology of English Literature, 250; and Lines Composed A Few Miles above Tintern Abbey, on
Revisiting the Banks of the Wye during a Tour, July 13, 1798, lines 93-102, in The Norton Anthology of English Literature, 237.


97 Ibid., lines 40, 97, in The Norton Anthology of English Literature, 721, 722.


100 Ibid., 94.

101 Barrett, Death of the Soul, 46, 112-113.


103 Irwin W. Sherman & Vilia G. Sherman, Biology, A Human Approach (Second Edition) (New York: Oxford University Press, 1979), 508 (In 1650, based upon the Bible the Irish Archbishop James Usher calculated the date of creation as for 4004 B.C.); Livingston, Modern Christian Thought, 251-53.

104 Sherman, Biology, 508-12.


106 Darwin's Descent of Man (1871) in Livingston, Modern Christian Thought, 254.

107 Livingston, Modern Christian Thought., 250, 253.

108 Ibid. 253; Sherman, Biology, 500-01.


110 Sherman, Biology, 511-12.
Ibid., 456-57, 511; Haught, Making Sense of Evolution, 3.

Sherman, Biology, 456-57, 511.

Haught, Making Sense of Evolution, xiii-xiv; John F. Haught, Deeper Than Darwin, The Prospect for Religion in the Age of Evolution (Boulder: Westview Press, 2003), 103. In 1999, Scientific American reported that 90% of the 1,800 members of the National Academy of Sciences consider themselves atheists or agnostics. In addition, only 40% of all US scientists believe in a personal God. Ibid. 15.

Livingston, Modern Christian Thought, 255-56.

Ibid., 257-58.

Baumer, Modern European Thought, 353-54.

Livingston, Modern Christian Thought: The Enlightenment and The Nineteenth Century, 259-62. Chief among the latter group was the American Presbyterian Charles Hodge (1797-1878), Professor of theology at Princeton theological seminary. Inferring that chance mutations and natural selection necessarily denied God’s design and implied God’s detachment from nature, Hodge considered Darwin’s theory atheistic. He could not accept that, following creation, God “then abandoned the universe to itself to be controlled by chance and necessity, without any purpose on his part as to the results, or any interventions or guidance…” Ibid., 261. Using Darwin’s own example of the eye as a product of evolution, Hodge asserted that “it is absolutely impossible to believe that it is not the work of design.” Ibid., 262. As Livingston explains, however, Hodge did not argue from design (the Intelligent Design argument of Paley and modern natural theology) but rather to design: “presuming a providential God, all things must be designed.” Ibid.

Because liberal Christian theologians accommodated Darwinism (e.g., Aubrey Moore in England and Lyman Abbott (1835-1922) in the United States), the late 19th century press reported that the debate between Darwinism and theology was over. Ibid., 265. Indeed, with a few prominent exceptions, like John F. Haught of Georgetown University, mainstream Christian theologians today have given little attention to Darwin, notwithstanding Livingstone’s observation that “the world-views of Darwinism and Christianity are, on a few fundamental issues, irreconcilable.” John F. Haught, God After Darwin, A Theology of Evolution (Boulder: Westview Press, 2000), 23; Livingston, Modern Christian Thought: The Enlightenment and The Nineteenth Century, 266. Indeed, Livingston’s comprehensive treatise on modern Christian thought in the 20th century contains only two brief references on Darwin and Darwinism. James C. Livingston and Francis Schuessler Fiorenza, Modern Christian Thought: The 20th Century (Minneapolis: Fortress Press, 2006), 35, 388. Instead, most Christian theologians have left the debate to rage between conservative Christians, espousing scientific creationism and intelligent design theory, on the one hand and anti-theistic neo-Darwinians, espousing materialist metaphysics, on the other.


Henri Bergson, Creative Evolution (1907) in Hakim, Historical Introduction To Philosophy, 694 (emphasis in original).

Ibid., 698.
Over these three centuries, the weight of intellectual power gradually shifted from England and France, which had dominated the Enlightenment, to Germany which equaled or surpassed those two nations in many cultural fields, including not only philosophy, but historical scholarship, religious history and psychology, and physics. 

CHAPTER 3

1 William Butler Yeats, "The Second Coming" (1920), lines 3-8, in The Norton Anthology of English Literature, The Twentieth Century and After, 2036.

2 By definition civilization is "a relatively high level of cultural and technological development," and culture is "enlightenment and excellence of taste acquired by intellectual and aesthetic training... in the arts, humanities, and broad aspects of science" (as distinguished from vocational and technical skills). Miriam-Webster's Collegiate Dictionary, 10th ed. (Springfield, Massachusetts: Merriam-Webster, 1998), 210, 282.


4 Ibid., 4, 14, 347.

5 Ibid., 1, 24. Clark quotes John Ruskin, the 19th century art and social critic, in this regard: "Great nations write their autobiographies in three manuscripts, the book of their deeds, the book of their words and the book of their art. None of these can be understood unless we read the two others, but of the three the only trustworthy one is the last." In other words, civilization and culture are related but not equivalent, and to understand a civilization we must look primarily to its art (i.e., its culture).


8 Matthew Arnold, Culture and Anarchy and other writings, ed. Stefan Collini (Cambridge: Cambridge University Press, 1993), 79 (the quotation is Matthew Arnold's characterization of culture).


11 Ibid., 16. The Austro-Hungarian Empire, for example, included 18 nationalities dispersed across five distinct kingdoms in a remarkable assimilation of diverse ethnicities. According to Ferguson, the Empire's Jewish minority succeeded largely because of "the fin-de-siècle combination of global integration and the dissolution of traditional professional barriers." Ferguson continues: "The physics of Albert Einstein, the psychoanalysis of Sigmund Freud, the poetry of Hugo von Hoffmannsthal, the novels of Franz Kafka, the satire of Karl Kraus, the symphonies of Gustav Mahler, the short stories of Joseph Roth, the plays of Arthur Schnitzler, even the philosophy of Ludwig Wittgenstein -- all owed a debt, not so much to Judaism as a faith, as to the specific milieu of a highly numerate and literate but
rapidly assimilating ethnic minority permitted by the times and circumstances to give free rein to their
thoughts, but also aware of the fragility of their own individual and collective predicament. Ibid., 41-42.

12 Ibid., 91. All but one of Victoria and Albert’s nine children married royally, and when Victoria
died in 1901 "members of the extended kinship group to which she belonged thus sat on the thrones not
only of Great Britain and Ireland, but also of Austria-Hungary, Russia, Denmark, Spain, Portugal,
Germany, Belgium, Greece, Romania, Bulgaria, Sweden and Norway." Ibid., 96.

13 Barbara W. Tuchman, The Proud Tower, A Portrait of the World before the War 1890-1914

14 Ferguson, The War of the World, 92. In 1914, the Great Powers were hardly an armed camp,
moreover, since they spent barely three percent of GNP on defense and employed only about 1.5% of
their population in the Armed Forces. Ibid., 93-93.

15 Ibid., 81.

16 Samuel Hynes, A War Imagined, The First World War and English Culture (New York:
Atheneum, 1991), 5-6; Barbara W. Tuchman, The Proud Tower, 431. "Between 1900 and 1913 no fewer
than 40 heads of state, politicians and diplomats were murdered, including four Kings, six prime
ministers and presidents," including President McKinley (1901), as well as an almost successful attempt
on President Roosevelt. Ferguson, The War of the World, 73.

17 Roland N. Stromberg, Redemption by War, The Intellectuals and 1914 (Lawrence: Regents
Press of Kansas, 1982), 90-91. In 1890, for example, Germany had only two cities above 100,000 people,
but by 1910 it had 48; by 1900 Europe had seven cities of more than 1 million people and 140 cities with
more than 100,000.

18 Ibid., 92-93.


20 Ibid., 33.

21 Tuchman, The Proud Tower, 182. The Dreyfus affair was the wrongful 1894 conviction of
Jewish army officer Captain Alfred Dreyfus for treason, namely, spying for Germany, followed by his
1906 exoneration.

22 Robert Rosenblum, Cubism and Twentieth-Century Art (New York: Abrams, 1968), 14-16,
25. Rosenblum gives a careful analysis of the work.


24 Ibid., 343.

25 Stromberg, Redemption by War, 190, 20.

26 F. T. Marinetti, "Manifesto of Futurism," in The Norton Anthology of American Literature,
2007), 1501.
Hamilton, *Painting and Sculpture in Europe 1880-1940*, 280. One year after Marinetti's Manifesto a group of Italian artists published their "Manifesto of the Futurist Painters," exalting originality and introducing a new style that used "dynamic sensation" to achieve Marinetti's principles of energy and velocity.


Nicole Brandmüller, "The Expressionist in Berlin," in *Ernst Ludwig Kirchner, Retrospective*, ed. Felix Kramer (Frankfurt: Stadel Museum, 2010), 102-03. In The Street Kirschner portrays two strikingly attired ladies wearing tight-fitting coats with fur collars and hats with feathers, followed by equally well-dressed businessmen in black coats and hats. He employs garish colors and bold hatchings plus an extremely foreshortened perspective to thrust this dynamic commercial enterprise at the viewer. The man to the right ostensibly viewing merchandise in the display window is probably assessing the women's reflection on the window just outside the picture frame and also discreetly making an overture with his phallic walking stick. The women nonchalantly stride ahead with hands and V-shaped fur coats discreetly yet suggestively pointing to their pubic area. As Nicole Brandmüller explains, "The dress code in Wilhelminian Germany was so strict that prostitutes were almost impossible to tell apart from ordinary bourgeois women. Their type-fitting suits and feathered hats were certainly very much in fashion in those days. Part of the art of being a prostitute, therefore, was to remain unrecognized, while at the same time drawing attention to oneself in passing using looks and gestures innocuous enough not to compromise the man."


Ibid., lines 4-7, 27, 51.


Ferguson, *The War of the World*, 80; Stromberg, *Redemption by War*, 179. While many historians think that World War I was the anticipated and inevitable consequence of militarism, imperialism, or Darwinian struggle among nations, Ferguson and Stromberg argue convincingly that war came as a complete shock to virtually all Europeans. London financiers, including Rothschild & Sons, were completely blindsided by the war even though they had the most to lose from their heavy investment in government bonds. Ferguson points out that bond prices began to fall only on July 31 1914, and dropped sharply even later. Ferguson, *The War of the World*, 85-86.


Ibid., 22.
Vejas Gabriel Liulevicius, *World War I: The "Great War,"* (Chantilly, Virginia: Teaching Company, 2006), Course Guidebook (Part 1), 26; Modris Eksteins, *Rites of Spring* (Boston: Houghton Mifflin Company, 1989), 57-62. Shouting, "We want the Kaiser!" unprecedented throngs of people poured into Berlin’s grand central boulevard and surged toward the Imperial Palace, where the Kaiser appeared to a thunderous welcome. Another throng surged toward the Austrian Embassy, singing German marching songs, "The Watch on the Rhine" and the Protestant hymn, "A Mighty Fortress Is Our God." Then, the Austrian ambassador appeared before wildly cheering crowds. These scenes were repeated everywhere throughout Germany -- and the rest of Europe.

Taylor, *The First World War*, 53, 114. In Britain, with a small standing army and no compulsory military service, 500,000 men volunteered in the first month, and volunteers ran over 100,000 per month for the next year and a half, raising more than 3 million volunteers. Only in January 1916, did Britain breach its long tradition of volunteerism to institute compulsory military service for single men and by midyear for married men. 

Women’s organizations turned from protesting for the vote to marching for inclusion in the war effort; virtually all Irishmen, Protestant and Catholic alike, enlisted in the British Army to support Belgium; and labor and socialists abandoned ideas of a general strike and turned enthusiastically to the war effort. Stromberg, *Redemption by War*, 3; Taylor, *The First World War*, 146.


Stromberg, *Redemption by War*, 178-85, 188.

Ibid., 2.

Ibid., 2, 37-38.


Stromberg, *Redemption by War*, 157-62. The Bloomsburite Lytton Strachey famously responded to a question about why he had not enlisted to defend civilization, "Madam, I am the civilization they are fighting to defend." Ibid., 159.

Ibid., 177.

Ibid., 187.

Ibid., 191, 198.

Rupert Brooke, "Peace," line 5 in *The Penguin Book of First World War Poetry*, 11; Brooke, "The Soldier," in Ibid., 108. During his sermon on Easter Sunday 1915, Dean Ing of St. Paul's Cathedral read Rupert Brooke's poem "The Soldier," making him famous. After Brooke died in April 1915, on the Greek island of Skyros (unheroically or at least ingloriously) of septicemia from a mosquito bite while en route to Gallipoli, Winston Churchill wrote his obituary, describing Brooke as "all that one could wish England's noblest sons to be." Brooke's poetry remained popular throughout the war, with soldiers and civilians alike; it spoke for "what the English felt, or wanted to feel" about the war. Ibid., xv, xxii.


In January 1915, field Marshal Earl Kitchener, British Secretary of State for War, recognized "that the French army cannot make a sufficient break through the German lines of defense," which "may be looked upon as a fortress that cannot be carried by assault, and also cannot be completely infested." Nevertheless, British Gen. Sir John French and his successor in command Gen. Sir Douglas Haig ignored Kitchener's advice and remained committed to the offensive. Haig famously responded to Lloyd George's question about how many machine guns he needed: "The machine gun is a much overrated weapon and two per battalion were more than sufficient" (by the war's end every British battalion had 43 machine guns "and cried out for more").

According to historian Barbara W. Tuchman, "The Battle of the Marne was one of the decisive battles of the world not because it determined that Germany would ultimately lose the war or the Allies ultimately win the war but because it determined that the war would go on. . . . The nations were caught in a trap, a trap made during the first 30 days out of battles that failed to be decisive, a trap from which there was, and has been, no exit." Barbara W. Tuchman, The Guns of August (New York: Ballantine books, 1962), 440.

Both armies paid a heavy price for the German offensive on February 21, 1916. Armies fought simply for the sake of fighting, with "no prize to be gained or lost, only men to be killed and glory to be won." Ibid., 83. The Germans suffered 281,000 casualties compared to the French 315,000 casualties.

Fronted heavily with barb wire, the Germans occupied the crested hills on the Somme, and sat securely in trenches 40 feet deep, with every modern convenience -- and they were ready. The British needlessly alerted them to the coming attack by undertaking various exploratory raids as well as five days of heavy bombardment along an 18 mile front. Then the British attacked using inexperienced and inadequately trained soldiers and similarly inexperienced junior officers who learned to attack in a straight line and to expose themselves recklessly in battle (hence their six times greater casualty rate).

62 Ibid., 177. One French Regiment went to the front bleating like sheep being led to the slaughter.

63 Ibid., 191-94. Undeterred and untutored by three years of failure, including his disastrous Somme offensive, Haig devised a new offensive at Ypres (July 31 – November 7, 1917) without ever inspecting the front line, taking account of likely rain and mud in Flanders, or heeding the opposition of his Intelligence Staff and the admonition of French Gen. Foch about fighting both Germans and mud. After the Battle Haig's chief of staff visited the war zone for the first time and, finding his vehicle stuck in the mud, he literally wept: "Good God, did we really send men to fight in that?" To which his companion replied, "It's worse further up." Ludendorff added a final footnote that the British soldiers were "lions led by donkeys." Ibid., 287.

Nevertheless, Brian Bond provides a different perspective from Taylor's on British military leadership. Brian Bond, The Unquiet Western Front, Britain's Role in Literature and History (Cambridge: Cambridge University Press, 2002), 20-22. While military commanders made "numerous mistakes, particularly in renewing and prolonging offenses which had bogged down, thus contributing to the heavy loss of life" (especially the Somme in 1916 and the later stages of the Third Ypres offensive in 1917), Bond contends that "the Army was generally well led" (citing Sir John Keegan), that "regimental officers lived close to their men and shared their private actions and dangers to a considerable degree," and that the military historians now agree the British army experienced a learning curve after its major offensives during the first two years of the war. British military leaders ultimately turned an amateur civilian force into an impressive modern army against "the world's toughest and most tactically adept enemy, the Imperial German Army," which culminated in the "victorious advance of 1918 when British and Imperial forces played the leading role in defeating the German armies on the Western front." Ibid., 20.

Specifically, the British command structure learned to provide "accurate artillery protection for advancing infantry," and by the end of the war had transformed its 19th century weapons and tactics into "the essential components of a modern all-arms battle." Ibid., 22.

64 Taylor, A.J.P. The First World War, 196-98.

65 Ibid., 171.


68 Ibid., 232.

69 Ibid., 233-37. To enhance Germany's negotiating position with the allies, especially President Wilson, Ludendorff urged that Germany adopt and turn over control of the war to a new democratic government.

70 Ferguson, The Pity of War, 295; Richard L. Rubenstein, The Cunning of History, The Holocaust and the American Future (New York: Harper Colophon Books, 1978), 7. France had 1.4 million dead and 2 million wounded; Britain had 723,000 dead and almost 1.66 million wounded; Germany 2 million dead and 4.2 million wounded; and America 114,000 dead and almost 206,000 wounded. The casualty rate among major combatants ran about fifty percent, except for France which ran higher. Indeed, the French war toll was catastrophic, considering its relatively low birth rate and older population: ten percent of the adult population and half of the French male population ages 20-32 died, leaving millions maimed for life. Mortimer Chambers, et al. The Western Experience, 10th ed. (New York: McGraw-Hill, 2010), 800.

72 Wilfred Owen, "Dulce et Decorum Est" (1917-18) in *The Norton Anthology of English Literature, The Twentieth Century and After*, 1974. In an October 16, 1917, letter to his mother, Owen translated the Latin he quoted from Horace, "It is sweet and meet to die for one's country. Sweet! And decorous!" Ibid., n1.

73 Ibid., lines 16, 21-28. The poet was Jessie Pope. Ibid., 1974n4.

74 Owen, "Futility," Ibid., 1976. Owen laments the inability of "fatuous sunbeams" to revive the frozen corpse of a young British soldier who died overnight, as those same sunbeams had previously awakened him at home, "whispering of fields unsown." Owen asks ruefully if the soldier was born only to suffer this horribly premature fate of unrealized potentialities: "Was it for this the clay grew tall?" Ibid., lines 13, 3, 12. The half rhymes (e.g., "sun" and "sown," "tall" and "toil") convey "the pity of War" by sympathetically muting the poem's ironic treatment of a soldier's having lived only half a life. English Professor Bernard Bergonzi observes that Owen's poem "places the tragedy of an individual death on a plane of cosmic significance, or rather, this death, so futile in its finality, points to an ultimate futility in the whole order of things." Bernard Bergonzi, *Heroes' Twilight* (Manchester: Carcanet Press, 1996), 123.

75 Owen, "Strange Meeting" (1918) in *The Norton Anthology of English Literature, The Twentieth Century and After*, 1975-76. The man "stared/ With hideous recognition in fixed eyes," writes Owen, and then disclosed: "I am the enemy you killed, my friend." Together these former enemies grieve about the "truth untold" of the "hopelessness" and "pity of war," and of the "the march of this retreating world" where "None will break ranks, through nations trek from progress." Ibid., lines 6-7, 40, 24, 16, 25, 32, 29. Owen's use of pararhymes (e.g., "groined" and "groan," "grained" and "ground") creates "the solemn music" of this dark, empty, and doomed civilization. Edmund Blunden, the poet and editor of the 1931 publication of Owen's collected poetry, wrote the following: "What he made of it [pararhyme] felt at its fullest, perhaps, in the solemn music of 'Strange Meeting', but again and again by means of it he creates remoteness, darkness, shock, emptiness, the last word." T.S. Eliot described "Strange Meeting" as "not only one of the most moving pieces of verse inspired by the war of 1914-18, but also a technical achievement of great originality." Bergonzi, *Heroes' Twilight*, 123.


77 *The Norton Anthology of English Literature, The Twentieth Century and After*, 1960-63. Sassoon variously satirizes the noncombatant headquarters officers who cavalierly kibitz about the frontline death of some "Poor young chap," in "Base Details"; the "cheery old card" of a general and the "incompetent swine" on his staff who planned the disastrous attack at Arras, in "The General" (1918); the gleeful British audiences who cackle at anti-German musicals and disregard war's brutal reality ("I'd like to see a Tank come down the stalls"), in "Blighters" (1917); the jingoistic Bishop who pontificates about "a just cause" and "the last attack/ On Anti-Christ" but omits any mention of the war's disastrous human toll, in "They" (1917); and the naïvely romantic women who "believe/ That chivalry redeems the war's disgrace," in "Glory of Women" (1918). Sassoon's postwar poems continued to chide government actions and conventional attitudes: "On Passing the New Menin Gate" (1928) mocks the sentimental platitude on a Brussels memorial to British war dead: "Their name liveth for ever" carved on the "peace-complacent stone" bearing "intolerably nameless names" cannot "absolve the foulness of their fate." "Well might the Dead who struggled in the slime/ Arise and deride the sepulchre of crime."

78 Ibid., 1960.
Robert Graves, *Good-Bye to All That* (New York: Anchor Books, 1998), 261. Graves knew that Sassoon was in no condition to endure a court-martial and imprisonment and, accordingly, he took steps so that Sassoon "should not be allowed to become a martyr to a hopeless cause in his present physical condition." Accordingly, as he subsequently advised Sassoon, Graves urged that the Army convene a medical board: "I took the line that everyone was mad except ourselves and one or two others, and that no good could come of offering common sense to the insane." When Sassoon demurred, Graves undertook "to rig the medical board" and to appear before it "in the role of the patriot distressed by the mental collapse of a brother-in-arms—a collapse directly due to his magnificent exploits in the trenches." Although "conscious of a betrayal of truth," Graves notes the "irony of having to argue to these mad old men that Siegfried was not sane!" The board sent Sassoon to the Craiglockhart convalescent home, "Dottyville" as Sassoon called it, and dispatched Graves as his escort. Ibid., 262-63.


Ibid., 186; Walter, *The Penguin Book of First World War Poetry*, xxx-xi. After being awarded the Military Cross in October, Owen died on November 4, 1918, exactly one week before the war's end.


Graves, *Good-Bye to All That*, 233. Convalescing in England, Graves and Sassoon both agreed: "Our proper place would be back in France, away from the more shameless madness of home-service. There our function would not be to kill Germans, though that might happen, but to make things easier for the men under our command. For them, the difference between being commanded by someone whom they could count on as a friend—someone who protected them as much as he could from the grosser indignities of the military system—and having to study the whims of any petty tyrant in an officer's tunic made all the difference in the world."

Born in 1873, Barbusse enlisted in the French army in 1914 at age 41 and served as for 17 months on the front until invalided out at the end of 1915, serving the remainder of the war in a clerical position, while writing and publishing a novel of his war experiences, *Le Feu*, in 1916 (translated as *Under Fire*), dedicated "to the memory of the comrades who fell by my side at Crouy and on Hill 119 January, May, and September 1915." It was the most widely read war novel in England during 1917-18, serving as an epigraph for Siegfried Sassoon's "Counter-Attack" and as a source of images for Wilfred Owen's "The Show." Hynes, *A War Imagined*, 203, 205. In January 1918, Barbusse left France and moved to Moscow, married a Russian woman, and joined the Bolshevik Party. He became an ardent proponent of Russia and Stalin and an active participant in international communist political and cultural activity. He died on August 30, 1935, and is buried in a Paris cemetery. *Under Fire* won the Prix Goncourt.

Remarque was born in Osnabrück on June 22, 1898, and christened Erich Paul Remark, the son of the Catholic bookbinder Peter Franz and his wife Anne Maria. After the war Remarque adopted his pen name by Gallicizing his surname and substituting his mother's middle name for Paul, which he uses for the main character in *All Quiet*. Although his war experience is somewhat mysterious, Remarque was conscripted in November 1916 and saw frontline experience in Flanders in June 1917 where he was wounded in the left knee and under one arm on July 31, 1917, and hospitalized for 15 months (August 1917-October 1918). Modris Eksteins, "Memory" in Bloom's Modern Critical Interpretations, *Erich Maria Remarque's All Quiet on the Western Front*, new ed. (New York: Bloom's Literary Criticism, 2009), 59-60. Remarque was a schoolmaster and freelance journalist before becoming a novelist, and writing his most famous and successful novel was *All Quiet on the Western Front*. In May 1933, the Nazis symbolically burned *All Quiet* as "politically and morally un-German," and in November 1933,
Berlin police seized all copies at the Ullstein publishing house and later burned them “for the protection of the German people.” Ibid., 77.


87 Ibid., 173.

88 Ibid., 138.

89 Ibid., 5-6, 183, 177.

90 Erich Maria Remarque, *All Quiet on the Western Front* (New York: Ballantine Books, 1982) (*Im Westen nichts Neues*, literally *Nothing New in the West*). Bäumer's classmates include Kropp, the clearest thinker; Müller, the perennial student; and Leer, the womanizer. His older squad members include Tjaden, a locksmith; Westhus, a peat-digger; Detering, a farmer; and Bäumer's 40-year-old mentor Katczinsky (Kat), a cobbler.

91 Ibid., 170-73. On home leave Bäumer feels estranged from his family and familiar surroundings: his mother dying of cancer, his father's colleagues and their 1914 war spirit, his glass case of butterflies, and his youthful passion for books – "Words, Words. Words – they do not reach me." Bäumer encounters an Army major who dresses him down for inadvertently failing to salute him, and Bäumer lies to his classmate's mother to spare her knowledge of her son's slow, painful death. "I ought never to have come on leave," he laments, longing to return to the front and hear the voices of his friends – "I belong to them and they to me; we all share the same fear and the same life, we are nearer than lovers, in a simpler, harder way; I could bury my face in them, in these voices, these words that have saved me and will stand by me." Ibid., 185, 212.

92 Ibid., 263, 87.

93 Ibid., 192-94, 205-06, 226.

94 Ibid., 286.

95 Ibid., 294.

96 Modris Eksteins, "Memory" in *Bloom's Modern Critical Interpretations, Erich Maria Remarque's All Quiet on the Western Front*, 70-71.

97 Brian Bond, *The Unquiet Western Front*, 26. Bond maintains that World War I was "for Britain, a necessary and successful war, and an outstanding achievement for a democratic nation in arms," that military morale remained high throughout the war, despite heavy casualties and setbacks, that popular support continued, with "official propaganda play[ing] an insignificant part in sustaining morale on the home front," and that "in the post-war settlement Britain achieved most of its objectives with regard to Europe, and its empire expanded to its greatest extent." Ibid., 1-2. As regards Britain's war aims, Bond states: "the German Navy was destroyed and its army’s capabilities drastically restricted; French and Belgian independence was restored and the former regained Alsace and Lorraine. Germany's drive to dominate Europe had been checked for the foreseeable future. Britain had also secured most of its imperial aims both in holding off French and Russian rivalry in the Near and Middle East, and in acquiring 'mandates' in the former Ottoman Empire which extended its own empire to its greatest geographical extents." Ibid., p. 22.
While the British government had no intention of fighting "a long and costly 'total war'" and conscription "was anathema to most Liberals," Britain had no choice, according to Bond, after the French losses in 1914, the Russian losses in 1915, and the British failure at the Dardanelles, but to enter into a continental war on the Western front. Ibid., 8. Negotiated settlement was "never a realistic option" since Germany was not prepared to give up its territorial gains, despite the Central Powers Peace Note in December 1916. German military leaders effectively ran the government and remained unwilling to compromise. Ibid., 8. For his part, Lloyd George was committed to "punishing aggression" and "promoting democratization," so only clear-cut victory seemed likely to produce a lasting peace. Ibid., 9.

Britain's optimistic views about the front, however, produced a later "backlash against the concealment of painful truths and, worse, outright deception," giving later critics, like Paul Fussell, a legitimate target over the shocking gulf between the real and the sanitized war. Ibid., 11. Bond acknowledges that "the Great War was largely conveyed to the public in pre-1914 imagery and concepts: 'only during the 1920s and 1930s was it re-fought using new images of waste and destruction developed during the conflict. It is this later re-evaluation that has come down to us as the true picture of British society during the Great War, but it is an historical absurdity.'" Ibid., 13.

Bond asserts that Britain's "willingness to sacrifice more than 1 million men to defend her interests on the Continent had deeply impressed her enemies" and that Britain's armed forces had gained immense prestige by their fighting prowess," but that diplomats "in the 1930s seemed either unaware of this diplomatic asset or too preoccupied with the human and economic costs of the war to use it" during the Munich crisis, which plucked "defeatism . . . from the garland of victory." Ibid., 23.

98 Hynes, A War Imagined, xi, xii. Not all the important war literature shares his narrative about the Myth of War. May Wedderburn Cannon (1893-1973) continued to support the British cause long after the war and rejected the sentiment that soldiers "went to the war with Rupert Brooke and came home with Siegfried Sassoon." The Norton Anthology of English Literature, The Twentieth Century and After, 1981. Her poem "Rouen" (1916) captures "the laughter of adventure" during her volunteer experience behind the French lines. Her unfinished autobiography Grey Ghosts and Voices (1976) reports the patriotism of frontline British soldiers: "When the whistle blew they stood to save the King and the roof came off the sheds. Two thousand men, maybe, singing—it was the most moving thing I knew." Ibid., 1981, 1984.

Similarly, David Jones (1895-1974) gives a heroic character to death in the trenches, extolling the ordinary Christian virtues of long-suffering, patience, and brotherly love among the front-line soldiers in his postwar epic. In Parentheses (1937) traces the wartime experience of Private John Ball and his company from enlistment through the Somme. With allusions to classics of war writing from Malory to Shakespeare, Jones emphasizes the common experience of ordinary soldiers in battle, using an objective, realistic, and highly personal viewpoint. In Parentheses lacks Owen's emphasis on pity, yet it also lacks the standard appeal of traditional epics to shared national or cosmic values. In his Preface to In Parentheses, Jones recognizes that his epic ends in July 1916, after which "things hardened into a more relentless, mechanical affair, took on a more sinister aspect," implying that later events would have made heroic treatment more difficult. Ibid., 1990. Furthermore, Jones does not try to defend the civilization that brought about the war or to write about the kind of exceptional heroic virtues displayed by great warriors, like Hotspur in Henry V or Roland in the Song of Roland.


100 Rubenstein, The Cunning of History, 7. Although they had become merely expendable machinery, soldiers everywhere nevertheless continued to lay down their lives, and their fellow countrymen continued to support their ongoing slaughter. French women, children, and old people willingly replaced the 6 million Frenchmen who left their civilian jobs for war; the German population dutifully survived on turnips during the British blockade; and the warring governments successfully retained broad civilian support at least through 1917. Stromberg, Redemption by War, 183-84. According
to Brian Bond, the British army's morale remained high or at least steady and displayed a "fighting spirit," despite the loss on the Somme in 1916 and the retreat in March 1918, and there was no "collective indiscipline comparable to the French mutinies" even at the Britain's lowest point during the Passchendaele campaign in 1917. Bond, *The Unquiet Western Front*, 14. Indeed, Bond says that "Military and civilian morale were probably as high in November 1918 as at any point during the war." Ibid., 15.

The huge scale of casualties did little to dampen morale during the war, since censorship had little impact on information about war deaths because the casualties were published in the press. The "idea of sacrifice in a just cause did not collapse into cynicism for the war generation," but instead for the generation which followed. Ibid., 24. In this regard, Bond discounts the significance of Sassoon's denunciation of the war as unjust in a statement to a Member of Parliament, which appeared in the press, because "his chief target was the ignorance and complacency of the pro-war civilians" and because his protest "was politically unacceptable and impractical," as Sassoon later acknowledged. Ibid., 17.


106 Ibid., 215.


108 Hynes, *A War Imagined*, 108, 274. Honoring the sacrifice of these war dead while simultaneously believing their sacrifice pointless ultimately produced a schism within the postwar body politic. A study by Stefan Goebel shows that Britain and Germany both created chivalric war memorials that reaffirmed their respective nation's continuity with its medieval past, yet the emerging postwar sensibility described by Hynes rejected such historical continuity with a false, dead, and gone past. Stefan Goebel, *The Great War and Medieval Memory: War, Remembrance and Medievalism in Britain and Germany, 1914-1940* (Cambridge: Cambridge University Press, 2007), 287. According to Goebel, only World War II memorials severed the link with the medieval commemorative culture, by preserving the war ruins in a search for reconciliation and peace (e.g., the ruins of Coventry Cathedral), rather than invoking the chivalric past. Ibid., 296-301.


110 Graves, *Good-Bye to All That*, 238, 142.

111 Ibid., 228. Among trench soldiers, patriotism was "too remote the sentiment, and at once rejected as fit only for civilians, or prisoners," and religious feeling was rare ("we spoke freely of God
and Gott as opposed tribal deities"). Ibid., 189. When news came of the Armistice, Graves found himself "cursing and sobbing and thinking of the dead"; and for 10 years thereafter, Graves clearly suffered post traumatic stress disorder ("I was still mentally and nervously organized for War. Shells used to come bursting on my bed at midnight"). Ibid., 278, 287.

Remarque, All Quiet on the Western Front, 160. Hearing his comrades' voices back in the trenches, Baumner says: "Those voices . . . tear me with a jolt away from the terrible feeling of isolation that goes with the fear of death, to which I nearly succumbed . . . . Those voices mean more than my life, more than smothering a fear, they are the strongest and most protective thing that there is: they are the voices of my pals . . . . I belong to them and they to me, we all share the same fear and the same life, and we are bound to each other in a strong and simple way. I want to press my face into them, those voices, those few words that saved me, and which will be my support." Ibid., 212.

By contrast, citing the work of Jay Winter, Bond discounts as exaggerated the notion of an "lost generation," even though upper and middle class officers suffered disproportionate casualties and even though the social and cultural effects "were profound and enduring," with one-half million of the 722,785 soldier deaths occurring in the age group under 30. Bond, The Unquiet Western Front, 24. British fatalities between 1914-18 were greater than those in the World War II by a ratio of three or four to one. After the Armistice, there began "two decades of national mourning behind a façade of hectic gaiety whose monumental, social and religious aspects are now interesting scholars." Ibid., 25.

Wohl elaborates: "Families from all social strata suffered; but older sons from the dominant political and cultural elites died in disproportionate numbers, and the loss was publicized in what now appears to have been a disproportionate (if understandable) way. The term 'missing generation' in England meant 'missing elite.' 'Missing elite' meant the decimation, partial destruction, and psychological disorientation of the graduates of public schools and universities who had ruled England during the previous half-century. Reading the literature on the lost generation, one seldom has reason to remember that of the 700,000 British combatants who died during the war, only 37,452 were officers -- and yet it is these 37,000 and not the troops they commanded who are enshrined in the myth." Ibid., 120-21.

Ibid., 225, 228.


Ibid., 43, 77, 126, 139. Boss Mangan, "a Napoleon of industry and disgustedly rich," robs Mazzini Dunn and destroys companies "as a matter of business"; Hesione Hushabye and Ellie Dunn expose modern marriage is a business proposition rather than a love match; Mangan's business syndicate cynically promotes him "as the director of the great public department" for its own commercial purposes; and the Capt. Shotover declares, "The Church is on the rocks, breaking up." Hector Hushabye concludes, "We are useless, dangerous, and all to be abolished." Ibid., 123.

In a parting shot, Captain Shotover says English politics will leave "Nothing but the smash of the drunken skipper's ship on the rocks, the splintering of her rotten timbers, the tearing of her rusty plates, the drowning of the crew like rats in a trap."

Ibid., 122.

D. H. Lawrence, Women in Love (New York: Viking Press, 1950), vii. In his September 12, 1919, Foreword to the novel, Lawrence writes: "This novel was written in its first form in the Tyrol, in
1913. It was altogether re-written and finished in Cornwall in 1917. So that it is a novel which took its final shape in the midst of the period of the war, though it does not concern the war itself. I should wish the time to remain unfixed, so that the bitterness of the war may be taken for granted in the characters.”

Ibid. In his Introduction to Women in Love Richard Aldington notes that the book did not appear in print until November, 1920, a limited edition in the United States, and in May, 1921, in Britain. Ibid., x.

121 In a November 1915 letter Lawrence wrote, "I think there is no future for England, only a decline and fall. That is the dreadful and unbearable part of it: to have been born into a decadent era, a decline of life, a collapsing civilization." George J. Zytaruk and James T Bolton, eds. The Letters of D. H. Lawrence, vol. II (Cambridge: 1981), 441, in Hynes, Samuel. A War Imagined, 136, 482n26.

122 Lawrence, Women in Love, 4.

123 Ibid., 460.

124 Stromberg, Redemption by War, 178.

125 Thomas Hardy, "And there was a great calm' (On the Signing of the Armistice, Nov. 11, 1918)," Late Lyrics and Earlier (London: 1922), 55-58, in Hynes, A War Imagined, 256.

126 Hynes, A War Imagined, 195-97.

127 Ibid. After the war, according to Wohl, the generation of 1914 had "an openness to radical political ideologies and skepticism about all nineteenth-century political movements, including social democracy," and this openness fostered both fascist and communist ideologies. Wohl, The Generation of 1914, 230. Fascism was a reaction to those social forces that threatened the culture and civilization associated with upper-middle-class elites, whereas Communism was a reaction against all hierarchies, elites and nationalities both, and ultimately proved difficult for intellectuals to accept -- they "had been brought up to revere the nation and to believe that the interests of the national community stood above the interests of classes for any international body." Ibid., 231. Just as T.S. Eliot remarked that a shadow falls between the idea and its realization, "the ever present gap between intention and achievement became an abyss" for the generation of 1914, according to Wohl. Ibid., 233-34. They had lost the peace: "the French and British had lost it out of weakness; the Germans and Italians had lost it out all of wounded pride and reckless national ambition." Ibid., 234.

128 Hynes, A War Imagined, 355-56.

129 Ibid., 355.

130 Liulevicius, World War I: The "Great War," Course Guidebook (Part 3), 46. In the course of these wars, English women won social and political privileges through the Representation of the People Act of 1918, which enfranchised women over 30, and through the Sex Disqualification (Removal) Act in 1919, which opened up the professions to English women. Hynes, A War Imagined, 361. Frenchwomen also got the vote but then faced enormous postwar pressure to stay at home to raise children and replenish the population.


132 Ibid., 159.

133 Ibid., 160, 168.
134 Ibid., 161.

135 Ibid., 166.

136 Ibid., 176-79.


138 Pericles Lewis, "The Waste Land," The Modernism Lab at Yale University, http://modernism.research.yale.edu/wiki/index.php/The_Waste_Land (accessed October 26, 2010). Eliot described his poem as "the relief of a personal and wholly insignificant grouse against life . . . just a piece of rhythmical grumbling" and he denied, as "nonsense," that he had intended to express "the disillusionment of the generation."


141 Ibid., 2298-2305. These include an unhappy tryst between an neurotic woman and a laconic man in an upper-class boudoir, and a barroom report of the conversation between two women concerning the bodily deterioration of a lower-class wife of a returning soldier caused by her medication for an abortion, in "A Game of Chess"; and the unromantic sex between the typist and the carbuncular clerk, a proposed homosexual encounter with Mr. Eugenides, the unfulfilled relationship between the "virgin" Queen Elizabeth and Robert Dudley, and the mechanical copulation in a canoe, in "The Fire Sermon."

142 T. S. Eliot, "Ulysses, Order, and Myth" (1923) in Ibid., 2294.

143 Ibid., 2305, line 314. In "Death by Water" Phlebas the Phoenician forgot "profit and loss" and drowned just as Mme. Sosostris prophesied, but his death may only signify every man's fate rather than constitute a sacrifice presaging rebirth. In "What the Thunder Said" Christ's two disciples on route to Emmaus show no recognition of "the third who walks always beside you"; the chaste knight finds nothing but decay and illusion in his unavailing quest to the Chapel Perilous; and the speaker sees an endless historical cycle of birth and destruction of fallen cities from Jerusalem, Athens, Alexandria to Vienna and London. Ancient myths and history seem to offer little consolation, only "the arid plain." Ibid., 2305n1. This does not suggest a clear path forward toward the restoration of Western civilization.

144 Ibid., 2307n3, 2308n6. *Datta, dayadhvam, damyata* mean "give, sympathize, and control"; and *Shanith* means "the Peace which surpasseth understanding."

145 Ibid., 2300-05, lines 310, 308. "The Fire Sermon" concludes with a reference to St. Augustine's coming to Carthage after a lustful youth ("O Lord Thou pluckest me out") and to Buddha's sermon about lust ("burning"), thereby blending Eastern and Western religions. Eliot says, "The collation of these two representatives of eastern and western asceticism, as the culmination of this part of the poem, is not an accident." Ibid., 2305n9.

146 "In 1900 the West really did rule the world," according to Ferguson, because it "produced more than half the world's output" and controlled most of the world's land surface and population. Ferguson, *The War of the World*, lxvii-lxviii, 16.
CHAPTER 4


5 Ibid., 442.

6 Ibid., 141.

7 Ibid., 425, 442.

8 I have subdivided Christian existentialism from neo-orthodoxy and, thus, have added a fourth theology to the other three identified by Baumer because of existentialism’s distinct emphasis on human authenticity as distinct from the neo-orthodoxy’s emphasis upon God’s *wholly otherness*. Ibid., 443.


17 Adolph von Harnack, *What Is Christianity?* trans. Thomas Bailey Saunders (New York: Harper & Row, 1957), 11, 14. Christianity, for Harnack, “is a question of life, again and again kindled fresh, and now burning with a flame of its own…getting rid of formulas, correcting expectations, altering ways of feeling, and this is a process to which there is no end.”
Ibid., 17; Livingston, *Modern Christian Thought: The Enlightenment and The 19th Century*, 289-90. Acknowledging that the Bible provides little bibliographical material on Christ's first 30 years, Harnack nevertheless finds weighty information in it on Christ's teaching, his service to his vocation, and his impression made upon and transmitted by his disciples, which enables us "to understand what his aims were, what he was, and what he signifies for us." Harnack, *What Is Christianity?*, 31. Christ gave perfect expression to the idea of God the Father, Providence, God's children, and the infinite value of the human soul. In addition, the Gospel conveys the idea that man "has a value which is higher than all the fabric of this world" and man's highest value "consists in his increasing the value of all mankind." Ibid., 67. As Livingston points out, Harnack considered "the ethical task of building a community inspired by love of neighbor as an indispensable dimension of Jesus’s Gospel."

Livingston, *Modern Christian Thought: The Enlightenment and The 19th Century*, 289. According to Livingston, Harnack considered "the ethical task of building a community inspired by love of neighbor as an indispensable dimension of Jesus’s Gospel."

Zahrnt, *The Question of God*, 15. To emphasize his point Zahrnt quotes Harnack's seventh lecture on "What is Christianity?" as follows: "We have received from the very foundation of our religion a lofty and noble ideal, an ideal which should be kept in view as our historical development proceeds, as its goal and lodestar. Who can tell whether man will ever achieve it? But we can and ought to draw nearer to it, and today – as opposed to two or three hundred years ago – we are already aware of a moral obligation to proceed in this direction, and those among us whose experience is more subtle and therefore prophetic no longer look upon the kingdom of love and peace as mere Utopia."


Le Roy (1870-1954), a mathematician turned philosopher and Teilhard's scientific colleague and friend, tried to align Catholicism with Darwinian evolution and Bergsonian philosophy. Ibid., 376-77.


Loisy, *The Gospel and the Church*, 210-11 in Livingston, *Modern Christian Thought: The Enlightenment and The 19th Century*, 369. Loisy considers Church dogma from the Incarnation to the Trinity as not the "summit of a doctrine": "Though the dogmas may be Divine in origin and substance, they are human in structure and composition. It is inconceivable that their future should not correspond to their past. Reason never ceases to put questions to faith, and traditional formulations are submitted to a constant work of interpretation."

Livingston, *Modern Christian Thought: The Enlightenment and The 19th Century*, 379. In 1910, the Church required all priests and priesthood candidates to sign an anti-Modernist statement and instituted a campaign called "Integralism." The campaign included a small society (secret police), called "Sodalitium Pianum," that spied on Modernist suspects and undertook "acts of denunciation, intimidation, and injustice that amounted to a veritable reign of terror." This caused the end of both Modernism and biblical study within Catholicism until after World War II. Most Catholic scholars now agree that Modernism was correct in concluding that the Church faced serious intellectual problems but that the Church's condemnation merely sent such criticism underground to reemerge several decades later.

“One day in August 1914 stands out in my personal memory as a black day,” Barth later recalled. "Ninety-three German intellectuals impressed public opinion by their proclamation in support of the war policy of Wilhelm II and his counselors. Among these intellectuals I discovered to my horror almost all of my theological teachers whom I had greatly venerated. In despair over what this indicated about the signs of the time, I suddenly realized that I could not any longer follow either their ethics and dogmatics or their understanding of the Bible and of history. For me at least nineteenth-century theology no longer held any future." Barth, "Evangelical Theology in the Nineteenth Century" in The Humanity of God (Richmond: John Knox Press, 1963), 14, in Zahrnt, The Question of God, 16.

Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 66.

Zahrnt, The Question of God, 45.

Ibid.

Ibid., 18.

"By following the example of Jesus and sharing his inner life," writes Zahrnt of this 19th-century Liberal Protestant viewpoint, "man increases his consciousness of God and matures to become a free spiritual and ethical personality." Ibid., 19.

"It is not the right human thoughts about God which form the content of the Bible, but the right divine thoughts about men. The Bible tells us not how we should talk with God but what he says to us; not how we find the way to him but how he has sought and found the way to us. . . . It is this which is within the Bible. The word of God is within the Bible." Hans Urs von Balthazar, Darstellung und Deutung seiner Theologie (Cologne, 1961), 182, in Heinz. The Question of God, 19.

Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 66. Zahrnt writes that "in opposition to every merely historical, psychological and speculative view of Christianity, Barth rediscovered the revelation of God as the decisive category of theological thought, and thereby restored to theology its own proper theme, which it had lost. He also placed the theologian in his proper place, 'beneath' holy scripture. Barth himself seeks to be nothing other than a scriptural theologian, a student and a teacher of holy scripture The Bible forms the source from which alone his entire theology is drawn." Zahrnt, The Question of God, 20.

Karl Barth, Epistle to the Romans (London: Oxford University Press, 1933), 1, in Zahrnt, The Question of God, 22. In response to Bultmann's review of Barth's Epistle to the Romans concerning the need for some critical historical analysis, given Paul's use of Jewish theology, Hellenistic philosophy, and popular Christian practice, Barth replies that Bultmann is interposing "a modern form of the dogma of Inspiration," pointing out his views set forth in the preface to the first edition: "Were I driven to choose between the historical-critical method and the venerable doctrine of Inspiration, I should without hesitation adopt the latter, which has a broader, deeper, more important justification." Yet Barth adds, "Fortunately, I am not compelled to choose between the two." Ibid., 23.

"If I have a system, it is limited to a recognition of what Kierkegaard calls the 'infinite qualitative distinction' between time and eternity, and to my regarding this as possessing negative as well as positive significance: 'God is in heaven, and thou art on earth.' The relation between such a God and such a man, and the relation between such a man in such a God, is for me the theme of the Bible and the essence of philosophy. Philosophers named this KRISIS of human perception – the Prime Cause: the Bible beholds at the same cross-roads – the figure of Jesus Christ." Barth, Epistle to the Romans, 10, in Zahrnt, The Question of God, 24. "The historical reality of Christ is not the 'historical Jesus' whom an all too eager historical research had wanted to lay hold of . . . but rather the risen one . . . That is the
'evangelical, the historical Jesus Christ' and otherwise, that is, apart from the testimony to him, apart from the revelation which must be here believed, 'we know him no longer.' H. Martin Rumscheidt, Religion and Theology: an Analysis of Barth-Harnack Correspondence of 1923 (Cambridge, 1972), 46, in Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 70-71.

38 "Behold, I make all things new! The affirmation of God, man, and the world given in the New Testament based exclusively on the possibility of a new order absolutely beyond human thought; and therefore, as prerequisite to that order, there must come a crisis that denies all human thought." Barth, The Word of God and the Word of Man, 473 (emphasis in original).


40 "The 'historical Jesus' reconstructed from the records is not identical to revelation, to the active God, which cannot be directly perceived in history. Yet the connection between God and history is not severed; the relationship is dialectical, which means that the action of God in the event of Jesus Christ must be understood in the terms that God has established and not in our turning it into premature identity of time and eternity, history and the Absolute. The tension and mystery inherent in holding together the sovereignty of God and the human requires that all human testimony be understood dialectically as both "no" and "yes" – for revelatory truth never can be pronounced directly or as the last word." Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 71 (emphasis in original).

41 Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 104-05. For Barth, Church Dogmatics constitute a science of the Church subject to the Word of God as revealed in three forms: Jesus Christ, Holy Scripture, and Church proclamations – all constituting the same Word of God. Christ's words and actions are the source and basis of Scripture and church proclamations, but because the latter two are human activities, they remain continually subject to human exegesis, and are not expressly the Word of God. Rather, they become the Word of God only through God's grace. Exegesis for Barth, however, is no longer merely a sympathetic reading of the Gospel without any preconceptions, as required in his Romans. Now Barth considers that theological exegesis must appropriate new presuppositions for exegesis, namely, faith, grace, and prayer.

Barth elaborates that this new exegetical conception "must consist in all circumstances in the freely performed act of subordinating all human concepts, ideas, convictions to the witness of revelation supplied to us in Scripture." In other words, we must surrender our human autonomy. Subordination, for Barth, "means placing oneself behind, following, complying as subordinate to the superior. . . . It cannot mean that we have to allow our ideas, thoughts, convictions to be supplanted, so to speak, by those of the prophets and apostles." Rather, for Barth, "Subordination must concern the purpose and meaning indicated in the ideas, thoughts and convictions of the prophets and apostles, that is, the testimony which, by what they say as human beings like ourselves, they wish to bear. To this testimony of their words we must subordinate ourselves." Barth, The Doctrine of the Word of God, Part II trans. G. T. Thompson and Harold Knight (Edinburgh, 1956), 718 in Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 105.

In short, the Bible is not per se the Word of God but becomes such only as a result of "divine disposing" of understanding to the reader through God's grace. By contrast with Liberal claims for the Bible's sublime truths, Barth emphasizes the Bible's human and fallible character. As Livingston and Fiorenza explain, "for Barth knowledge of the Word of God is not an anthropological problem!" Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 74-75.

42 Zahrnt, The Question of God, Protestant Theology in the Twentieth Century, 31 (emphasis in original).

43 Ibid., 55-59; Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 75-76.

Livingston and Fiorenza, *Modern Christian Thought: The 20th Century*, 99-100. On January 20, 1933, when Hitler became German Chancellor, Barth, then a professor at the University of Bonn, promptly determined to resist National Socialism because he considered the Nazi policy designed to eliminate the expression of Christian faith. In April 1933, the Nazis required all the German churches to assimilate under the "Evangelical Church of the German Nation" and to operate under guiding principles that considered the Jews a grave national danger and forbade intermarriage between Germans and Jews. In June 1933, Barth wrote a pamphlet published in *Theological Existence Today* (banned by the Nazi's in July 1934), attacking the Nazi church program.

Barth joined what became known as the Confessing Church, which held a synod of 138 delegates at Barmen in May 1934. The synod issued the famous Barmen Declaration, essentially written by Barth, which rejected the erroneous views of the German Christians, the superintendence of the church by the National Socialist Party, and the constitution of the church as an organ of the state. The Declaration proclaimed allegiance only to the Word of God, challenged the anti-Semitic Nazi position, and rejected "the false doctrine that the church could have permission to hand over the form of its message and of its order to whatever it itself might wish or to the vicissitudes of the prevailing ideological and political convictions of the day."


Ibid., 96.


Ibid.

Ibid., 109.


Lucas and Lucas, *Teilhard*, 50. Teilhard posited Cosmic Organizing Energy, similar to Bergson’s *élan vital*, which drew subatomic particles together into increasingly complex matter that produced Life and eventually Man, both heading towards an ultimate goal: "Everything that is hard, crusty, or rebellious . . . all that is false and reprehensible . . . all that is physically or morally evil," Teilhard wrote, "will disappear. . . . Matter will be absorbed into Spirit."

Ibid., 53, 56.

Ibid., 69; Ursula King, Introduction to Pierre Teilhard de Chardin and Ursula King, *Pierre Teilhard De Chardin: Writings* (Maryknoll, NY: Orbis Books, 1999), 15. The Muslim soldiers called him *Sidi Marabout*, which is "an acknowledgment of his spiritual power as a man closely bound to God, a saint and ascetic protected from all injuries by divine grace."

350
Ibid., 15.

Lucas and Lucas, Teilhard, 61.


Teilhard, "Cosmic Life" in Pierre Teilhard De Chardin: Writings, 48-49; King, Teilhard’s Mysticism of Knowing, 9.

King, Teilhard’s Mysticism of Knowing, 9-11.

Teilhard, "Cosmic Life" in Pierre Teilhard De Chardin: Writings, 48-49; King, Teilhard’s Mysticism of Knowing, 9, 12-14.

King, Teilhard’s Mysticism of Knowing, 120, 124. "Teilhard de Chardin’s spiritual vision emerged in the trenches of the First World War and remained with him all his life. An ardent Christocentric mysticism was the source of all his energies, the life of his great faith and devotion, the firm support for his extraordinary faithfulness. This living faith in the living God immersed in the world and all its labors inspired and sustained him through all the vicissitudes of his life and career." Ursula King, "Postscript: The Heart of Teilhard's Faith Questioned and Reaffirmed" in Pierre Teilhard De Chardin: Writings, 165.

"Equipped as he now was with the tools of his profession, he began the task of stating his religious intuitions in scientifically acceptable terms. Since the Aristotelian 'body-soul,' 'spirit-matter' distinction still did not make sense to him, he wrote new essays arguing for the action of one single personalizing Progress of the world. Though this process, he felt, had only reached its fullness in man, he now felt he could detect graduating "promises" of it through all the varieties of sensitive life, right back to matter brought it forth." Lucas and Lucas, Teilhard, 63.

Ibid., 69-73.

Ibid., 74-75. With the death of Pius X at the beginning of the war, the Curia's "White Terror" had quieted down, but began to reemerge upon the election of Benedict XV in 1914, with cataloging heresies, finding the University of Louvain accused of "scientism," and dragging Belgian Cardinal Mercier "into a struggle to keep the theory of evolution from being officially condemned by the Church." As the Lucases point out, "Right philosophizing came to be regarded as a prerequisite to right believing, and by the end of Benedict’s reign, Roman seminarians vied with one another in parroting the textbooks of [the neo-Thomists] . . . ." Ibid., 65. The Jesuits followed suit in imposing strict censorship under the militaristic control of the Jesuit General Vladimir Ledochowski, who developed the board of censors to oversee the writings and teachings of Jesuits. The Jesuits removed Teilhard's friend Auguste Valensin from Jersey and sent him to teach literature at a university in Lyon, and Teilhard came to realize how unbending the Church had become toward new thought. After a recent Church condemnation Teilhard wrote that it "is nothing more or less than a declaration of war by one kind of mentality on another. . . . Stifled at one point, we assert ourselves at another. We serve the Church by forcing her hand." Ibid., 67.

Ibid., 74.

Ibid., 81-84.

Ibid., 86. Teilhard recognized the need to act prudently to avoid an unacceptable ultimatum. Ignatius Loyola wrote that Jesuits "must take precedence in true and perfect obedience – in the voluntary renouncement of private judgment," but thereafter the society should require such obedience "in as mild
and paternal a spirit as possible," allowing individual Jesuits to make "discrete remonstrances" to a superior when compliance put him in "danger of sin." Thus Teilhard sought to revise the declaration into terms that he could live with, contending, as the Lucases explain, that his paper "was only a demonstration of the possibility of reconciling the doctrine of Original Sin with scientific data, and offered his formal promise that henceforth he would limit such speculation to conversations with 'professionals.'" The best that Teilhard's Jesuit superior Costa de Beauregard could do was to send his alternative declaration to Rome for approval. Ibid., 87-88.

70 Ibid., 89-90.

71 Remark to Paul Rivet in Ibid., 95; Livingston and Fiorenza, *Modern Christian Thought: The 20th Century*, 376.

72 Lucas and Lucas, *Teilhard*, 106. Upon later learning that one of Le Roy's early works had been placed on the Index of Forbidden Books, with a Church demand for retraction of his ideas, Teilhard wrote to him: "You must know, my dear friend, how much I, too, feel this last below!… The people who condemn you are simply incapable of recognizing anything as true unless they hear it in the vocabulary they learned when they were schoolboys… If this sort of thing keeps up, I feel I well may die in the arms of the World, rather than in those of the Church!" Ibid., 126.

73 Ibid., 109.

74 Ibid., 113.

75 Ibid., 50, 146, 160. Ordering Teilhard to stop disseminating his ideas and to remain put until they decided his fate, the Jesuits reversed themselves surprisingly, allowing Teilhard to complete his work in China and even to write his philosophical essays so long as they were edited by René d'Ouince, editor of the Jesuit journal *Études*.

76 Ibid., 148-50, 160, 155-56. In what the Lucases call his "most daringly optimistic semi-scientific piece," entitled "Human Energy" (1937), Teilhard calls man the goal of evolution. Once men had unconsciously civilized or spiritualize themselves, men began consciously to pursue a common goal, and, with modern communication virtually instantaneous, men now have the power to advance the process of evolution by working together for the betterment of all. His essay entitled "The Spiritual Phenomenon"(1937) challenged the distinction between spirit and matter advanced by Aristotle and adopted by the Thomists and argued that "germs of consciousness" existed even in "brute matter." Back in Peking in 1938, Teilhard superior, Father George Marin, called him a "communist, a pantheist, and an evolutionist," causing Teilhard's reputation to plummet further within the Society.

77 Ibid., 50, 168.

78 Ibid., 199.

79 Ibid., 229, 235.

80 Ibid., 269, 274.

81 Ibid., 285. In May 1950, the papal encyclical *Humani Generis* chastised those responsible for the "disagreements and errors" circulating in theology and philosophy and for their acceptance of the "still unproved scientific theory of evolution." In addition, the encyclical insisted on the correctness of the doctrines adopted at the Council of Trent and of the philosophy of Thomas Aquinas.
83 Ibid., 340-42, 345.

84 Ibid., 167-68. In "My Universe" (March 1924), Teilhard wrote an essay by the same title in 1918. Teilhard wrote that "my experience in these last 10 years has convinced me that both within and outside Christianity many more minds than we suspect are drawing nourishment from the same intuitions and the same ill-defined feelings as those that have filled my life. It has been my destiny to stand at a privileged cross-roads in the world; there are, in my twofold character of priest and scientist, I have felt passing through me, in particularly exhilarating and varied conditions, the double stream of human and divine forces. Pierre Teilhard de Chardin, Science and Christ (New York: Harper & Row, 1965), 38. Consequently, Teilhard thought he would be "disloyal to Life" if he failed to describe "the features of the resplendent image that has been disclosed to me in the universe in the course of twenty-five years of reflections and experiences of all sorts." Writing five years after the end of World War I, his only concern was his ability "to show how it is possible, by approaching the vast disorder of things from a certain angle, suddenly to see their obscurity and discord become transformed in a vibration that passes all description, inexhaustible in the richness of its tones and its notes, interminable in the perfection of its unity." Ibid., 38-39.

Describing his philosophy, Teilhard announces his "profound conviction that being is good, that the universe "considered as a whole... Has a goal" and "Cannot take the wrong road nor come to a halt in the journey." Indeed, Teilhard is convinced that the world "is assured of attaining its end," i.e., "arriving at a certain higher degree of consciousness," which he calls "the terminal Reality" and a "cosmic consciousness." The Creative Union which is the goal of evolution is not a metaphysical doctrine but "rather a sort of empirical and pragmatic explanation of the universe, conceived in my mind from the need to reconcile in a solidly coherent system scientific views on evolution (accepted as, in their essence, definitively established) with the innate urge that has compelled me to look for the Divine not in a cleavage with the physical world but through matter, and, in some sort of way, in union with matter." Teilhard sees evolution as a process of unification by which elementary particles must have some immanent "spark of spirit" or "nebula of consciousness" in order to give birth to organic life. Ibid., 40-41, 43-44, 47.


86 Teilhard's conception of God as the inspiration for cosmic evolution is much like that of Alfred North Whitehead who views God as a creative lure towards increased novelty and complexity. Teilhard's and Whitehead's philosophic views are summarized in Livingston, James C. & Fiorenza, Francis Schuessler. Modern Christian Thought: The 20th Century, 311-16. Expanding upon ideas developed during the war, Teilhard’s The Phenomenon of Man argues that man evolved from the inorganic world through psychic activity that ultimately became manifest in human thought through tangential energy (measurable forces like electromagnetic and mechanical energy) and radial energy (the psychic energy that drove evolution forward to man’s appearance). This growth in complexity, interiority, and increasing self-awareness within the biosphere culminated in man, whose "reflectivity," or self-consciousness, made him privileged among the animal kingdom. Whereas Henri Bergson had considered evolution to be a divergent process that multiplied the number of forms, Teilhard considered it a convergent process, setting evolution in a new direction of human socialization made possible by rapid communication and "planetization." Ibid.

87 Teilhard, The Phenomenon of Man, 269-70. By picturing God, the Omega Point, as present with, but independent of, the cosmic evolutionary process, Teilhard seems to distinguish his idea of God from other process theologies, like those of Hegel and Whitehead, which consider God affected by and, to

88 Lucas and Lucas, Ellen. *Teilhard*, 167-75. In his 1921 lecture on "Science and Christ" Teilhard asserted that man plays a crucial role in the cosmic evolutionary process and "that our duty as man is to act as though there were no limit to our power. Life has made us conscious collaborators in a Creation which is still going on in us, in order to lead us, it would appear, to a goal (even on Earth) much more lofty and distant than we imagined. We must, therefore, help God with all our strength, and handle matter as though our salvation depended solely upon our industry." Teilhard, "Science and Christ or Analysis and Synthesis" (February 1921) in *Pierre Teilhard De Chardin: Writings*, 32. "The biological function of religion," writes Teilhard in this context, "is to give a form to the free psychic energy of the world," and he finds all the major religions lacking such faith in the future, except Christianity, "which is a religion of universal progress." Teilhard, "Christianity in the World" (May 1933) in Teilhard, *Science and Christ*, 104-08.


90 Teilhard, "Research, Work and Worship" (March 1955) in *Science and Christ*, 214.

91 Teilhard defines evil as "disunity" produced through evolution in "My Universe" (March 1924) in Teilhard, *Science and Christ*, 80n15.


94 Ibid., 120-23.

95 Ibid., 125-27.


99 Ibid., 85, 102.


Catholicism also had its existentialist thinkers. For the Catholic philosopher Gabriel Marcel (1888-1973), existential man participates in the ontological mystery of being which is both a gift and an aspect of the transcendent. Marcel sees despair as an individual's inability to affirm being; by contrast, hope instills life with a sense of the Holy and fidelity to one's fellow man creates a conscious and authentic self. Ibid., 138-39.

Tillich, The Courage to Be, 86, 163-81. Acceptance of ourselves, including our relative limitations and the ultimate threat of our non-being, enables us to realize our full human potential. If we shrink from the self-affirmation in favor of greater security, we forfeit this courage to be authentic. Human authenticity requires the inspiration of the infinite, namely, the God above God. For Tillich, God is the depth dimension, i.e., the reality beneath the individual surface, that layer of truth not instantly accessible, but present in nature and history. God is a depth of being both within and without existence.


Livingston and Fiorenza, Modern Christian Thought: The 20th Century, 316-36. Whitehead's assistant, the philosopher Charles Hartshorne (1897-2000) continued the development of process theology from the 1940s through the 1960s, as did the theologian Schubert Ogden (1928- ) thereafter.

CHAPTER 5


2 Martin Heidegger (presumably from Lectures on Nietzsche, 1936-40) in William Barrett, Irrational Man, 184.

3 Chambers, Hanawalt, Rabb, Woloch, and Tiersten, The Western Experience, 829-30. In papers published in 1905 and 1915, Albert Einstein developed his theory of relativity, which held that space and time are an interrelated continuum rather than absolutes and that they must be measured relative to the observer. Einstein developed his theory of relativity based upon the 1902 findings of Max Planck who observed that subatomic matter released and absorbed measurable amounts of energy, which he called quanta. Thus, Einstein concluded that matter could be converted into energy. In the mid-1920s, as problems emerged with measurements applying Planck's quantum theory, where Heisenberg argued that
measurement instruments affected the variables being measured such that it was impossible to determine both the position and momentum of a subatomic particle at the same time.

4 Morton White, *The Age of Analysis, 20th Century Philosophers* (New York: Mentor Book, 1957), 13-21. As discussed in the text, Viennese intellectuals questioned reason’s ability to comprehend reality. Quentin Lauer writes the following about Husserl's desire to make philosophy a strict science: "his times would be satisfied with nothing less than scientific verifiability for every proposition which is to be recognized as meaningful. In Husserl, then, we see a heroic effort to re-establish metaphysics according to the canons set up by science." Quentin Lauer, *Phenomenology, Its Genesis and Prospect* (New York: Harper Torchbooks, 1965), 159.

5 Baumer, *Modern European Thought*, 460-63. I base this discussion of the new science on Baumer’s helpful summary.


7 Baumer, *Modern European Thought*, 464.

8 Ibid., 463.


12 A. C. Grayling, *Wittgenstein, A Very Short Introduction* (Oxford: Oxford University Press, 2001), 1-4. Wittgenstein's paternal grandfather was a prosperous Jewish wool merchant from Hesse, Saxony, Germany who converted to Protestantism, married a Viennese banker's daughter, and moved his business to Vienna. Their son Karl rebelled at his father's strictures, left home at age 17, and spent two years in the United States, living as a waiter, bartender, and teacher, including violin instructor, in New York before returning home to become an iron and steel magnate, among the wealthiest men in Vienna. Karl Wittgenstein married Leopoldine Kalmus, the Roman Catholic daughter of a prominent Viennese banker, who encouraged the entire family's active musical and cultural life, which included regular visits from Mahler and Brahms. When Wittgenstein's brother Paul, a concert pianist, lost his right arm in the Great War, both Maurice Ravel and Richard Strauss composed left-handed him concerti for him to play. Wittgenstein himself played the clarinet, could whistle entire concerti from memory, and considered becoming a conductor. The three eldest of Wittgenstein's brothers committed suicide, the youngest of the three, Kurt, after his troops deserted on the Italian front toward the end of the war, and the older two, Hans and Rudi, apparently from depression related to their father's domineering insistence that they prepare to enter the business world, despite their obvious artistic interests and talents. Allan Janik and Stephen Toulmin, *Wittgenstein's Vienna* (Chicago: Elephant Paperback, 1973), 171-73, 200.

13 Russell called Wittgenstein "the ablest person I have come across since (GE) Moore," Grayling, *Wittgenstein*, 6; and in a memorial article on Wittgenstein, Russell wrote that "getting to know Wittgenstein was one of the most exciting intellectual adventures of my life" G.H. Von Wright Biographical Sketch in Norman Malcolm, *Ludwig Wittgenstein: A Memoir* (New York: Oxford University Press, 1972), 6n1.

Ibid., 121-30. Janik and Toulmin characterize Mauthner's view as follows: "Philosophy is theory of knowledge. Theory of knowledge is critique of language. Critique of language, however, is effort on the behalf of the liberating thought that man can never succeed in getting beyond a metaphorical description of the world utilizing either everyday language or philosophical language." They point out that this epistemological skepticism — that man's description of the world is only metaphorical, that science and philosophy cannot prove true knowledge, and that the laws of nature are simply social phenomena — becomes the subject for Wittgenstein's *Tractatus Logico-Philosophicus*, including his view of the world as representation and mathematical model. Ibid., 131-32.

Ibid., 164-65.

For Schopenhauer, reason does not lead to ethical behavior because virtue and reason are different; rather, moral acts are the product of the willing subject acting out of compassion for his fellow man. Schopenhauer explains as follows: "He [the willing subject] recognizes immediately, and without reasons or arguments, that the in-itself of his own phenomenon is also that of others, namely that will-to-live which constitutes the inner nature of everything, and lives in all..." Arthur Schopenhauer, *The Basis of Morality*, trans. A. B. Bullock, 2nd ed. (London: Allen & Unwin, 1915), 372, in ibid., 156-57. Thus, for Schopenhauer, ethics is a compassionate, ethical, even mystical experience, like that described in Hindu mysticism.

In *Philosophical Fragments* (1844), Kierkegaard challenges Hegel's view of the historical dialectic of Absolute Spirit by contending that the historical is intrinsically elusive since it is not the object of either sense perception or knowledge, and that something's "coming into existence" as part of history is perceived only after the fact. Consequently, in either case our apprehension of history is a matter of belief (i.e., conclusion or judgment) rather than empirical knowledge. Furthermore, since history results from freely acting causes and not from necessity, Kierkegaard concludes that Hegel's dialectical method for determining the past and predicting the future is a foolish tautology. Søren Kierkegaard, *Philosophical Fragments Johannes Climacus*, ed. and trans. with Introduction and Notes by Howard V. Hong and Edna H. Hong (Princeton: Princeton University Press, 1987), 78n. Based upon his contrary postulate of "an absolutely freely acting cause," Kierkegaard concludes that "Hegel is not right in his attempt to unite logical, metaphysical and historical categories in his system, with the result that he understands historical events as having occurred with necessity." Ibid., 76. In short, Hegel's dialectical necessity relates to "essence" (Kant's *noumena*), which is beyond human knowledge; scientific knowledge about "being" (*phenomena*) differs from matters of subjective belief; and faith (especially in the Absolute Paradox of Christ's divinity) "does not result simply from a scientific inquiry... [and] does not need [proof]." Søren Kierkegaard, *Concluding Unscientific Postscript*, in Walter Kaufmann, *EXISTENTIALISM From Dostoevsky to Sartre*, revised and expanded, ed. and trans. with Introduction and Prefaces by Walter Kaufmann (New York: New American Library, 1975), 114.

Janik and Toulmin, *Wittgenstein's Vienna*, 163. As Konstantin Levin says in Tolstoy's *Anna Karenina*: "I looked for an answer to my question [about the meaning of life]. But reason could not give me an answer — reason is incommensurable with the question. Life itself has given me the answer, in my knowledge of what is good and what is bad." Leo Tolstoy, *Anna Karenina*, trans. Constance Garnet (New York: Grosse it in Dunlap, 1931), Part VIII, Chapters XIII, in ibid.


Janik and Toulmin, *Wittgenstein's Vienna*, 209-11. They point out that in 1911, when Russell first met Wittgenstein, Russell’s formal logic and philosophical analysis was philosophically neutral and not yet positivist. Russell simply wanted clear language and logical forms for use in philosophy. The logical positivists of the Vienna Circle, who developed in the 1920s, also had no interest in Hegelian philosophy, probably appreciated Schopenhauer primarily for his attacks on Hegel, and had aims similar to, but different than, Cambridge’s analytical philosophers. “Whereas the young Cambridge radicals had set out to reform philosophy by analysis,” according to Janik and Toulmin, “the Viennese positivists were determined to reform it by generalizing methods that were already proving their worth in scientific theory.” Ibid., 212. As with any science, the Vienna Circle thought that philosophical concepts should rest upon empirical observation, inductive reasoning, and the logic of pure mathematics, as in Ernst Mach’s epistemology and David Hume’s analysis of sensations.

Von Wright, Biographical Sketch, in Malcolm, *Ludwig Wittgenstein: A Memoir*, 10; Janik and Toulmin, *Wittgenstein's Vienna*, 200-04; Barrett, *The Illusion of Technique*, 31-35. The depth of Wittgenstein’s religious feeling is captured in a letter that Russell sent to Lady Ottoline Morrell, dated December 20, 1919, following his meeting with Wittgenstein in Holland: "I had felt in his book the fervor of mysticism, but was astonished when I found he had become a complete mystic. He reads people like Kierkegaard and Angelus Silesius, and he seriously contemplates becoming a monk." Russell further notes Wittgenstein’s attraction to the works of Tolstoy, Dostoevsky, and William James, and writes, "He has penetrated deep into mystical ways of thought and feeling, but I think (though he wouldn't agree) that what he likes best in mysticism is its power to make him stop thinking..." Barrett calls Wittgenstein "a genuinely religious personality" in the tradition of Kierkegaard and Pascal, and a devotee of the dictum in Tolstoy's essay accompanying his translation of the Gospel: "The more we live by our intellect, the less we understand the meaning of life.” Ibid., 35.

Von Wright, Biographical Sketch, in Malcolm, *Ludwig Wittgenstein: A Memoir*, 8-9. G.E. Moore suggested the Latin title, modeled on the title of Spinoza’s work. While interned in Italy, Wittgenstein wrote to Russell (via his Cambridge friend Maynard Keynes), and Russell contributed an Introduction and arranged for German publication of the *Tractatus* in 1921, with an English translation in 1922 (Wittgenstein later complained that Russell’s Introduction misunderstood and misrepresented his views in the *Tractatus*).

Ibid., 9-10. According to his student, friend, and memoirist, G. H. Von Wright, Wittgenstein’s war notebooks do not focus on the *Tractatus* but chiefly concern "the ego, the freedom of the will, the meaning of life, and death," showing the strong influence of Schopenhauer’s and Tolstoy’s ethical and religious teachings, which underlay the *Tractatus*. Ibid., 9. Rather, Wittgenstein developed the idea of a proposition as a model or picture of similar corresponding parts of the world, i.e., language as a picture of reality, after reading a magazine about a Paris lawsuit involving an automobile accident which used a model in court to describe the state of affairs. Ibid., 7-8.


Ibid., secs. 1.1, 2, 2.01, 2.02.


Wittgenstein, *Tractatus*, secs. 3, 3.1, 3.2, 4.01.
Ibid., secs. 2.04-06, 4.11. In Wittgenstein's words, "The correct method in philosophy would really be the following: to say nothing except what can be said, i.e. propositions of natural science – i.e. something that has nothing to do with philosophy – and then, whenever someone else wanted to say something metaphysical, to demonstrate to him that he had failed to give meaning to certain signs in his proposition." Ibid., sec. 6.53.

Ibid., secs. 6.53, 4.111.

Ibid., sec. 4.112.

Ibid., sec. 4.114.

"My propositions are elucidatory in this way: he who understands me finally recognizes them as senseless, when he has climbed out through them, on them, over them. (He must so to speak throw away the ladder, after he has climbed up on it.) He must transcend these propositions, then he will see the world aright." Ibid., sec. 6.54.

Ibid., sec. 6.42.

Ibid., secs., 6.421, 6.522, 6.52.

Ibid., sec. 7; also, sec. 1. As Wittgenstein put it in a letter to Russell, "The main point [of the Tractatus] is the theory of what can be expressed by propositions – i.e. by language – (and, which comes to the same thing, what can be thought), and what cannot be expressed by propositions, but only shown; which, I believe, is the cardinal problem of philosophy." Grayling, Wittgenstein, 18-19.

Ludwig Wittgenstein, Briefe an Ludwig von Ficker, ed. G. H. Von Wright (Salzburg: Otto Müller, 1969), 35, in Janik and Toulmin, Wittgenstein's Vienna, 192. As he wrote in a letter to his German publisher Fricker, Wittgenstein considered the most important part of the Tractatus to be the mystical world of the ethical and life's meaningfulness about which he had been silent, except for its emphasis in the introductory and concluding remarks:

The book's point is an ethical one. I once meant to include in the preface a sentence which is not in fact there now, but which I will write out for you here, because it will perhaps be a key to the work for you. What I meant to write, then, was this: My work consists of two parts: the one presented here plus all that I have not written. And it is precisely this second part that is the important one. My book draws limits to the sphere of the ethical from the inside as it were, and I am convinced that this is the ONLY rigorous way of drawing those limits. In short, I believe that were many others today are only gassing, I have managed in my book to put everything firmly into place by being silent about it. And for that reason, unless I am very much mistaken, the book will say a great deal that you yourself want to say. Only perhaps you won't see that it is said in the book. For now I would recommend you to read the preface and the conclusion because they contain the most direct expression of the point of the book. Ethics and value, for Wittgenstein, concern the world as a whole and not the facts within the world. Indeed, Wittgenstein asserts: "How things are in the world is a matter of complete indifference for what is higher. God does not reveal himself in the world," because it "is not how things are in the world that is mystical, but that it exists." Ibid., secs., 6.432, 6.44.

Barrett, The Illusion of Technique. 49. The Vienna Circle placed great stock in the principle of verification, i.e., the sense of the statement depends upon its method of verification to determine whether it is true or false. Grayling, Wittgenstein, 70-71. In Language, Truth and Logic (1936) A. J. Ayer publicized the Vienna Circle's work in English, emphasizing the verification principle. Moritz Schlick, Philosophy Professor at Vienna University and founder of the "Vienna Circle," admired Wittgenstein's
work and stimulated Wittgenstein's return to philosophy (Wittgenstein discovered that he had not solved all the problems and could again do creative work in philosophy). Von Wright, Biographical Sketch in Malcolm, *Ludwig Wittgenstein: A Memoir*, 13. Schlick met Wittgenstein in 1927, (Wittgenstein reported, "Each of us must have thought that the other was crazy"). When Wittgenstein finally met with the Vienna Circle, however, he declined to discuss technical points in his philosophy and, instead, read them poetry. By the early 1930s, Wittgenstein had distanced himself from the Circle's ideas, even though the Circle members associated their ideas with the *Tractatus*. Janik and Toulmin, *Wittgenstein's Vienna*, 216. Grayling disputes the claim that the *Tractatus* was a major inspiration for the logical positivism of the Vienna Circle, contending that its views had already solidified before reading the *Tractatus*. Grayling, *Wittgenstein*, 65-68.

40 As Janik and Toulmin note, the logical positivists "were turning an argument designed to circumvent all philosophical doctrines into a source of new doctrines, meanwhile leaving the original difficulties unresolved." Janik and Toulmin, *Wittgenstein's Vienna*, 216.

41 "Any one fact can either be the case, or not the case, and everything else remains the same." Wittgenstein, *Tractatus*, sec. 1.21.

42 Barrett, *The Illusion of Technique*, 37. Barrett makes this argument with analogy to Hume. Ibid., 36-44.

43 Grayling, *Wittgenstein*, 39. Propositions depend on the truth value of their elementary propositions, according to Wittgenstein, with two exceptions: (1) when a proposition is true no matter what the constituents truth value (a tautology) and (2) when a proposition is false no matter what the constituents truth value (a contradiction). When language fails to state a proposition it is nonsense because it fails to mirror the world, and most philosophical propositions fall into this category.

44 Barrett, *The Illusion of Technique*, 45-49.

45 Von Wright, Biographical Sketch, in Malcolm, *Ludwig Wittgenstein: A Memoir*, 10-11. In 1926, Wittgenstein resigned to take on a job as gardener at a monastery outside of Vienna where for a second time he considered becoming a monk before opting to undertake responsibility for the architectural design of his sister's home. According to Von Wright, Wittgenstein designed the house with "severe exactitude in measure and proportion" and with a meticulous, unornamented style in the manner of his friend, the architect Adolph Loos. Clearly, Wittgenstein was a restless Renaissance man. In addition to engineering (making a working model sewing machine out of matchsticks at age 10), mathematics, logic, philosophy, and architecture, Wittgenstein was interested in music (investigating rhythm and curious about the logic of jazz, playing the clarinet, whistling whole concerti, and contemplating becoming a conductor), sculpture (sculpting a woman's head in classical Greek style), and medicine (considering it as a profession in the 1930s before working in Guy's Hospital in London and a medical laboratory in New Castle during World War II). Ibid., 6, 11, 17; Janik and Toulmin, *Wittgenstein's Vienna*, 174-76.


48 Barry Smith and David Woodruff, eds., *The Cambridge Companion to Husserl* (Cambridge: Cambridge University Press, 1996), 4-5. Brentano influenced Husserl to dislike German idealism and admire British empiricism, especially Hume, and most importantly to become a philosopher: "Brentano's lectures gave me for the first time the conviction that encouraged me to choose philosophy as my life's
work, the conviction that philosophy too was a serious discipline which also could be and must be dealt with in the spirit of the strictest science." Dermot Moran, *Edmund Husserl, Founder of Phenomenology* (Cambridge, UK: Polity Press, 2005), 17.

49 Moran, *Edmund Husserl*, 16-17. Husserl's religious commitment was to a quasi-Hegelian "absolute spirit" in the sense that he aimed to reach "God without God."

50 Ibid., 19, 22, 25. Husserl's spreading reputation gave him students like Adolph Reinach, who died in the war in 1917, and of whom Husserl wrote several moving obituaries.


52 Quentin Lauer, *Phenomenology, Its Genesis and Prospect* (New York: Harper Torchbooks, 1965), 1-2; Albert B. Hakim, *Historical Introduction to Philosophy*, 2nd ed. (New York: Macmillan, 1992), 728-29. Phenomenology arises from the distinction drawn by Kant between *phenomena* (the appearance of reality in consciousness) and *noumena* (reality in itself). By considering scientific knowledge possible only of phenomena and not noumena, Kant engaged in a kind of phenomenology in order to resist the rationalism of Descartes, who sought knowledge of all reality, and the skepticism of Hume, who accepted no scientific knowledge except in mathematics. Following Kant, Hegel specifically characterized his approach as phenomenology, contending that we can only know phenomena but that phenomena nevertheless provide sufficient basis for understanding reality. For Hegel, reality is revealed in the dialectical process, starting with consciousness of the self and progressing to reason, then to the unity of reality, and finally to the Absolute Spirit. On the other hand, Husserl remained concerned that the success of the natural sciences would cause them to reduce human consciousness and spirit to physical matter.


54 Lauer, *Phenomenology*, 5-6.


56 Lauer, *Phenomenology*, 67n5.

57 Ibid., 69. As Lauer explains, intuition is a function of reason and thus a constitutive function of consciousness (subjectivity), which is both intention and intuition. Ibid., 70-71. Husserl makes both reason and experience a constitutive function of transcendental subjectivity. Being as known is constituted in consciousness, and only being in consciousness is absolute being. Ibid., 79. Lauer concludes: "Thus, intentional constitution has become a universal explanation of the 'clarification' of being. 'Nothing is, except by a proper operation of consciousness, whether actual or potential.' If, then, the task of philosophy is to understand being, its method must be to penetrate the subjectivity wherein being has its source. In this way Husserl derives an entire philosophy from what he calls a 'radical consciousness of self.'" Ibid. An individual consciousness is a "transcendental" subject related to objects, and for Husserl the sum total of subjective relations to the world constitutes "transcendental subjectivity." Ibid., 79-80. Herman Phillipse explains that Kant's thing-in-itself is the ideal consequence of this phenomenological subjectivity, i.e., "an ideal limit of the phenomenal thing." Herman Phillipse, "Transcendental idealism," in Smith and Smith, eds., *The Cambridge Companion to Husserl*, 274.

As Lauer explains, learning, for Husserl, is not an accumulation but a growth in knowledge that renders the subject capable of ever greater and more complex objectivities. Lauer, *Phenomenology*, 105. The transcendental subject is inseparable from his experiences and is constituted by these acts and their objective correlates; indeed, they constitute his life. Ibid., 109. "Thus, every act of consciousness passes," says Lauer, "but it leaves behind the ego which performed the act, and which by virtue of that act is rendered capable of subsequent acts of which it was not really capable before." Ibid., 110.

Ibid., 159. Even though Husserl seeks to avoid metaphysical presuppositions, his phenomenology has metaphysical implications because metaphysics rests on epistemology and Husserl is an ontological idealist. Herman Philipse explains the metaphysical implications as follows: "The phenomenal world is ontologically dependent on consciousness, because it is a projection of the latter. But if the world in itself is merely an idealization of the phenomenal world, as is the case according to Husserl's re-interpretation of the *an sich*, it follows that Husserl is also an ontological phenomenalist or idealist. Even the world in itself is ontologically dependent on the perceiving subject, for it is an idealization of a projection performed by the subject. In short, Husserl's theory of perceptions, combined with his new conception of a *Ding an sich* [Kant's thing-in-itself], implies the idealist ontology of the real world which Husserl states in *Ideas I*. The real world is nothing but a "sense," constituted by consciousness, because it is the product of a transcending interpretation of really imminent sensations." Herman Philipse, "Transcendental idealism," in Smith and Smith, eds., *The Cambridge Companion to Husserl*, 276.


Dermot Moran notes that "right to the end of his life, he associated himself proudly with the great accomplishments of German culture, from Copernicus to Kepler to Beethoven, Herder, Schiller, Goethe and Kant"… [and] saw phenomenology as part of this German contribution to world culture." Moran, *Edmund Husserl*, 32.

Ibid., 22, 35.


Ibid., 35-36. Citing Husserl's articles submitted to a Japanese intellectual journal in 1923-24, Moran observes that Husserl sought "the renewal of philosophy and science through the creation of a universal moral order, and through a surpassing of narrow nationalisms in order to found true community in shared interests." Moran adds that Husserl sought recovery of a spiritual sense of purpose and of Enlightenment ideals, with a science of the human spirit to provide moral purpose to the natural sciences.


Ibid. in Hakim, *Historical Introduction to Philosophy*, 750 (emphasis added); see also discussion in Lauer, *Phenomenology*, 161-62.


Moran, *Edmund Husserl*, 39. Considering his friendship and professional support for Heidegger during the 20s, Husserl found Heidegger's *Being in Time* a shocking departure from his own vision of transcendental phenomenology, as he wrote in 1931: "A philosophy that takes it start from human existence falls back into that naiveté the overcoming of which has, in our opinion, been the whole meaning of modernity." Ibid., 37.


Barrett, *What is Existentialism?*, 194. Dasein's being is like "a magnetic field without the solid body of the magnet at its center," writes Barrett, "man's Being is such a field, but there is no soul substance or ego substance at the center from which that field radiates." In Heidegger's hands, phenomenology made conspicuous those aspects of the human condition usually overlooked but obvious once pointed out. Inwood, *Heidegger*, 36.

Martin Heidegger, *Being and Time in Basic Writings from Being and Time (1927) to The Task of Thinking (1964)*, ed. with General Introduction and Introductions to each section by David Farrell Krell.
In his later *Letter on Humanism* (1947), Heidegger defines Being as "there is/it gives" since "'gives' names the essence of Being that is giving, granting its truth. The self-giving into the open, along with the open region itself, is Being itself."

82 Martin Heidegger, *Being and Time*, in *Basic Writings*, 54. Heidegger considers his own interpretive philosophical approach basically a conceptual extension of what Dasein does every day in its pre-conceptual understanding of the world, of entities, and of itself.


84 First, Dasein is *existentiality*, meaning that it engages the world through its concerns and its understanding of how things are used and relate to one another (i.e., their possibilities). Second, Dasein is *facticity*, meaning that it is thrown into and open to the world, which affects its mood (i.e., Dasein's past experience affects its state of mind as it stands in the present and moves toward the future). Third, Dasein is *falling*, meaning that it identifies with the worldly desires and activities valued by others generally rather than by Dasein specifically. Heidegger labels the "fallen" Dasein, *das Man*, or the One, as distinct from authentic Dasein, the Self.


87 Ibid., 112.

88 Barrett, *What is Existentialism?*, 196-99. Plato locates truth in the mind as the product of correct thought and forgets the self-revealing presence of Being; Thomas Aquinas maintains that true judgments correspond to things, leaving aside the Augustinian sense of the underlying presence of the divine; and Descartes avoids the debate over the reliability of correspondence between judgments and existence, relying upon God as the ultimate guarantor that the human mind can comprehend the real truth. Finally, Nietzsche brings this long march of philosophic humanism to a halt by declaring that God is dead and no longer the guarantor of truth, that truth is whatever increases human power, and that power is the essence of man. Consequently, man no longer lives harmoniously with nature but controls and transforms nature in an exercise of unbridled humanism.

89 Ibid., 209-10. Heidegger considers philosophers the key to Western development by laying down general frameworks within which history works out details, and, therefore, philosophical history played a central role in the development of the modern technological era. Technology originated in the West as a product of science, which distinguishes East from West more so than any other cultural factor, such as religion or art. Science began with the Greeks, rather than the Asians, because the Greeks were philosophically oriented toward detaching objects from Being's enveloping presence and began to focus their research on these objects. Thus, the special way in which Greek thought grasped Being produced the sciences, and, the consequence, says Barrett, is "that philosophy has been the mother of the sciences, and that disciplines like physics, chemistry, and biology were once parts of natural philosophy."

90 Ibid., 166. Heidegger still sees the possibility for man to direct civilization toward an entirely new outlook, not some new philosophical theory, but a new kind of thinking, beyond the metaphysical and technical. The present age is one of mastery over things (beings) rather than understanding of Being, and it has left Cartesian man locked up in his own ego and estranged from the very world that he controls.
To retrieve Being from this oblivion man must assume a passivity toward Being and learn to let Being be, instead of trying to draw answers out of Being through science.

91 Barrett, *The Illusion of Technique*, 158. Aristotle and later the Scholastics considered truth to be correspondence of thought with outside existence (the correspondence theory of truth), and Descartes considered truth to be the consistency between thought and the perception of existence (the coherence theory of truth). Heidegger escapes this subjectivism by locating truth outside the mind, as disclosure or un-hiddenness. "If we go looking for truth inside the mind," writes Barrett, "we shall only find the mind already outside of itself in the world." Thus, for Heidegger, truth is not a proposition but a disclosure, as in a work of art.


93 Barrett, *The Illusion of Technique*, 262. Early Heidegger considers the correspondence theory of meaning (mental judgment matching a material fact) possible only when judgment and fact meet in the field of Being. In other words, the openness to Being as un-hiddenness makes propositional truth possible. Late Heidegger, by contrast, asserts that truth is only accessible through freedom, the freedom to let-be, by which Heidegger means a characteristic of Being itself rather than of Dasein. In this later view, Being and truth are interchangeable in that Being reveals itself. Heidegger never explains how to achieve this selfless exercise of freedom, this will-less state of letting things be, or how to overcome the human will that leads men into untruth. Indeed, Heidegger neglects the connection between Being and doing because he considers Being to be the product of aesthetic rather than moral action.

94 Ibid., 263.


96 “Setting up the world and setting forth the earth, the work is the fighting of the battle in which the unconcealedness of beings as a whole, or truth, is won.” Martin Heidegger, *The Origin of the Work of Art* in Inwood, *Heidegger*, 120.

97 “Since poetry is in language, and since it is a form of art, that is, of the lighting projection of truth,” explains Inwood, "poetry must be projective saying, an original, innovative use of language to name things and thus open up a realm in which we can communicate." Furthermore, poetry is primary to the other arts since language also opens up these other art forms. Ibid., 123.

98 Ibid., 121. As Inwood explains, "art is the main way in which truth happens. Not only the temple but also the Greek tragedy lay down the paradigm, the values and categories, in which a people view the world and make their choices." In resolving the tension or "rift" between earth and the world, the work of art reveals a truth that calls for explanation from a viewer, and, therefore, needs an audience as well as an artist. The artwork requires a suspension of normal activity and an ecstatic entry into a clearing in which old viewpoints and traditions become suspended and the new fields of knowing and willing emergence.

99 Ibid., 124-25. Art grounds the viewers by featuring their earth, their language, and their customs, beliefs, and traditions and constitutes an explosion of creativity, a beginning or a leap, from which future generations may benefit. According to Heidegger, this has been the experience of art through the ages: the Greeks conceived of art as presence, the medievalists as created things, and the modernists as objects to be manipulated. Whereas Hegel considered art non-essential to historical existence because truth was already revealed, Heidegger thought of himself as a prophet for a new art and a new era in which art served as a founding of truth.
Ibid., 3-7.

101 Martin Heidegger (presumably from Lectures on Nietzsche, 1936-40) in Barrett, Irrational Man, 184.

102 Barrett, What is Existentialism?, 49.

103 Samir Okasha, Philosophy of Science: A Very Short Introduction (Oxford: Oxford University Press, 2002), 78. Most positivists came to the United States in the 30s, providing a powerful academic influence through the 1960s when positivism began to disintegrate.

104 Stumpf, Philosophy, History & Problems, 424-25.

105 Ibid., 425.

106 Ibid., 427-28. Analytic statements are true or false depending upon the meaning of its words or symbols and contribute nothing to knowledge. If true, the statements are tautologies, e.g., all men are mortal, and if false, the statements are contradictions, e.g., all men are not mortal. By contrast, synthetic statements are true or false depending upon their verifiability by empirical observation, e.g., snow is crystallized water. Thus, analytical statements are either tautologies or contradictions, whereas synthetic statements can add to factual knowledge if empirically verified as true. If a statement is neither analytical nor synthetic, it is judged to be emotive or non-cognitive. For the logical positivists, metaphysics, ethics, and aesthetics fall into this latter category.


108 Ibid., 23.

109 Ibid., 51; Barrett, What Is Existentialism?, 164.

110 Barrett, What is Existentialism?, 146-74. Heidegger describes the structures of human existence only as the point of departure for his fundamental ontological inquiry. By contrast, Kierkegaard urges pursuit of authentic human existence and opposes the use of philosophical systems in this regard because he considers them incompatible with such authenticity. As a speculative philosopher, Heidegger deals with pure possibilities; as a Christian moralist, Kierkegaard deals with the specific ethical and religious choices of actual individuals. In short, Heidegger and Kierkegaard are doing two different things, which reflect the two different types of existentialism. Kierkegaard's conception of existence deems actuality prior to possibility because, for Kierkegaard, life involves actual not hypothetical situations. Kierkegaard also elaborates the ethical and religious task of becoming an authentic self and assiduously avoids developing any general theory on the subject. Finally, Kierkegaard ignores the philosophical problem of comprehending reality. Heidegger takes the opposite stance to all three positions; this sets him apart from Kierkegaard and most existential philosophy, which generally revolves around Kierkegaard's and Nietzsche's approach.

111 Ibid., 52-53. Existentialism's overriding concern was existing authentically, becoming an individual, making one's actions one's own. One's choices define one's essential being, or, in Sartre's words, "existence comes before essence." Jean-Paul Sartre, Existentialism Is a Humanism (1946), in Walter Kaufmann, Existentialism from Dostoyevsky to Sartre (New York: New American Library, 1975), 348.

112 Flynn, Existentialism, 54.
Jean-Paul Sartre, *Existentialism Is a Humanism* in *Existentialism from Dostoyevsky to Sartre*, 369.


Ibid., 349.

Barrett, *What Is Existentialism?*, 165. Heidegger distinguishes between the ontological aspects (general structure or laws) and the ontic aspects (actual facts) of human existence to determine the *a priori* structures that pervades human existence as potentialities. Heidegger, *Basic Writings*, 53-54n. In distinguishing between ontological and ontic, Heidegger considers the characteristics of being-in-the-world (care, anxiety, death, guilt, etc.) to be ontological possibilities rather than ontic actualities. Thus, for Heidegger, death pervades human existence as potential not actual mortality. The ever-present possibility of death is the ontological context within which man makes his ontic decisions.

Sartre flip-flops between ontic and ontological viewpoints, attempting a phenomenological description of Being in *Being and Nothingness* yet periodically exhorting free individual action as the moral leader of the mid-century French generation. Barrett, *What Is Existentialism?*, 164. The distinction between Heidegger and Sartre is set out in bold relief by their disparate views of actions and potentialities. Sartre says you are what you do – a moral viewpoint that the authentic individual cannot evade personal responsibility for what he does or fails to do. Thus, Sartre is fundamentally concerned with the ontic level of individual acts, not the ontological level of human possibilities. For Heidegger, by contrast, Being takes precedence over Doing since man's ontic actions occur within the context of man's ontological possibilities, which is his primary concern. The celebrated will to action or will to power, for Heidegger, inevitably thwarts man’s fundamental endeavor to let Being reveal itself.

Barrett, *The Illusion of Technique*, 139-45. By suspending belief in the existence of objects, Husserl never escaped the dichotomy between consciousness and experience anymore than did Descartes. Transcendental phenomenology brackets existence but does not explain the life-world, which is suffused with the facts of existence. Bracketing draws a distinction between the objects of existence and their appearance in consciousness, which itself is a dichotomy, and also presupposes an *ego* existing within that world, which therefore already brackets the consciousness. The paradox of phenomenology consists in detaching oneself from the world to seek a goal within the very world that consciousness brackets. Thus, Barrett considers that the appearance of existence for Husserl is "simply Hume's phenomenalism clothed in the language of essence." Ibid., 142. Husserl never got to the primacy of existence over consciousness by failing to recognize that it is "only because we stand within Being can we make this distinction between subject and object at all. Consciousness, in short, is intelligible only in terms of our being in the world." Ibid., 145. Indeed, the very intentionality of consciousness, which always refers to something in the world, shows that the consciousness itself belongs to that world. As Heidegger points out, man is being in the world and his existence is an inescapable existential reality that creates anxiety. So long as we consider consciousness separate from Being by bracketing existence to contemplate essence, we inevitably fail to bring them together as in fact they coexist in the world. The primacy of consciousness in Husserl inevitably divides man between the two worlds – *ego* and experience – when in fact man is being in the world.


Ibid., 54-55, 142.

Ibid., 142.
CHAPTER 6

1 Ernest Hemingway, A Farewell to Arms (New York: Charles Scribner's Sons, 1957), 239.

2 F. Scott Fitzgerald, This Side of Paradise (New York: Simon & Shuster, 2010), 330.

3 Barbusse, Under Fire, 138.

4 Remarque, All Quiet on the Western Front, 294.

5 Graves, Robert. Good-Bye to All That, 228, 321 (Prologue to his 1957 revision).


9 Baumer, Modern European Thought, 411.

10 Ibid., 419-424.

11 Ibid., 419-20.


13 Ibid., 54, 57, 62.


16 Baumer, Modern European Thought, 421.


19 Andre Malraux's term quoted in Baumer, Modern European Thought, 424.

20 M. H. Abrams and Jeffrey Gault Harpham, A Glossary of Literary Terms, 9th ed. (Boston: Wadsworth Cengage Learning, 2009), 177-78. We commonly think of literature as fictional works of
poetry, prose, and drama, but it also can include expressive philosophical, historical, and scientific writing intended for the general audience, and that is the sense in which literature is used in this chapter.


22 Ibid.


24 Ibid., 18-19.


28 Ibid., 10.

29 Ibid., 61.

30 Ibid., 97, 101.

31 Ibid., 137, 141.

32 Ibid., 170.

33 Ibid., 205.

34 Ibid., 204, 222, 228, 232.

35 Ibid., 249.


37 Ibid. in Hoffman, *The 20s*, 316.


39 Ibid., 71.

40 Ibid., 57, 77, 82.

41 Ibid., 95.


43 Ibid., 319.
In *God without Thunder* (1930), Ransom argued for return of the "old God" of the Old Testament to address the problems of evil in the world because they provide a basis for the moral law: "Religion is an order of experience under which we indulge the compound attitude of fear, respect, enjoyment, and love for the external nature in the midst of which we are forced to live…. Science is an order of experience in which we mutilate and prey upon nature; we seek all practical objectives at any cost, and always at the cost of not appreciating the setting from which we have to take them." For Ransom, science is a truth but not the whole truth because it focuses on abstractions and reduces objects to their measurable aspects, thereby eliminating God and myth, when science and religion should work in partnership. Ransom concludes by challenging modern man: "Let him restore to God the thunder." Hoffman, *The 20s*, 327-29.

Kirtley F. Mather, *New Republic* (September 9, 1925) in Hoffman, *The 20s*, 283. Mather stood among Bertrand Russell, J. B. S. Haldane, and others, in rejecting traditional notions and sanctions against sin. All three advocated a scientific approach to ethics, appealing to intelligence as a counteraactive to the morality of both fundamentalism and industrialism.

Hoffman, *The 20s*, 284. In his article in the *New Republic* (August 6, 1924), William Pepperell Montague staked out a middle ground between science and religion that Hoffman characterized as "a request that God be allowed in the modern Temple on probation, that His attributes and the terms of belief in Him be accepted as hypotheses, presumably hypotheses that might never be pressed for evidence nor embarrassed by the need for verification; unless, of course, the immortality of the soul and the existence of the supernatural beings can eventually be proved as 'highly probable' through some extension either of science or of religion as not yet proposed." Ibid., 284-85.

Herbert Croly made these points in successive articles in the *New Republic* (June 9, 1920 and January 27, 1926).


Ibid., 39.


Consider, for example, Jane Austen's opening to *Emma*: "Emma Woodhouse, handsome, clever, and rich, with a comfortable home and happy disposition, seemed to unite some of the best blessings of existence; and had lived nearly twenty-one years in the world with very little to distress or vex her." Jane Austen, *Emma* (London: Headline Book, 2006), 3. Consider also the opening to Emile Zola's *Germinal*: "On a page-black, starless night, a solitary man was trudging along the main road from
Marchiennese to Montsou, ten kilometers of cobbles running straight as a die across the bare plane between fields of beet.” Emile Zola, *Germinal*, 19.

Contrast these all-knowing narrators in Austen and Zola with Conrad's ironic narrator Marlow who refers to the brutal Europeans as "pilgrims" and leaves the reader to react emotionally to the pretensions of the colonial enterprise. His vague, impressionistic language ("the implacable force brooding over an inscrutable intention") proves inadequate to convey the promised enlightenment, "the clue" anticipated from Marlow's long narrative towards Kurtz's final "cry" ("The horror! The horror!"). Joseph Conrad, *Heart of Darkness* A Norton Critical Edition, 4th Ed. (WW Norton & Co., 2006), 27. Marlow's tale is just "one of these misty halos": it illustrates Conrad's problematic "relationship between language and reality" and his reliance "on individual sensation as the only reliable source of ascertainable truths." Ibid., 5; Ian Watt, "Impressionism and Symbolism in *Heart of Darkness*," in Daphnia Eridinast-Vulcan, "The Failure of Metaphysics," in Ibid., 418. Yet Conrad's linguistic technique conveys the instability of civilization, while simultaneously tainting the reader with knowledge of the mysterious heart of darkness, the "horror." Peter Brooks., "An Unreadable Report: Conrad's *Heart of Darkness*," in Ibid., 384-85.

56 Virginia Woolf, "Modern Fiction" (1925) in *The Norton Anthology of English Literature*, 2150.

57 Ibid. 2151-52.

58 Kershner, *The Twentieth-Century Novel*, 38. Kershner also cites and quotes historian Eric J. Hobsbawm to the effect that everything falling under the rubric "modernism" had taken place by 1914: "cubism; expressionism; futurism; pure abstraction in painting; functionalism and flight from ornament in architecture; the abandonment of tonality in music; the break with tradition in literature."

59 Ibid., 39; Abrams and Harpham, *A Glossary of Literary Terms*, 201-02.


61 "The War was over," Clarissa thinks, but not for "Mrs. Foxcroft at the Embassy last night eating her heart out because that nice boy was killed" or "Lady Bexborough who opened the bizarre, they said, with the telegram in her hand, John, her favorite killed." Ibid., 5. Doris Kilman still holds a "violent grudge against the world" because she lost her teaching job during the war due to her German origin; uniformed boys march toward Whitehall to lay a wreath at the tomb of the Unknown Warrior; and Dr. Bradshaw discloses the suicide of a shell-shocked soldier – "in the middle of my party, here's death, she thought." Ibid., 129, 183.

62 Septimus Warren Smith is self-loathing and tormented because of his inability to feel following the death of his lover and fellow officer Evans, killed just before the Armistice. Ibid., 86-88. The parallels between Clarissa and Septimus are striking: they both marry friends rather than lovers (Richard Dalloway rather than Peter Walsh); both depend on the emotional support of spouses for their survival; both deny their homosexual leanings – he for Evans and she for Sally Seton; and both feel life's emptiness and death's presence. Clarissa "felt somehow very like him – the young man who killed himself. She felt glad that he had done it; thrown it away." Ibid., 186. In effect, Septimus and Clarissa are both war victims. Nancy Topping Bazin and Jane Hamovit Lauler draw these parallels between Clarissa Dalloway and Warren Smith in "Virginia Woolf's Keen Sensitivity to War, Its Roots and Its Impact on Her Novels" in *Virginia Woolf's Keen Sensitivity to War, Its Roots and Its Impact on Her Novels* in *Virginia Woolf and War, Fiction, Reality, and Myth*, ed. Mark Hussey (Syracuse: Syracuse University Press, 1991). Clarissa sacrifices Peter Walsh's all-consuming passion ("If I had married him, his gaiety would have been mine all day!") Woolf, *Mrs. Dalloway*, 47 for Richard's protection of the "privacy of her soul"; Septimus "had married his wife without loving her; he lied to her; seduced her" (Ibid., 91); Clarissa fell in love with the vivacious Sally Seton who kissed her on the lips
(Ibid., 32-35) and Septimus with his fellow officer Evans; Clarissa felt "an emptiness about the heart of life, and Septimus felt hopeless because he felt nothing (Ibid., 89-90).

63 As Karen L Levenback notes, "Septimus does not remember the war; unlike the civilian characters, he daily lives with its reality, that is, the war has become his actuality. For him, the postwar world has duplicated the war in the trenches – without the trenches." Karen L. Levenback, Virginia Woolf and the Great War (Syracuse: Syracuse University Press, 1999), 50-51.

64 Woolf, Mrs. Dalloway, 151.

65 Quoted in Levenback, Virginia Woolf and the Great War, 72. Levenback continues: "Septimus's suicide is the climax of his development and not the result of insanity, but of a profound sanity. . . . The reason for Septimus's suicide is not as Bradshaw assumes owing to shell-shock, but the shock occasioned by recognition of the power of the postwar world to ignore or to suppress. To assume (as Bradshaw does) that Septimus was suffering from deferred shell-shock is to neglect to acknowledge culpability and responsibility. Deferred shell-shock does not cause his death, as Woolf makes clear by putting his opinion in the mouth of Dr. Bradshaw. What causes his death is Smith's recognition of individual powerlessness in an indifferent postwar world." Ibid., 76, 78.


68 Woolf, Mrs. Dalloway, 92.

69 Poole, "'WE ALL PUT UP WITH YOU VIRGINIA,' Irreceivable Wisdom about War" in Virginia Woolf and War, 82.

70 Woolf, Mrs. Dalloway, 88.

71 Some Do Not... (1924), No More Parades (1925), A Man Could Stand Up (1926), and The Last Post (1928). Despite several issues (Ford's dedicatory letter implying that this fourth book was only a sequel, Tietjens absence until the very end of the fourth book, and the book's different structure from the other three), Macauley concludes that The Last Post provides an indispensable resolution and a necessary part of the whole, as Ford conceived and wrote it over the five-year period (1923-28). Indeed, Ford published Parade's End as a unit under a title of his own choosing. Robbie McCauley, Introduction to Parade's End (New York: Penguin Books, 1982), xvii, xxi. Bernard Bergonzi notes the conflict among critics over whether the last book is an integral or separable part of Parade's End, pitting Robbie Macauley and Richard Cassell against John Meixner and Graham Greene. By contrast with Macauley, however, Bergonzi sides with the latter group because of the final book's different form and Ford's own belated view that it should be separated from the trilogy. Bergonzi, Bernard. Heroes' Twilight (Manchester: Carcanet Press, 1996), 166-67.


73 While having an affair herself, his wife Sylvia slanders him, alleging that he has a mistress and child out of wedlock; she causes him credit problem with his bank; and she claims (outrageously) he could restore restored their marriage by calling her a whore and a bitch. Sylvia hates her husband because of his 'dull display of the English gentleman' and his being "the soul of truth" (Sylvia's mother calls him
"the best ever"), and Sylvia equates his fundamental goodness with "immorality," for which she intends to "torment that man." Ibid., 20, 32, 39-41. Tietjens friend McMaster upholds Edwardian attitudes and worldview, and he rises in the Imperial Department of Statistics essentially by stealing Tietjens statistical analysis which earns McMaster a knighthood.

74 Ibid., 3.

75 Ibid., 155.

76 As Ford wrote in a dedicatory letter to No More Parades: "We were oppressed, ordered, counter-ordered, commanded, countermanded, harassed, strafed, denounced – and, above all, dreadfully worried. The never-ending sense of worry, in fact, far surpassed any of the exigencies of troops actually in contact with the enemy forces,' and that applied not merely to the bases, but to the whole field of military operations. Unceasing worry! Quoted in Robbie McCauley, Introduction to Parade's End, xiii.

77 Hynes, Samuel. A War Imagined , 433.


79 McCauley, Introduction to Parade's End, xviii-xix. Christopher and Valentine Wannop, and Christopher's older brother Mark and his French mistress now his wife Marie live together in a cottage after the war. Paralyzed from a stroke, aware of his impending death but still mentally alert, Mark symbolizes the waning Tietjens dynasty; he conducts three interior monologues that frame the beginning, middle, and end of the book. Mark now realizes that his father died by accident and not suicide, that Christopher is truly the father of Sylvia's son, and that the family estate will cede to a Catholic heir, Christopher son, and thereby break the centuries-old curse. Ready for death and "sensible of the presence of the Almighty walking upon the firmament," Mark dies as Christopher appears and shows him a piece of the now-destroyed Groby great tree representing the Tietjens family.

80 Bergonzi, Heroes Twilight, 167-68.

81 Ibid.

82 Hoffman, The 20s, 101.


84 Hoffman, The 20s, 71.

85 Ernest Hemingway, A Farewell to Arms (New York: Charles Scribner's Sons, 1957), 18.

86 Hoffman, The 20s, 72-73.

87 Ibid., 77.

88 Ibid. Hoffman characterizes the feeling of outrage in the 1920s war literature as tripartite: (1) "a monstrous hoax, and unendurable outrage committed or by the elders, who were brutal, insensitive, and stupid"; (2) "a violent re-education of the soldier in the ugliness and the scatological realities underlying the surface of decorum"; and (3) "a means of testing the true nature of men and of reclassifying them morally."
In 1917, France faced extensive mutinies throughout its armies, which created panic within the command structure and government because it decimated front-line manpower. In a 1988 letter Brown states that "it was not those dumb, jejune letters of mine that got us into trouble. It was the fact that C and I knew all about the violent mutinies in the French Army a few months before Cummings and I reached the front. We learned all about them from the poilus. The French did everything, naturally, to suppress the news. We two were loaded with dynamite" Gill, John M. "'All These Fine People Were Arrested as Espions' :Detainees in The Enormous Room" (Fall 2006), 81-93, 86, Http://www.gvsu.edu/ english/cummings/Gill14.pdf (accessed May 13, 2011).


Cummings particularly admires four inmates, the so-called Delectable Mountains, who convey learning beyond their education: (1) Wanderer loves his gypsy wife and three children "as I have never seen a man love anything in the world," and he conveys "unspeakable sunlight, and the dark, keen, bright strength of the Earth" (Ibid., 225, 230); (2) Zulu is illiterate and barely speaks French but exhibits "an effortless spontaneity" and "never ceases to feel" (Ibid., 255); (3) Surplice is "intensely religious," "utterly curious," and the butt of everyone's humor and insults, a role he accepts with Christ-like, long-suffering innocence (Ibid., 257-262); and (4) Jean Le Nègre is child-like, "joking, fibbing, laughing, and always playing" (Ibid., 292). Faithful to their values and wise in their compassion, the four Delectable Mountains exemplify truths that inspire Cummings, bring him "alive," and turn him into a new person (Ibid., 325).

Quoted in Claudia Matherly Stolz, "Dos Passos's Three Soldiers: A Case Study," West Virginia University Philological Papers 51 (Fall 2004): 77.

John Dos Passos, Three Soldiers (New York: George H. Doran Company, 1921). The first soldier and hero of the book is John Andrews, discussed in the text. The second is "Chris" Crisfield, a 20-year-old Indiana farm boy, who becomes murderously angry at his superior, Corporal Anderson, finds Anderson helplessly wounded in France, leaning against a tree with his arm in a sling, and tosses not one but two grenades at Anderson to guarantee his murder. Next, "burst out laughing," Crisfield mercilessly kicks a helpless German prisoner. Ibid., 188-89. The third is Dan Fuselli, a 19-year-old San Francisco factory worker, who resents being a "slavey" for a lieutenant (Ibid., 62-63) and ultimately is sentenced to a labor battalion at his court-martial for contracting venereal disease.

Hemingway's collection of short stories began with six one-paragraph stories entitled "In Our Time," which he contributed to the Little Review (1923). Hemingway added 12 additional "chapters" for a total of 18 short stories published in the book in our time (1924). Thereafter, Hemingway converted 16 of these 18 chapters to interchapters between which he added 14 short stories to the book In Our Time (1925). Finally, in a 1930 republication of In Our Time by Scribner's, Hemingway added the introductory story, "On the Quai at Smyrna," and converted two of the earlier chapters to short stories, "A Very Short Story" and "The Revolutionist," giving a collection a total of 16 short stories and 16 italicized interchapter prose poems. Wendelyn E. Tetlow, Hemingway's In Our Time, Lyrical Dimensions (Lewisburg: Bucknell University Press, 1992), 122n2.

Robert M. Slabey, "The Structure of In Our Time" in Critical Essays on Ernest Hemingway's In Our Time, 79, proposed the follows the four-part organization:

1. Nick Adams: the young man
   "Indian Camp"
   "The Doctor and the Doctors Wife"
   "The End of Something"
   "The Three-Day Blow"
   "The Battler"

2. The Effects of War
   "A Very Short Story"
   "Soldiers Home"
   "The Revolutionist"

3. The Failure of Marriage
   "Mr. and Mrs. Elliot"
   "Cat in the Rain"
   "Out of Season"
   "Cross Country Snow"

4. The Search for a Code
   "My Old Man"
   "Big Two-Hearted River: Part I"
   "Big Two-Hearted River: Part II"

Hemingway refers throughout the novel to love as a religion. The priest tells Frederick Henry, "When you love you wish to do things for. You wish to sacrifice for. You wish to serve." Catherine embodies the priest's notion of love as wishing to serve by investing herself completely in her relationship with Frederick and making that one thing perfect. The priest also assures Henry that he will experience love: "You will. I know you will. Then you will be happy." Ernest Hemingway, A Farewell to Arms (New York: Charles Scribner's Sons, 1957), 70. Catherine tells Frederick, "There isn't any me. I'm you. Don't make up a separate me"... "You're my religion. You're all I've got." Ibid., 111. Later Count Greffi advises Frederick: "Then you are in love. Do not forget that is a religious feeling." Ibid., 251.

Ibid., 284-85. Frederick Henry tells his friend Rinaldi about his near-death experience on the Front: "I was blown up while we were eating cheese." Ibid., 62. He further explains: "I tried to breathe but my breath would not come and I felt myself rush bodily out of myself and out and out and all the time bodily in the wind. I went out swiftly, all of myself, and I knew I was dead and that it had all been a mistake to think you had just died." Ibid., 54. After Henry's confrontation with death and recognition of his own vulnerability Catherine becomes the impetus for his passion to live ("I want you. I'm just mad about you"). Ibid., 90. When Frederick becomes trapped by the "Peace Brigades" who are shooting alleged deserters during the Caporetto retreat, he escapes by leaping into the freezing Tagliamento River while soldiers shoot at him. By doing so, writes Robert Penn Warren, Frederick "is baptized into a new condition, that of total outsider, the man who has resigned from society." Robert Penn Warren, Democracy and Poetry (Cambridge: Harvard University Press, 1976), 29. After executing their subsequent escape from Italy to Switzerland by rowing 35 km on a windy night to avoid being caught by the Italians. Frederick tells Catherine: "But we were never lonely and never afraid when we were together." Hemingway, A Farewell to Arms, 279.

Ibid., 285, 251.
Hemingway's disarmingly simple, matter-of-fact prose replicates life within a meaningless universe: he favors coordinating conjunctions and avoids subordinating conjunctions ("and" and "but" rather than "because" and "since") because the latter construct a false order and imply causal and temporal relationships, whereas the world is arbitrary and chaotic.

Ernest Hemingway, The Sun Also Rises (New York: Charles Scribner's Sons, 1954), 34. As Guenter Schmigalle points out, Jake lost his penis on the Italian Front, which means that he has the sex drive without the means for sexual performance and satisfaction, and to exacerbate his sexual frustration, Jake is in love with an oversexed woman. Günther Schmigalle, "'How People Go to Hell': Pessimism, Tragedy, and Affinity to Schopenhauer in The Sun Also Rises," Hemingway Review 25 (1) (Fall 2005): 7-21.

Hemingway, The Sun Also Rises, 148.

Bullfighting requires "purity of line through the maximum exposure" and, as Jake explains to Brett, that technique makes the bullfighter and the bull "all one sharply edged mass." The American expatriates accompanying Jake, however, corrupt the spiritual tradition of the Basques: Brett targets and seduces the bullfighter, with Jake serving as pimp; Brett's fiancée Mike Campbell is a drunken bore, taunting Robert Cohn throughout their stay; and Cohn generally ruins the ambience in Montoya's hotel and then physically attacks Jake and subsequently the bullfighter Romero.

F. Scott Fitzgerald, This Side of Paradise (New York: Simon & Shuster, 2010). After desperately turning to drink and even contemplating suicide, Blaine emerges from four failed love affairs (the women rejected Blaine's impecunious romanticism for pragmatic security), courageously and altruistically jeopardizes his own reputation to rescue his friend Alec from woman trouble with the law, honestly examines his own shortcomings ("a human creature of sex and the pride, foiled by chance and his own temperament of the balm of love and children, preserved to help in building up the living consciousness of the race"), and finally discovers his calling "to be necessary to people, to be indispensable" – now he can say, "I know myself." Ibid., 310-12, 330. Much like Amory Blaine, Fitzgerald also was educated at a New Jersey Catholic boarding school (Newman School) and at Princeton University, but he was mobilized into the Army during World War I, too late for active service. The Norton Anthology of American Literature, 1914-1945, 7th ed., vol. D (New York: WW Norton, 2007), 1822.

The Great War enters as "an amusing melodrama" after Blaine's freshman year, but becomes serious as his friend Kerry joins the Lafayette Escadrille in France, military platoons march in Princeton's gymnasium, and classmates debate pacifism and German aggression. Blaine's transition comes with a terrifying dream about death and the devil. Although Blaine joins the Army even before his Princeton graduation, the war only covers the novel's brief Interlude (May, 1917-February, 1919) and serves primarily as a backdrop for Amory Blaine's coming-of-age and America's emergence into the Jazz Age.

Fitzgerald, This Side of Paradise, 324, 249, 194, 307-08, 310, 330.

As English Professor John Aldrich explains, This Side of Paradise portrays Fitzgerald's sense "of the tragedy that was to be his and his times." "For the beautiful there is always damnation; for every tenderness there is always the black horror of night; for all the bright young men there is sadness; and even Paradise has another side." Aldrich, John. After the Lost Generation: a Critical Study of the Writers


114 Ibid., 47-48, 66, 150, 171.

115 Ibid., 32, 44, 61, 101, 154.

116 Ibid., 179.

117 Ibid., 2.


121 Baumer, Modern European Thought, 441.

122 Barrett, Irrational Man, 215.

123 Flynn, Existentialism, 58-59.


125 Ibid., 133.

126 Hayden Carruth, Introduction to Nausea, xi.

127 Sartre, Nausea, 114, 170.

128 Ibid., 178.

129 As Caruth points out, Sartre leaves these questions open in Nausea, subject to later philosophic development with concepts like freedom and being-for-itself: "Man, beginning in the loathsome emptiness of his existence, creates his essence – his self, his being – through the choices that he freely makes. Hence his being is never fixed. He is always becoming, and if it were not for the contingency of death he would never end. Nor would his philosophy." Carruth, Introduction to Nausea xiii.
CHAPTER 7


3 Roger Shattuck labeled the three decades before the Great War the "banquet years" because the avant-garde became a true community with the banquet as its supreme rite. "To a greater extent than at any time since the Renaissance," Shattuck asserted, "painters, writers, and musicians lived and worked together and tried their hands at each other's arts in an atmosphere of perpetual collaboration." Roger Shattuck, The Banquet Years, 28. These avant-garde artists often lived tragically "on the edge of life, on the outskirts of art," as the French poet and art critic Guillaume Apollinaire observed in 1910, because the viewing public did not support their artistic innovations, preferring instead traditional representational art. Hamilton, Painting and Sculpture in Europe 1880-1940, 17. Hamilton noted that this public attitude forced many fin de siècle artists, notably van Gogh, Gauguin, and Munch, into tragic isolation.

4 Hamilton, Painting and Sculpture in Europe 1880-1940, 15.


7 Richard Sheppard, Modernism – Dada – Postmodernism (Evanston, IL: Northwestern University Press, 2000), 50, 60. Sheppard made this valuable point and attributes it to Rosalind Krauss.

8 Dempsey, Styles, Schools and Movements, 83-4 (Dempsey credited Braque rather than Picasso as being the first Cubist and provided the dates for the two Cubist phases: analytical Cubism (1909-12) and synthetic Cubism (1912-14).

9 Rosenblum dated this work in May 1912 rather than traditional winter date of 1911-12 based on the artist's recollections. Rosenblum, Cubism and Twentieth-Century Art, 67.
Rosenblum developed this line of analysis at length. Ibid., 67-68.


Ibid., 91. Among Boccioni’s war paintings is *Charge of Lancers* (1915), which uses monochromatic grays and blacks to portray lances and gunmetal and dissects planes to display the forward rush of the Lancers. *Charge of Lancers* completes its evocation of the battlefield by including a clipping from a French newspaper that reports French forces successfully overrunning a German stronghold.


"The world pictured by the modern artist," according to philosopher William Barrett, "is, like the world mediated by the existential philosopher, a world where man is a stranger." Barrett, *Irrational Man*, 43.


Ibid., 250. This was true for Braque, who was called up, seriously wounded on the Front, and returned postwar to his earlier phase of Cubism.


"During those four war years I was abruptly thrust into a reality which was both blinding and new. When I left Paris my style was thoroughly abstract: period of pictorial liberation. Suddenly, and without any break, I found myself on a level with the whole of the French people; my new companions in the Engineer Corps were miners, navvies, workers in metal and wood. Among them I discovered the French people. At the same time I was dazzled by the breach of a 75-millimeter gun which was standing uncovered in the sunlight: the magic of light on white metal. This was enough to make me forget the abstract art of 1912-13. A complete revelation to me, both as a man and as a painter. The exuberance, the variety, the humor, the perfection of certain types of men with whom I found myself; their exact sense of useful realities and of their timely application in the middle of this life-and-death drama into which we
had been plunged. More than that: I found them poets, inventors of everyday poetic images – I am thinking of their colorful and adaptable use of slang. Once I had got my teeth into that sort of reality I never let go of objects again.” Quoted and translated by Douglas Cooper in his *Fernand Léger et le nouvel espace* (London and Paris, 1949), vii, 74-75, in Hamilton, *Painting and sculpture in Europe 1880-1940*, 253-54.


25 Ibid., 164. Indeed, Léger later described *The Card Game* as "the first picture in which I deliberately took the subject from my own time."

26 The player on the right looks anonymous beneath his helmet as he puffs clouds of solid smoke that match the formidable balls of the pipe smoke coming from the rival on his right. The open jacket of the large, fierce looking figure on the left displays his imposing red, triangular vertebrae, as he rests a massive right forearm confidently on the table. He plays his cards with a left forearm that is curiously detached from the rest of his arm. Cork notes that this may well suggest more than arm movement but also a prosthesis with which Léger no doubt became familiar while convalescing in the military hospital.

27 Rosenblum, *Cubism and Twentieth-Century Art*, 136-153. With the war's end Léger evolved from this analytical phase of solid modeled forms, with pictorial illusion behind the picture frame. Thereafter, he moved to a synthetic phase of flattened, opaque forms which seem placed before the picture surface, at times like bas-reliefs. As exemplified in *City* (1919), Léger's postwar Cubism captures the observed aesthetics of modern urban life: the bold colors and flashing lights, the billboards and buildings, the transmission towers and smokestacks, and the human figures ascending and descending the foreground staircase – all impersonal aspects of the smooth running, urban environment. Léger evokes the city's complexity and unity, its visually shifting and partially observed makeup -- "the modern city's potentialities of order and beauty," as fine arts professor Robert Rosenblum observed, "rather than its confusion and ugliness."


30 *The Observer* (Nov. 28, 1915) in Cork. *A Bitter Truth*, 74. *The Observer* critic also wrote the following about *A Bursting Shell*: "An extraordinary sense of irresistible, destructive force is conveyed by that revolving rainbow-colored spiral from which radiate black, orange bordered shafts." The graphic, swirling, rainbow colors and dark, radiating shards dramatize the shell's destructive power and create the type of "dynamic sensation" glorified by the 1910 Manifesto of the Futurists Painters. Hamilton, *Painting and Sculpture in Europe 1880-1940*, 280.


32 "The secret of his [Nevinson's] art, and of his success," continued Apollinaire who probably viewed *La Mitrailleuse* in a photograph, "lies in his way of rendering and making palpable the soldiers suffering, and of communicating to others the feeling of pity and horror that have driven him to paint. He
has set down on canvas the mechanistic aspects of the present war: the way in which man and machine are fused in a single force of nature. His picture, *La Mitrailleuse*, makes this point ideally well.”

Guillaume Apollinaire, "Echos et on-Dit des Letters et des Arts," *L'Europe Nouvelle* (July 20, 1918) in Ibid., 74. *La Mitrailleuse* portrays an almost dehumanized gunner poised behind his machine gun. Both man and gun painted in gray metallic colors seem like a single machine tensely awaiting the next German attack. One injured soldier with a ghostly pallor lies immobile at the gunner's feet while another soldier shouts for assistance and a fourth surveys the front. Nevinson rendered the soldiers' faces, helmets, and clothing in angular planes, geometric forms, and dark shading that creates a machinomorphic image, stripping the soldiers of their individuality. This starkly gripping work is frank, representational reportage of the soldiers' desperate front line ritual. The anti-Futurist Walter Sickert declared that *La Mitrailleuse* is "the most authoritative and concentrated utterance on the war." Ibid.

33 Ibid. In Wyndham Lewis's characterization of the letter, Nevinson asserted "that he no longer shares, that he REPUDIATES, all his (Marinetti's) utterances on the subject of war. . . . Marinetti's solitary English disciple has discovered that War is not Magnifique...”

34 Christopher Nevinson, *Paint and Prejudice* (London, 1937), 95-96, in Cork, *A Bitter Truth*, 72. Nevinson reported that upon arriving in Dunkirk he worked "in a shed full of dead, wounded, and dying. It was a sudden transition from peaceful England, and I thought then that the people at home would never be expected to realize what war was. A few hours from London, with its theaters playing to crowded houses and a kind of mock heroism abroad... and here we are working in a shed that was nicknamed the 'Shambles.'”


37 Cork. *A Bitter Truth*, 24; Hamilton, *Painting and sculpture in Europe 1880-1940*, 199. They derived the name "Bridge" from the prologue to Nietzsche's *Thus Spoke Zarathustra*: "what is great in man is that he is a bridge and not at goal; what can be loved in man is that he is a going across and down going." Kirchner's 1906 manifesto declared: "Putting our faith in a new generation of creators and art lovers, we call upon all youth to unite. And being youth, the bearers of the future, we want to wrest from the comfortably established older generation the freedom to live and move. Anyone who directly and honestly reproduces that force which compels him to create things belongs to us.” Quoted in Christian Saehrendt, "Wer malt der Nation das Aushängeschild?" *Frankfurter Allgemeine Zeitung* (June 15, 2005), 40, in Felix Kramer, "In Contradiction: Ernst Ludwig Kirchner," in *Ernst Ludwig Kirchner, Retrospective*, ed. Felix Kramer (Frankfurt: Stadel Museum, 2010), 14.

38 Kramer, "In Contradiction: Ernst Ludwig Kirchner," in *Ernst Ludwig Kirchner, Retrospective*, 14-17. Using simplified forms and bold colors, Kirchner focused upon the female nude, adults and children alike, in an expressively sensual and unaffected manner, totally disregarding classical style and bourgeois decorum.

39 Ibid., 17-19; Hamilton, *Painting and sculpture in Europe 1880-1940*, 18-20. Furthermore, Kirchner's female subjects evolved from the sensual to the unerotic.

40 Nicole Brandmueller, "The Expressionist in Berlin," in Kramer, *Ernst Ludwig Kirchner, Retrospective*, 102-03. See Chapter 3, note 29, for an analysis of this painting.

41 “What is harder to bear than anything else is the burden of the war and the prevalence superficiality. I constantly have the impression of a bloody carnival. Where will it all end? We sense the outcome in the air, and everything is going haywire. All puffed up, we stagger to work where all work is
in vain, and the onslaught of the mediocre pulls everything down with it. Now we ourselves are like the

cocottes I painted. Smear on one day; gone the next." Ernst Ludwig Kirchner to Gustaf Schiefler,
November 12, 1916, in Wolfgang Henze, ed., Ernst Ludwig Kirschner-Gustaf Schiefler: Briefwechsel
1910-1935/1938 (Stuttgart and Zürich, 1990), 83, in Felix Kramer, "In Contradiction: Ernst Ludwig
Kirchner," in Ernst Ludwig Kirchner, Retrospective, 18-19.

42 Javier Arnoldo, "War and Breakdown," in Kramer, Ernst Ludwig Kirchner, Retrospective,
151.

43 "No amount of uniforms and weaponry can save them," writes Richard Cork about the
painting, "and their pale, forked nakedness signifies an underlying inability to protect themselves from

44 "I feel half dead with mental and physical torment." Ernst Ludwig Kirchner to Karl Ernst
Osthaus, quoted by Wieland Schmied, "Points of Departure and Transformations in German Art, 1905-

45 Arnoldo, "War and Breakdown," in Kramer, Ernst Ludwig Kirchner, Retrospective, 152.
Kirchner invoked this phrase to describe his later creative process in which he became "completely
deselfed" and thereby "completely open" to the world around him. Art historian Javier Arland
considered Kirchner's characterization of his painting process "laden with pathos" because Kirchner
considers himself "as a martyr to high art . . . by insisting that the artist must surrender himself largely to
the object of his painting if he is to have any grasp at all of its 'mystery.'"

46 Sandra Oppmann, "The 'New Style" in Kramer, Ernst Ludwig Kirchner, Retrospective, 199-
201.

47 Kramer, "In Contradiction: Ernst Ludwig Kirchner," in Ernst Ludwig Kirchner, Retrospective,
22.

48 Ibid.

49 Sabine T. Kriebel, "Otto Dix" in Leah Dickerman, ed. Dada : Zürich, Berlin, Hanover,

50 Upon invitation from George Grosz, Dix exhibited at the 1920 Berlin Dada Fair, affiliating
himself with the outspokenly antiwar and antimilitary Berlin Dadaists. Ibid.

51 "The war was a horrible thing," Dix declared in a 1963 interview, "but there was something
tremendous about it, too. I didn't want to miss it at any price. You have to have seen human beings in this
unleashed state to know what human nature is." He had volunteered, he said, out of a compelling "need to
experience all the depths of life for myself." Otto Dix, interview, December 1963, quoted by Dieter


53 Kriebel, "Otto Dix" in Dickerman, Dada : Zürich, Berlin, Hanover, Cologne, New York,
Paris, 466.

54 His Signal Flair (1917) is a shocking image of nighttime death in No Man's Land. The arcing
white and red flairs cast an eerie green glow that reveals a mass of dead soldiers ungainly enmeshed in
barbed wire, many so long dead that their heads are skeletal. His Setting Sun (Ypres) (1918) is an
apocalyptic image of an explosive sunset radiating over the pockmarked battlefield at Ypres, with foreground soldiers smeared in its blood-red glow, crouching as if to escape the sun's threatening rays. As Cork suggested, this abject and defiled 1918 landscape might well reflect Dix's realization that the war would end disastrously for Germany. Cork, *A Bitter Truth*, 204.


56 Ibid., 478; Cork. *A Bitter Truth*, 272-73, 305.


60 Ibid., 9.


62 Quoted in Hopkins, *Dada and Surrealism*, 7-8.

63 Hopkins, *Dada and Surrealism*, 3-4; Sheppard, *Modernism – Dada – Postmodernism*, 201. Sheppard explained that Dadaists were anti-Art as a bourgeois institution, for five reasons. First, Dadaists reacted against artistic theories that separated art from life (viewed as vitalist Nature and everyday existence) and that viewed art as a mediator with the transcendent. Art was not an end in itself but a means for awakening and criticizing the postwar era. Second, they reacted to the commercialization of high art as the preserve of the rich. Third, they rejected museum art because it is revered over what occurs in ordinary life. Fourth, they rejected the anthropocentric and classical world view for a fragmented world in flux, and considered the classical world view an illusory consolation in a chaotic world. Finally, Sheppard wrote: "they objected to any absolute distinction between art and nonart; art kitsch; art and entertainment; artist and nonartist; art and spectator."

64 Hopkins, *Dada and Surrealism*, 2.

65 Ibid., 3.


67 Ibid.


69 Quoted in ibid.


71 Quoted in Hopkins, *Dada and Surrealism*, 71.
“For both Arp and Zen,” according to Sheppard, “the human being is not a spirit imprisoned by Nature but an aspect of the intricately balanced organism that is the material world. Consequently, for both Arp and Zen, a work of art does not exist above Nature as the sign of humanity's ability to dominate and organize matter. Rather, it is itself a product of Nature's workshop and thus analogous to a fruit, clouds, animals, and human beings. Accordingly, the artist must learn to suspend her or his conscious mind and open her or his unconscious faculties to the secret workings of creative chance. . . . Like the Zen artist, Arp aims to present human beings with images of dynamic stillness, to free them from the noise that disguises inner emptiness and the haste that hurries nowhere, to make them aware of the void that is plenitude.” Sheppard, Modernism – Dada – Postmodernism, 286-87.

By this technique Arp sought to distance himself from the work. The resulting abstract wooden reliefs, like Untitled (Plant Hammer) (1917), are multilayered constructions of wooden shapes painted in different commercial colors. Arp's wooden reliefs blur the boundaries between sculpture and painting. Unlike his later reliefs, Plant Hammer employs a traditional frame. Yet one typical amoeba-like shape in Plant Hammer, located at the bottom of the relief, extends outside the frame. Dickerman noted that Arp's elimination of the traditional frame, or extension beyond it in Plant Hammer, suggests "a new permeability between the space of the artwork and the viewer's own."

Hans Arp, "I became More and More Removed from Aesthetics," in Arp on Arp: Poems, Essays, Memories, ed. Marcel Jean, trans. Joachim Neugroschel (New York, 1972), 238, in Dickerman, "Zürich" in Dada : Zürich, Berlin, Hanover, Cologne, New York, Paris, 38. By this technique Arp sought to distance himself from the work. The resulting abstract wooden reliefs, like Untitled (Plant Hammer) (1917), are multilayered constructions of wooden shapes painted in different commercial colors. Arp's wooden reliefs blur the boundaries between sculpture and painting. Unlike his later reliefs, Plant Hammer employs a traditional frame. Yet one typical amoeba-like shape in Plant Hammer, located at the bottom of the relief, extends outside the frame. Dickerman noted that Arp's elimination of the traditional frame, or extension beyond it in Plant Hammer, suggests "a new permeability between the space of the artwork and the viewer's own."


Hopkins, Dada and Surrealism, 86-7.

"Choose the object which has the least chance of being liked. A urinal -- very few people think there is anything wonderful about a urinal. The danger to be avoided lies in the aesthetic delectation." Thus Duchamp explained his motive an interview. Michael R. Taylor in Dickerman, Dada: Zürich, Berlin, Hanover, Cologne, New York, Paris, 287. Duchamp obviously delighted in his scandalous Dada submission: "we sent it [the urinal] to the Independents and the poor fellows couldn't sleep for three days." Ibid. In a typical Dada publicity move, Duchamp highlighted the incident a month later in a proto-Dada journal. The journal article included a Stieglitz photograph of the urinal and the following philosophical justification: "Whether Mr. Mutt with his own hands made the fountain or not has no

384
importance. HE CHOSE IT. He took an ordinary article of life, placed it so that its useful significance disappeared under the new title and point of view -- and created a new thought for that object." Hopkins, *Dada and Surrealism*, 44-45.

82 "The war will produce a severe direct art. One readily understands this when one realizes the growing harshness of feeling in Europe, one might almost say the callousness with which people are learning to receive the news of the death of those nearest and dearest to them. Before the war the death of the son in the family was received with utter, abject woe, today is merely part of a huge universe of grief, which hardly seems to concern any one individual." Marcel Duchamp interview, "The New-Descending-a-Staircase Man Surveys Us," *New York Tribune*, Special Features Section (September 12, 1915), 2, in Taylor, "New York," in Dickerman, *Dada: Zürich, Berlin, Hanover, Cologne, New York, Paris*, 290.

Richard Sheppard speculates that Duchamp's use of R. Mutt on his *Fountain* was a pun on the German word for poverty (*Armut*) since he wrote it shortly after America which was his refuge from war had gone to war Sheppard, *Modernism – Dada – Postmodernism*, 202-03.

83 Quoted in ibid., 130.

84 Hopkins, *Dada and Surrealism*, 103-04. Similarly, *Rrose Selavy* (his feminine pseudonym and nominal pun, pronounced "Eros, c'est la vie") ironically conflates male and female. *Rrose Selavy* implies the male artist's need to define his gender, and at the same time parodies America's commercial exploitation of sex. Duchamp used Man Ray's photograph *Marcel Duchamp as Rrose Selavy* (1920-21) as a highly feminized, albeit transendered vehicle purportedly to market an international line of leisure goods -- a female impersonator impugning the authenticity of American mass media and commercial culture. Taylor, "New York," in Dickerman, *Dada: Zürich, Berlin, Hanover, Cologne, New York, Paris*, 293-96.


86 Ibid.


89 "In the war [at a machine factory]," Schwitters said later, "I discovered my love for the wheel and recognized that machines are abstractions of the human spirit." Kurt Schwitters, *Sturm-Bilderbuch IV* (Berlin, 1921), 2, in Ibid., 158.

90 Ibid., 157. Because Schwitters developed and promoted his own Merz brand of art, including his ersatz love poem, Richard Huelsenbeck denied Schwitters membership in Berlin's Club Dada. Huelsenbeck thought Schwitters' methodology was bourgeois and his sensibility romantic. Nevertheless, Schwitters maintained close contact with Dadaists in Berlin and elsewhere, including Hans (Jean) Arp. Having made contact with Theo van Doesburg from the Dutch Constructivist movement during the early
1920s, Schwitters attended the "Dada-Constructivist Congress" in Weimar in September 1922. The Congress technically fell outside of Dada because it focused on purely aesthetic experimentation, which Dada opposed.


93 Hopkins, Dada and Surrealism, 139-40.

94 "On the pretext of carrying out propaganda for the soul, they have, in their struggle with naturalism, found their way back to the abstract, pathetic gestures which presuppose a comfortable life free from content or strife." Richard Huelsenbeck, Berlin Dada Manifesto (1920) in Hopkins, Dada and Surrealism, 12.

95 Hopkins, Dada and Surrealism, 35.

96 Hamilton, Painting and Sculpture in Europe 1880-1940, 476.

97 Hopkins, Dada and Surrealism, 57. Helmut Herzfelde anglicized his name to John Heartfield, who is Wieland Herzfeld's brother, Grosz's friend, and a fellow Dadaist known for his collages and photomontages.

98 Ibid., 103.


101 Ibid., 49-50.

102 Sheppard, Modernism – Dada – Postmodernism, 278-79.


104 Hopkins, Dada and Surrealism, 14.

105 Ibid., 76.

106 The use of Santa meaning "saint" in the painting title is a confusing and may be a slip up in his Italian or intended as a joke.


108 Ibid. 18, 76.
Ernst described being “struck by the obsession that showed to my excited gaze the floor boards, the grain of which had been accentuated by a thousand scrubblings. I decided then to investigate the symbolism of this obsession and, in order to aid my meditative and hallucinatory faculties, I made from the boards a series of drawings by placing on them, at random, sheets of paper which I began to rub with black-lead. In gazing attentively at the drawings thus obtained, the dark passages and those of a gently lighted penumbra, I was surprised by the sudden intensification of my visionary powers and by the hallucinatory succession of contradictory images superimposed, one upon the other, with the persistence and rapidity peculiar to amorous memories. My curiosity awakened and astonished, I began to examine indiscriminately, using the same means, all sorts of materials in my visual field: leaves and their veins, the frayed edges of a bit of sackcloth, the brush strokes of a “modern” painting, a thread unwound from spool, etc… I insist that drawings thus obtained through a series of suggestions and transmutations which occur spontaneously, like hypnagogic visions, more and more lose the character of the material examined (wood, for example), to become images of an unhoped-for precision, in such a way as to reveal the original cause of the obsession, or to produce a simulacrum of that course.” Hamilton, *Painting and Sculpture in Europe 1880-1940*, 399.

Ibid.

Hopkins, *Dada and Surrealism*, 12, 77. For example, Richard Huelsenbeck's manifesto of 1920 excoriated at the paintings of the prior art generation for selling out to bourgeoisie. Hopkins' employs the quoted phrases.


Hopkins made these points effectively. Ibid., 100-03. Hopkins described *Pieta* as referring to Freud's Oedipus complex “predicated on the male child's unconscious fantasy of rivalry with the father for the mother's love, and the violent (castrative) retribution which would result. The 'latent content' of the painting would thus be that the father has taken revenge for the son’s infringement of the incest taboo. Ernst, of course, was not reconstructing one of his own dreams but producing a form of self-analysis.” Hopkins cautions, however, that we can also read *Pieta* to show a homosexual attachment to the father and, further, that Ernst could have been more ironic than earnest in his Freudianism. Surrealists often employed black humor and generally had less concern with insightful analysis than with mere celebration of the unconscious.

Tristan Tzara, 1918 *Dada Manifesto*, in Marc Dachy, *Dada, the Revolt of Art* (New York: Abrams, 2006), 98.

Quoted in Hopkins, *Dada and Surrealism*, 46.


Ibid.

Hopkins, *Dada and Surrealism*, 16.

Quoted in Ibid., 17.

Ibid.
Ibid., 78-80.

Ibid., 80. Citing the critic Max Morise, Hopkins also refers to the inability of surrealistic paintings actually to render the unfolding of dreams.

Ibid., 84.


Ibid., 48.

Ibid., 227.

Ibid.


Ibid., 196.

*Hopkins, Dada and Surrealism*, 99.

Ibid., 196.

Ibid., 104-05. For example, Berlin Dadaists Raoul Hausman stated: "Dada is the full absence of what is called Geist (Spirit). Why have Geist in the world that runs on mechanically?" Nevertheless, as Timothy O. Benson explains, Hausman evolved a secular view of spirit underlying his monist materialism. Benson, "Mysticism, Materialism, and the Machine in Berlin Dada," 47, 52.

CHAPTER 8


3 Ibid., 54-55.


materialistic philosophy, viewing nature as independent of human consciousness and mind, reality as composed entirely of matter, and mind as simply a function of matter – a view that, according to Baumer, dominated European Marxists through the mid-20th century and beyond. Ibid., 469.

Baumer cites the 1934 interviews by the mathematician J. W. N. Sullivan purportedly finding unanimity among European scientist-philosophers on mind-matter and on anti-materialism. Ibid., 470. Max Planck thought matter derived from consciousness, and James Jeans thought that Heisenberg's indeterminacy principle made room for mind in the universe. Ibid., 471. The physicist-astronomer A. S. Eddington did not know the extent to which scientists accepted materialism in 1929, but he considered materialism inconsistent with physical principles. Ibid., 471-72. The zoologist Lloyd Morgan considered mind an emergent rather than a resultant phenomenon, both novel and qualitatively new. Ibid., 472. In response to C. P. Snow's essay on the two cultures many scientists, like Julian Huxley and Jacob Bronowski, defended science as humanistic and man's emergence as no longer blindly deterministic biology. Ibid., 474.

Bertrand Russell's view on materialism seems to have evolved into a neutral monism, which he considers the source of both mind and matter. Psychology and physics approached one another, for Russell, materializing mind in behaviorism and de-materializing matter with space-time relativity. The result, for Russell, was that mind formed one way and matter formed another way out of this neutral stuff, which he defined, respectively, as “sensed and un-sensed percepts,” and which theoretically bridged mind-matter dualism. E. C. Grayling, Russell: a Very Short Introduction (Oxford: Oxford University Press, 2002), 72-74. Grayling reports that Russell's position is not widely accepted because there is no "substance" to it. In any event, Russell apparently does not reduce mind simply to matter, like other materialists. Nevertheless, Russell's scientism and atheism remain very clear throughout in his writings.

Chapter 1, note 10.


Ibid. Okasha uses a similar example.

Ibid., 22.

While probability forms the basis for many physical and biological laws, including genetic frequency, probability is still another word for chance or likelihood. Of course, while a high probability may provide good support an inductive inference, it does not prove that inference. So, Hume's critique still stands. Thus, a high probability makes an inference logically supportable even though the inductive inference cannot be guaranteed. As a practical matter, science relies on the concept of probability as an implicit answer to Hume's critique. Ibid., 36-38.


Okasha, Philosophy of Science, 25.

Ibid., 27.

Ibid., 51.
17 Ibid., 52-55.


19 Ibid., 3-4 (emphasis in original).

20 Ibid., 4 (emphasis in original).

21 Ibid., 5.

22 Ibid., 12.

23 Ibid., 44.

24 Ibid., 51.


27 Ibid., 80.


29 Ibid., 102, 104.

30 Ibid., 10, 24.


32 Ibid., 118.

33 Ibid., 95, 98.

34 Ibid., 112, 113.

35 Ibid., 39.

36 Ibid., 169, 172 (emphasis in original).

37 Ibid., 179-80.

38 Ibid., 21-22.


40 Monod, *Chance and Necessity*, 45-46 (emphasis in original).

41 Ibid., 148.

43 Monod, *Chance and Necessity*, 159.

44 Ibid., 21.


48 Ibid., 18, 51.


50 Ibid., 111, 45.


52 Ibid.


55 Ibid., 170 ff.

56 Ibid., 80.

57 “While the higher comprises and therefore in a sense understands the lower, no being can understand anything higher than itself. A human being can indeed strain and stretch towards the higher and induce a process of growth through adoration, or wonder, admiration, and imitation, and by attaining a higher level expand its understanding . . . .” E. F. Schumacher, *A Guide for the Perplexed* (New York: Harper Colophon Books, 1978), 21.


60 Monod, *Chance and Necessity*, 172, 167, 40.

61 Ibid., 116, 159.

62 Ibid., 197-99.

63 Ibid., xi.

65 Ibid., 87.


67 Ibid., xvi-xvii.

68 Ibid., 9 (emphasis in original).

69 Ibid., 10.

70 Ibid., 21 (emphasis in original)

71 Ibid., 21-22.

72 Ibid., 22.

73 Ibid., 61 (emphasis in original).

74 Ibid., 24, 29.


76 Ibid., 207.

77 Ibid., 200.

78 Ibid., 212-237.

79 Ibid., 236-37.


81 Ibid.

82 Ibid., 202, 205. For Dawkins, therefore, religion is the "psychological byproduct of the misfiring of several of these modules [collections of brain organs], for example the modules for forming theories of other minds, for forming coalitions, and for discriminating in favor of in-group members and against others." Ibid., 209. While "conventional Darwinian selection of genes might have favored psychological predispositions that produce religion as a byproduct," Dawkins also considers memes part of his ultimate explanation for religion. Ibid., 218, 221. "The role of genetic natural selection in the story is to provide the brain, with its predilections and biases – the hardware platform and low-level system software which form the background to mimetic selection. Given this background, mimetic natural selection of some kind seems to me to offer a plausible account of the detailed evolution of particular religions." Ibid., 233. Memes are "units of cultural inheritance," analogues of genes, and Dawkins speculates as follows: "In the early stages of a religions evolution, before it becomes organized, simple memes survived by virtue of their universal appeal to human psychology. This is where the meme theory of religion and the psychological by product theory of religion overlap. The later stages, where a religion
becomes organized, elaborate and arbitrarily different from other religions, are quite well handled by the theory of memeplexes – cartels of mutually compatible memes. This doesn’t rule out the additional role of deliberate manipulation by priests and others. Religions probably are, at least in part, intelligently designed, as our schools and fashions in art.” Ibid., 233. From this interplay of genes and memes it is no small leap for Dawkins to conclude that they also are responsible for human morality. Also, Richard Dawkins, *Climbing Mount Improbable* (New York: Norton, 1996).


84 Ibid.

85 Ibid., 251.


87 Ibid., 18 (emphasis in original).

88 Ibid., 25, 68.

89 Ibid., 82-83.

90 Ibid., 83 (emphasis deleted).


92 Ibid., 310-11.


96 *Edwards v. Aguillard*, 482 U.S. 578 (1987). In 1987, the US Supreme Court ruled decisively that the teaching of creation science in public schools violates the First Amendment prohibition against establishment of religion.


99 "The logical structure of the argument to design is a simple inductive one: whenever we see such highly specific interactions in our everyday world, whether in a mousetrap or elsewhere, we unfailingly find that the systems were intentionally arranged -- that they were designed. Now we find systems of similar complexity in the cell. Since no other explanation has successfully addressed them, I
argue that we should extend the induction to subsume molecular machines, and hypothesize that they were purposely designed.” Ibid., 355, 367.


101 Stephen C. Meyer, "The Cambrian Information Explosion, Evidence for Intelligent Design," in Debating Design, 372-74. Darwinian theory can account for micro-evolutionary adaptation, like the variations in Galapagos finch beaks, but, for Meyer, it cannot account for the informationally complex genes, proteins, cells, and the body plans of the Cambrian age. While natural selection can preserve advantageous variations in genetic sequences, it cannot generate new functional sequences necessary for complex animals -- the probability of randomly selecting the necessary functional sequences for such higher animal forms, according to Meyer, is "vanishingly small." Ibid., 378. Too much luck is involved for random variations to produce the complex specified information (novel genes and proteins arising nearly simultaneously). Furthermore, DNA alone cannot account for the discontinuous increases in body plan morphogenesis (higher levels of organizational hierarchy) during the Cambrian period. Ibid., 379-86. Meyer asserts that the genetic algorithms advanced by Richard Dawkins to support the creative power of random mutation and natural selection cannot supply the "forward-looking" memory,” the "purposive or goal-directed design,” necessary for the hierarchical arrangement of parts in an animal body plan -- a rational and conscious agent is necessary, i.e., Intelligent Design. Ibid., 386-89.

102 While ID theorists claim that conscious intelligence is necessary, Darwinians, like Dawkins, Dennett, and Francisco J. Ayala, assert that organisms in fact are "designed” for certain purposes (they adapt to their environment) and that natural selection counteracts the randomness by preserving the useful and eliminating the harmful variations. Francisco J. Ayala, "Designed without Designer, Darwin's Greatest Discovery" in Dembski and Ruse, Debating Design, 58-64, 71-72. In addition to complex, beautiful, and diverse organisms, however, evolution causes defects, pain, and cruelty that bely an intelligent designer. Behe’s argument that the designer might have multiple motives, according to Ayala, "destroys Intelligent Design as a scientific hypothesis, because it provides it with an empirically impenetrable shield." Ibid., 69; also, Haught, Deeper Than Darwin, 89-90.


104 William A. Dembski, The Design Inference: Eliminating Chance Through Small Probabilities (New York: Cambridge University Press, 1998) in Haught, Deeper Than Darwin, 88-89, 196n5. Haught's arguments are as follows: First, ID defenders are 'theists' motivated to defend the integrity of religion against the atheistic materialism of much Darwinist writing. Second, the ID argument -- from Paley's divine designer to Behe's irreducible complexity of cellular systems -- is inextricably intertwined with religious belief in a divine Creator. Third, devotees advance ID as a logical argument against the contrary philosophical view that evolutionary theory explains all of life without the need for God. And fourth, the assertion that an overseeing intelligence influences natural evolution is unmistakable natural theology, introducing a theological explanation for natural causes. Haught, Deeper Than Darwin, rev. ed. (Boulder CO: Westview Press, 2008), Chapter 11, "Darwin and God after Dover." In the Dover Area School District Case, the court agreed with Haught, finding that intelligent design is theology, not science, and thus violates the First Amendment. Kitzmiller v. Dover Area School District, 400 F. Supp. 2d 707 (M.D. Pa. 2005).

105 Haught urges the contestants to look for God "not in the design but in the drama of life" and to consider "not whether design points to deity but whether the drama of life is the carrier of meaning.” John F. Haught, Making Sense of Evolution, Darwin, God, and the Drama of Life (Louisville, KY: Westminster John Knox Press, 2010), 58. He points out that “if life were perfectly designed right now, as
Dawkins implicit theology demands, there could be no drama at all. Perfect design would mean that the work of life has been finalized. There would be no story but only stiff and static structures to talk about.” Ibid., 59. In short, while evolutionary adaptations are imperfect and flawed, the Darwinian materialists have "failed to consider the possibility that the perfect design they are looking for would bring an abrupt end to the drama of life." Ibid., 60. "Design is satisfying to those who think statistically, spatially, and non-historically," observes Haught, "but to those who welcome time's long reach and narrative nuance, design considered apart from drama is trivial." Ibid., 61. To those Darwinian materialists as well as ID theorists, Haught asserts: "The flawlessly engineered world they prefer would be dead on delivery. Since it would already be perfect, it would also be finished; and if finished, it would have no future." Ibid., 63.

As discussed in Chapter 5, Teilhard considers that underlying evolution is a movement in the direction of complexity and consciousness and that the complexification of triviality is the product of noncoercive divine inspiration operating invisibly beneath the seeming randomness of evolutionary change. Whitehead argues that God is persuasive love luring the universe to increasing novelty and beauty: "The teleology of the universe is directed to the production of Beauty.” Alfred North Whitehead, Adventures of Ideas (New York: The Free Press, 1933), 265. "Thus God's purpose in the creative advance is the evocation of intensities.” Alfred North Whitehead, Process and Reality, corr. ed., eds. David Ray Griffin and Donald W Sherburne (New York: The Free Press, 1978), 105. In this quest for greater beauty and intensity lies the risk of disorder and suffering. For Whitehead, however, “the immanence of God gives reason for the belief that pure chaos is intrinsically impossible. At the other end of the scale, the immensity of the world negatives the belief that any state of order can be so established that beyond it there can be no progress.” Ibid., 111.

Pope Paul II agreed that "the theory of evolution is no longer a mere hypothesis. It is… accepted by researchers, following a series of discoveries in various fields of knowledge.” Quoted in Ayala, "Designed without Designer, Darwin's Greatest Discovery” in Dembski and Ruse, Debating Design, 58-59. Haught advocates a new idea of God in consort with evolutionary theory to "help us account for the increasing complexity and consciousness that evolution has brought about not only in life, but in culture and religion as well" and to help us explain "not only the fact that the universe has order to it, but also that it has a penchant for novelty and creativity such as we see in evolution.” Haught, Science and Religion, 68. Haught describes God as the source of diversity, inviting consideration of God "as the ultimate source not only of the order in the world, but also of the troubling novelty and diversity that always somehow disrupt the status quo," and consideration of chance, not as the cause of evolution but "as the consequence of a breakdown in present forms of order as novelty enters in.” Ibid. In short, Haught conceives of God as "the ultimate or remote origin of this novelty," as the God of evolution who "wants nothing less than the ongoing enhancement of cosmic beauty," who promises to save universe "from all its travail, suffering, and death," and who "struggles along with all beings, participating in both their pain and enjoyment, ultimately redeeming the world by an infinite compassion – so that in the end nothing is ever completely forgotten or lost.” Ibid., 69.


Ibid., 180.

Ibid., 8.

Ibid., 181, 117-18 (emphasis in original).

Ibid., 127-30, 32.

Ibid., 30, 32.
Ibid., 32-33.

Ibid., 5, 10.


Ibid.

Ibid., 41-43.

Ibid., 40.


Ibid., 161.


"As Haught correctly notes: "any belief system that you cling to must be congruent with your desire to know and the imperatives of your mind," otherwise, what you say is inconsistent with how you act. Furthermore, "if it undermines the confidence and trust in the cognitional imperatives that lead you toward open-minded and critical exploration of reality, then it is inconsistent with the fundamental criterion of truth, namely, fidelity to the desire to know." Haught, *Is Nature Enough?*, 39. I am indebted to Haught for this entire line of argument.

Ibid., 95.


Dennett, *Darwin's Dangerous Idea*, 17-34. Some scientific materialists, moreover, acknowledge their "a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counterintuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door." Richard Lewontin, "Billions and Billions of Demons," *New York Review of Books* 44 (January 9, 1997), 31, in Haught, *Is Nature Enough?*, 118-19, 119n4.


Ibid., 129.

Ibid., 97. Haught draws a distinction between scientific materialism and scientific naturalism based upon the latter's different attitude toward the phenomenon of emergent complexity, although they both have the same materialist roots. Haught considers scientific materialism a hard naturalism that rules out the nonphysical, whereas soft naturalism, sometimes called religious naturalism, leaves room for spontaneous emergent complexity that inspires awe in nature's mystery. In attributing natural phenomena to purely natural causes accessible through scientific analysis, scientific naturalism or naturalism considers a religious explanation of life unnecessary and indeed untenable. Haught characterizes "sunny" naturalists as revering the beauty and creativity of nature, and "sober" naturalists as seeing the universe as devoid of meaning, leaving man, like Sisyphus in Albert Camus' writing, to find meaning in the face of absurdity. Ibid., 8, 10-11.

CHAPTER 9


6 Shaw, Preface to *Heartbreak House*, 5.


11 Ferguson, *War of the World*, 72-73; Chapter 3 generally.

13 Baumer, Modern European Thought, 425, 442.


15 Baumer, Modern European Thought, 450-51; Maritain, The Peasant of the Garonne, 119, 122, 264-65 (emphasis omitted).

16 Lucas and Lucas, Teilhard, 63, 86-88.


18 Ibid., 120-23; Teilhard, "Catholicism and Science," in Teilhard, Science and Christ, 189, 190-91 (emphasis in original).


20 Rudolf Carnap, Philosophy and Logical Syntax, Chapter I, in Stumpf, Philosophy, History & Problems, 425.

21 Wittgenstein, Tractatus Logico-Philosophicus, sec. 6.54.

22 Ibid., secs. 4.112, 7.

23 Ibid., secs. 6.432, 6.45, 6.44, 6.421, 6.54, 6.522, 6.53.

24 Husserl, Formale und transzendentale Logic, 14, in Lauer, Phenomenology, 80.


26 Moran, Edmund Husserl, 35-36.


30 Heidegger (presumably from Lectures on Nietzsche, 1936-40) in Barrett, Irrational Man, 184.
Russell, A Free Man's Worship and Other Essays, 11-12.

Krutich, The Modern Temper, 9, 205.


Richards, Science and Poetry, 71, 77, 95.

Ransom, God without Thunder in The 20s, 327-29; Mather, New Republic article in The 20s, 283; Montague, New Republic article in The 20s, 284; Ibid., 284. Croly, New Republic articles in The 20s, 284.

Woolf, Mrs. Dalloway, 88.

Hemingway, A Farewell to Arms, 177-78.

Ibid., 239.

Zürich Dadaist Hans (Jean) Arp quoted in Hopkins, Dada and Surrealism, 7-8.

Quoted in Dachy, Dada, the Revolt of Art, 34; Tzara, 1918 Dada Manifesto.


Nadeau, The History of Surrealism, 227.


Ibid. The same quest for certainty motivated the postwar rise of Christian fundamentalism in America. Lawrence M. Principe, Science and Religion, Course Guidebook, 43. Principe explains that Christian fundamentalism experienced a belligerent resurgence during and after the Great War from anxiety over the loss of a religiously oriented Anglo-Saxon Protestant American and the rise of cultural modernity.

Bernstein, Beyond Objectivism and Relativism, 19, 48.


Bernstein, Beyond Objectivism and Relativism, 133.

Ibid., 113; Martin Heidegger, Basic Writings, 58, 112.

Whitehead, Science and the Modern World, 91; Bernstein, Beyond Objectivism and Relativism, 126.

BIBLIOGRAPHY

_Cultural, Intellectual, and Military History_


**Theology**


*Philosophy*


Locke, John. *An Essay Concerning Human Understanding* (1690). In *Great Books of*


Literature


Carruth, Hayden. Introduction to Jean-Paul Sartre, Nausea. Translated by Lloyd


Art


