**The transformation of the modern era**

**Outline**

**The changing image of the human being from Copernicus through Freud 1**

**The self-critique of the modern mind 6**

**From Locke to Hume 6**

**Kant 12**

**The decline of metaphysics 18**

**The crisis of modern science 20**

**Romanticism and its fate 28**

**The two cultures 28**

**The divided worldview 34**

**Attempted synthesis: from Goethe and Hegel to Jung 36**

**Existentialism and nihilism 43**

**The Post-modern mind 47**

**At the millennium 50**

What I want to do here is to trace the trajectory of the modern mind as it developed from the foundations and premises of the modern worldview examined in the last chapter. Perhaps the most momentous paradox concerning the character of the modern era was the curious manner in which its progress during the centuries following the scientific revolution and the Enlightenment brought Western human beings unprecedented freedom, power, expansion, breadth of knowledge, depth of insight, and concrete success, and yet simultaneously served – at first subtly then later critically – to *undermine* the human being’s existential situation on virtually every front: metaphysical, ontological, epistemological, psychological, and finally also biological. A relentless balance, an inextricable intertwining of positive and negative, seemed to mark the evolution of our modern age, and my task here is to understand the nature of that intricate dialectic.

**The changing image of the human being from Copernicus to Freud**

In the same instant that humankind liberated itself from the geocentric illusion of virtually all previous generations, humankind also effected for itself an unprecedented fundamental cosmic displacement. The universe no longer centered on “man”, “man’s” cosmic position neither fixed nor absolute, with each succeeding step in the scientific revolution adding new dimensions to the Copernican effect, only served to further propel that liberation and also to intensify that displacement.

With Galileo, Descartes, and Newton the “new science” was forged, a new cosmology defined, and a new world opened to the West. Within this world, human’s powerful intelligence could act with new freedom and effectiveness. Yet simultaneously that new world was *disenchanted* (in creation or nature becoming a *mechanism* it lost its meaning) of all those personal and spiritual qualities that for millennia had given human beings their sense of cosmic significance. The new universe was a *machine*, a self-contained mechanism of force and matter, devoid of any purpose or goal, bereft of intelligence or consciousness, its character fundamentally alien to humankind. The pre-modern world had been permeated with spiritual, mythical, and other humanly meaningful categories, but all these were regarded by the modern conception as *anthropomorphic projections*. Mind and matter, psyche and world were now separate realities. The scientific liberation from theological dogma and animistic superstition was therefore accompanied by a new sense of human alienation from a world that no longer responded to human values, no longer offered a redeeming context within which could be understood the larger issues of human existence. Similarly, science’s quantitative (measurement) analysis of the world, the methodological (experimentation) liberation from subjective distortions was accompanied by the ontological diminution of all those qualities – emotional, aesthetic, sensory, imaginative, and intentional – that seemed most constitutive of human experience. These losses and gains were noted, but the paradox seemed inevitable if human beings want to remain faithful to their own intellectual rigor. ***Science may have revealed a cold, impersonal world, but it was the true one nonetheless*.** Despite any nostalgia for the venerable but now disproved cosmic womb, humankind could not go back.

**Darwin**

With Darwin these consequences were further affirmed and amplified. Any remaining theological assumptions concerning the world’s divine government and human beings’ special spiritual status were severely controverted by the new theory and evidence: “man was a highly successful animal”! Man was not God’s noble creation with a divine destiny, but merely an experiment of nature with an uncertain destiny. Consciousness which once ruled the universe and permeated it was now a mere accident in the course of the evolution of matter. Consciousness had existed but a short time, characteristic of a limited and relatively insignificant part of the cosmos – *homo sapiens* – for which there was no guarantee its ultimate evolutionary fate would be any different from that of thousands of now extinct species.

With the world no longer a divine creation, spiritual nobility seemed to have departed from that world, an impoverishment that necessarily touched humankind erstwhile it crown. While Christian theology had maintained that natural history existed for the sake of human history, and that humanity was essentially at home in a universe designed for its spiritual unfolding, the new understanding of evolution refuted both claims as *anthropocentric delusions*. All was in flux. Humankind was not absolute, and human beings’ cherished values had no foundations outside themselves. Human beings’ character, mind and will, came from below, not from above. The structures of religion, of society, of culture, and of reason itself now seemed relatively arbitrary expressions of the struggle for biological success. Thus, in the mid 19th c. Darwin too was liberating and diminishing at the same time. Humankind could now recognize that it rode the crest of evolution’s advance, nature’s most complex and dazzling achievement; but humankind also was just an animal species with no higher purpose. The universe provided no assurance of the indefinite success of the human species and, of course, certain assurance of individual demise at physical death. Indeed, on the longer-term macroscopic scale, the growing modern sense of life’s contingency was further enforced by 19th c physics’ formulation (Hermann Helmholtz) of the second law of thermodynamics which portrayed the universe as moving spontaneously and irreversibly from order to disorder toward a final condition of maximum entropy, or “heat death”. The chief facts of human history until the present were fortuitously supportive of biophysical circumstances and brute survival, with no apparent larger meaning or context, and with no cosmic security supplied by any providential design from above.

**Freud**

At the turn of the 20th c. Freud dramatically furthered these developments as he brought the Darwinian perspective to bear more fully on the human psyche, presenting persuasive evidence for the existence of unconscious forces determining man’s behavior and conscious awareness (consciousness was merely the tip of the iceberg – most of what mattered was underneath the water). In doing so, Freud seemingly freed the modern mind from its naïve consciousness (aware that it is driven by inner unconscious forces beyond its control) giving it a new profundity of self-understanding, yet Freud also confronted that mind with a dark, deflating image of its true character. For on the one hand, psychoanalysis served a virtual epiphany for the early 20th c mind as it brought to light the archeological depths of the psyche, disclosed the intelligibility of dreams, fantasy, and psychopathological symptoms, illuminating the sexual etiology of neurosis, demonstrating the importance of infantile experience in conditioning adult life, discovered the Oedipal complex, unveiled the psychological relevance of mythology and symbolism, recognized the psychic structural components of id, ego, and superego, revealed the mechanisms of resistance and repressions, and brought forth a host of other insights laying open the mind’s character and internal dynamics. Freud thereby presented a brilliant culmination of the *Enlightenment* project, bringing even the human reason/unconscious (that last remnant of human freedom) under the light of rational naturalistic investigation.

Yet on the other hand, Freud radically undermined the entire *Enlightenment* project by his revelation that below or beyond the rational mind there existed an overwhelmingly potent repository of non-rational forces which did not readily submit either to rational analysis (reason) or to conscious manipulation, and in comparison with which man’s conscious ego was but a frail and fragile phenomenon: *consciousness as the veneer of civilization*! Freud thereby furthered the cumulative modern process of casting man out of that privileged cosmic status his modern rational self-image had retained from the Christian worldview. Human beings could no longer doubt that it was not only his/her body but his/her psyche as well for which powerful biological instincts – amoral, aggressive, erotic, “polymorphous perverse” – were the most significant motivating factors, and that in the face of these the proud human virtues of rationality, moral conscience, and religious feelings were conceivably no more than reaction formations and delusions (i.e., defense *mechanisms*) of the civilized self-concept/consciousness. Given the existence of such unconscious determinants, human beings’ sense of personal freedom could well be spurious. The psychologically aware individual now knew himself to be, like all members of modern civilization, condemned to internal division, repression, neurosis, and alienation.

With Freud in the 20th c. the Darwin in the 19th c. humankind’s struggle with nature took on new dimensions, as human beings were now constrained to live in eternal struggle with their **own** nature. Not only was God exposed as a primitive infantile projection, but the conscious human ego itself with its prize virtue of human reason – reason being the last bastion separating man from nature – was now dethroned. Reason was nothing more exalted than a recent and precarious evolutionary development out of the primordial id. This id was the wellspring of human motivations, a seething caldron of irrational, bestial impulses – and contemporary events began to provide distressing evidence for this thesis. *Not just man’s divinity but also his humanity was coming into question*. As the scientific mind emancipated modern humankind from his illusions, humankind seemed increasingly swallowed up by nature, deprived of ancient dignities, unmasked as a creature of mere material instinct.

**Marx**

Also in the 19th c. Marx’s contribution had also suggested a similar deflation. As Freud revealed the mechanism of personal unconscious, Marx exposed the mechanisms of social unconscious. The philosophical, religious, and moral values/consciousness of each age could be plausibly comprehended as determined by (unconscious) economic and political factors, whereby control over the means of production was maintained by the ruling class. The entire superstructure of human belief (conscious) could be seen as reflecting the more basic struggle for material power. The elite of Western civilization, for all its cultural achievement, might recognize itself in Marx’s dark portrait as a self-deceiving bourgeois imperialist oppressor. Class struggle, not civilized progress, was the program of the foreseeable future – and again, contemporary historical developments appeared to bear out his analysis. Between Marx and Freud, with Darwin behind them, the modern intelligentsia increasingly perceived man’s cultural values, psychological motivations, and conscious reason, to be ***historically relative phenomena*** derived from unconscious political, economic, and instinctual impulses of an entirely naturalistic/materialistic quality. The principles and directives of the Scientific Revolution (“new science”) of the Enlightenment – the search for material, impersonal, secular explanations for all phenomena – had found new and illuminating applications in the psychological and social dimensions of human experience. Yet in the process, modern man’s optimistic, self-estimate from the Enlightenment was subject to repeated contradiction and diminution by his own advancing intellectual horizons.

These horizons were also radically expanded under the force of scientific discoveries that, like the views of Darwin, Marx, and Freud, applied a historical and evolutionary model of change to an increasing array of phenomena. That model first emerged in the Renaissance and Enlightenment when European man’s recently unbounded intellectual curiosity was combined with a new and emphatic sense of his dynamic *progress*. From these grew a heightened interest in the classical and ancient past from which man had developed, and enhanced standards of scholarship and historical investigation. From Lorenzo Valla (1405-1457) and Nicolo Machiavelli (1469-1527) in the Renaissance, to Voltaire (Francois Marie Arouet, 1694-1778) and Edward Gibbon (1737-1794), from Giambattista Vico (1668-1744) and Johan Gottfried von Herder (1744-1803) to Georg Wilhelm Friedrich Hegel (1770-1831) and Leopold von Ranke (1795-1886), attention to history increased, as did awareness of historical change and recognition of developmental principles by which historical change could be understood. The global explorers had similarly expanded Europeans’ geographical knowledge, and with it their exposure to other cultures and other histories. With the continuous growth of knowledge in these areas, it gradually became evident that human history extended back in time far longer than had been assumed, that there existed many other significant cultures past and present, that these possessed views of the world very divergent from the European, and that there was *nothing absolute*, immemorial, or secure about modern man’s present status and values. For a culture long accustomed to a relatively static, abbreviated, and Eurocentric conception of human history – indeed universal history [as Archbishop’s James Ussher’s (1580-1655) famous dating of the year of Creation as 4004 BCE] – the new perspectives were disorienting in both scope and character. Yet subsequent work by archeologists pressed the horizon still further back, uncovering ever more ancient civilizations whose entire rise and fall had occurred before Greece and Rome were born. Unending development and variety, decay and transformation, were the law of history, and history’s trajectory was disconcertingly long.

When the developmental and historical perspective was applied to *nature*, as with James Hutton (1726-1997, Scottish geologist) and Charles Lyell (1797-1875, Scottish geologist) in geology, and Georges-Louis Leclerc, Comte de Buffon (1707-1788), Georges Cuvier (1769-1832), Jean Baptiste Lamarck (1744-1829), Charles Darwin (1809-1882), and Ernst Haeckel (1834-1919, “ontogeny recapitulates phylogeny”) in biology, the time spans within which organic life and the earth were known to have existed were exponentially expanded to thousands of millions of years, in comparison with which all of human history had taken place in an astonishingly brief period of time. Yet all this was only the beginning, for then astronomers, empowered by increasingly advanced technical tools, applied similar principles toward understanding the cosmos itself, resulting in its unprecedented temporal and spatial expansion. By the 20th c, the resulting cosmology had posited the solar system as a vanishingly small part of a gigantic galaxy containing a hundred billion other stars, each comparable to the sun, with the observable universe containing a hundred billion other galaxies, each comparable to the Milky Way. These individual galaxies were, in turn, members of a much larger galactic cluster, themselves seemingly parts of even vaster galactic superclusters, with celestial space conveniently measurable only in terms of distances traveled in years at the speed of light, and with the distances between galactic clusters calculated in hundreds of millions of light-years. All these starts and galaxies were presumed to be involved in enormously long processes of formation and decay, with the universe itself born in a scarcely conceivable, let alone explicable, primordial explosion some 10 or 20 billion years past.

Such macroscopic dimensions forced upon human beings a disturbingly humble sense of their own relative minuteness in both time and space, dwarfing the entire human enterprise, not to mention our individual lives, to shockingly miniscule proportions. Superseded by such immensities, the earlier expansions of man’s world brought about by say Columbus, Galileo, and even Darwin, seemed comparatively intimate. The combined efforts of explorers, geographers, historians, anthropologists, archeologists, paleontologists, geologists, biologists, physicists, and astronomers, served to expand humankind’s knowledge even as they diminished human beings’ status in the cosmos. The distant origins of humankind among the primates and primitives, and yet in comparison to the age of the earth, their comparative proximity; the great size of the earth, and the solar system and yet relative to the galaxy their extreme minuteness; the stupendous expanse of the heavens in which the earth nearest neighboring galaxies were so unimaginably remote that their light now visible on earth had left its source over a 100,000 years earlier when *Homo Sapiens* was still in the old stone age – faced with such vistas, thoughtful people had good cause to ponder the apparent insignificance of human existence in the greater scheme of things.

Yet it was not just radical temporal and spatial diminution of human life brought about by science’s advance that threatened modern man’s self-image, but also *science’s qualitative devaluation of man’s essential character.* As reductionism was successfully employed to analyze nature and human nature as well, the individual person and humankind as a whole were reduced. With increasing scientific sophistication, it seemed likely that the laws of physics were at the bottom of everything. The phenomenon of chemistry could be reduced to physics, those of biology to chemistry and physics, and for many scientists, notably in psychology in the 20th c., those of human behavior and consciousness could be reduced to biology ands biochemistry. Hence ***consciousness became an epiphenomenon of matter;*** consciousness became a secretion of the brain, a function of the electrochemical circuitry serving biological imperatives. The Cartesian program of mechanistic analysis thereby began to overcome the distinction between *res cogitans* and *res extensa,* as Julien de La Mettrie (1709-1751), and in the 20th c. Pavlov, Watson, Skinner and others argued that as the universe as a whole could best be understood as a machine so could human behavior and mental functioning be based on the mechanistic principles of stimulus and response, compounded by genetics and neuro-chemistry all increasingly subject to manipulation. Ruled by statistical determinism, man became an appropriate subject for the domain of probability theory. Man’s future, his/her very essence, appeared to be as contingent and un-mysterious as an engineering (input-output) problem. Although it was merely a regulatory assumption, the widespread hypothesis that all complexities of human experience, consciousness, and of the world in general would ultimately be explicable in terms of natural scientific principles, increasingly and often unconsciously, took on the character of a well-established scientific principle with profound metaphysical implications.

The more modern man strove to control nature by understanding its principles, to free himself from the power of nature, to separate himself from the necessity of nature, and above all, to rise above it, the more completely science metaphysically submerged man into nature and into its mechanistic and impersonal character. For if man lived in a mechanistic and impersonal universe and if existence was entirely grounded in that universe, then man too became mechanistic and impersonal, and his private experience became a psychological fiction. In this light, man was little more than a genetic strategy for the continuance of the species and, as the 20th c progressed, the strategy’s success became increasingly uncertain.

**Thus, it was the irony of modern intellectual progress that man’s genius discovered successive principle of determinism (Cartesian, Newtonian, Darwinian, Marxist, Freudian, behaviorist, genetic, neurophysiological, sociobiological) that steadily attenuated belief in his own rational and volitional freedom, while eliminating his sense of being anything more than a peripheral and transient accident of material evolution!**

**The self-critique of the modern mind**

These paradoxical developments were matched by simultaneous progress in modern philosophy as it analyzed the nature and extent of human *knowledge* (was it unlimited? Could we know everything?) with increasing rigor, subtlety, and insight. For at the same time as modern man was expanding his effective knowledge of the world, his effort to turn towards himself in order to understand how that knowledge was possible (epistemology: how is knowledge possible?), it revealed the disquieting limits beyond which his knowledge could **not** claim to penetrate.

**From Locke (1632-1704) to Hume (1711-1776)**

With Newton’s synthesis of a “new science”, the Enlightenment began with an unprecedented confidence in human reason, and the new science’s success in explicating the natural world also affected philosophy and this in two ways:

(1) by locating the basis for knowledge in the human mind (rather than in the world) in its encounter with the physical/material world (ontological claim), and

(2) by directing philosophy’s attention to an analysis of the mind that was capable of such cognitive success (epistemological claim) in explaining the world.

It was John Locke (1632-1704), Isaac Newton’s (1642-1727) contemporary and Frances Bacon’s (1561-1626) heir, who set the tone for the Enlightenment by affirming the foundational principle of *empiricism*: “there is nothing in the intellect that was not first in the senses” (*Nihil est in intellectu guod non antea fuerit in sensu*). Locke was stimulated by reading Descartes (1596-1650), but also influenced by Newton (1642-1727), Boyle (1627-1691), and the Royal Society (1660), and affected by Gassendi’s (1592-1655) atomistic empiricism. ***Locke could not accept the Cartesian rationalist belief in innate ideas.*** In Locke’s analysis, all knowledge of the world must rest finally on human beings’ sensory experience. Through the combining and compounding of simple sensory impressions or “ideas” (defined as “mental contents”) into more complex ideas or concepts (by way of reflection on sensations), the mind can arrive at sound conclusions. Sense impressions and inner reflection on those impressions: *“those are the two fountains of knowledge from whence all ideas we have, or can naturally have do spring”.* The mind is first of all a blank tablet (*tabula rasa*) upon which experience then writes. The mind is intrinsically passive (receptor) and then receives atomistic impressions that represent external objects causing the impressions in the mind. From those impressions the mind then constructs by means of introspection (*here understood as “inner observation”)* a conceptual understanding through its compounding operations – so that the mind possesses innate power (reflection, compounding) but not innate ideas. Knowledge (cognition) begins in sensation.

The British empiricist demand that sensory experience be the ultimate source of knowledge of the world set itself in opposition to the Continental rationalist orientation epitomized by Descartes (1596-1650), Spinoza (1632-1677), and Leibnitz (1646-1716) who all held that the mind alone through its recognition of clear and distinct, and self-evident truths, could achieve certain knowledge. For the empiricists, such empirically ungrounded rationalism was, as Frances Bacon had said, “*akin to a spider’s producing cobwebs out of its own substance*”. The characteristic imperative of the Enlightenment (soon to be carried from England by Voltaire to France and the French Encyclopedists) held that reason required sensory experience to know anything about the world other than its own concoctions. The best criterion of truth was therefore its “genetic” (meaning “historical”) basis (sensory experience) and not just its apparently rational validity (which could be spurious). In subsequent empiricist thought, rationalism was increasingly delimited (to speculation, definition, mathematical or logical operations). Similarly, the rationalist belief that science could attain certain knowledge of general truths about the world (e.g., that there were two kinds of stuff, extended stuff and non-extended stuff, or that everything was composed of monads) was increasingly displaced by a less absolutist position, suggesting that science cannot make known the real structure of things (metaphysics) but can only, on the basis of hypotheses concerning what appears, discover *probable* truths (reason becomes analogous to a probability calculus, a heuristic, instrumental procedure) about the machine of nature.

**Skepticism and empiricism**

This nascent skepticism in the empiricist position was already visible in John Locke’s own difficulties with his theory of knowledge. Locke recognized that there was no guarantee that all human ideas of things *genuinely resembled* external objects that these ideas were supposed to “re-present” in the mind. Nor was Locke able to reduce all complex ideas (e.g., notions of substance, or cause) to simple ideas or sensations. Locke held that there were three factors in human knowledge: (1) the mind, (2) the physical object, and (3) the idea in the mind that represents the object. Man knows the object only mediately, that is by way of the idea. Outside sensory perception, there is simply the world of material substances in motion (e.g., Hobbes, 1588-1679); the various impressions of the external world that man experiences in cognition cannot be absolutely confirmed as belonging to the world-in-itself.

Locke however attempted a partial solution this problem of skepticism by making a distinction (following Galileo, 1564-1642) and Descartes, 1596-1650) between primary and secondary qualities. That is, distinguishing between qualities that inhere in all physical objects as objectively measurable (weight, height, shape, and motion), and qualities that inhere only in the subjective human experience of those objects (taste, color, odor, beauty). While primary qualities produce ideas in the mind that genuinely resemble the world, secondary qualities produce ideas that are simply the consequence of the subject’s perceptual apparatus. By focusing on primary qualities, science can attain reliable knowledge of the material world; secondary properties/qualities are merely subjective and uncertain. In this way Locke protected the “new science” from skepticism (i.e., we can know – the truth about the world – only if we restrict ourselves to primary properties of the machine of nature).

**Berkeley (1685-1753)**

But Locke was followed by Bishop Berkeley (1685-1753) who pointed out that if the empiricist analysis of human knowledge is carried through rigorously then it must be admitted that all the qualities the mind (*both primary and secondary*) can register are ultimately experienced as ideas in the mind, and there can be no conclusive inference whether some but not all of these qualities genuinely represent the object. Indeed, there can be no conclusive inference concerning even the existence of the external world of material objects outside of the mind that produces these ideas (solipsism = skepticism). For there is no justifiable means of distinguishing between objects and sensory impressions, and hence no idea in the mind can be said to be “like” (picture, resemble, represent) a material thing so that the latter is re-presented in the mind as it is in itself. Since no one can ever get outside the mind to compare the idea with the actual object, Berkeley concluded that the whole notion of “re-presentation” is groundless. The same arguments Locke used against representational accuracy of secondary qualities were equally applicable to primary qualities, for in the end both types of qualities must be regarded as experiences/”ideas” in the mind (even physics was dependent on the ideas in the mind).

Berkeley concluded that Locke’s doctrine of representation must therefore be untenable. In Berkeley’s analysis, all human experience is *phenomenal*, limited to *appearances* in the mind. Man’s perception of nature is his mental experience of nature, and consequently all sense data must finally be adjudicated as “objects for the mind” and not as representations of material substances. In effect, while Locke had reduced all mental contents to an ultimate basis in sensation (empiricism), Berkeley further reduced all sense data to contents of the mind.

The Lockean distinction between qualities that belong to the mind and qualities that belong to the world cannot be sustained, and with this breakdown Berkeley, who was a Bishop in the Anglican Church, sought to overcome the atheistic materialism which he felt had unjustifiably arisen with modern “new science”. He agreed that the empiricist rightly affirms that all knowledge rests on experience, but Berkeley’s point is that in the end all experience is nothing more than experience (all mental re-presentations of supposedly material objects are finally nothing but ideas in the mind) and therefore the existence of the material world external to the mind is an unwarranted assumption. All that can be known with certainty is the mind and its ideas (including those that seem to represent the world). From a rigorously philosophical point of view, “to be” does not mean “to be a material substance”; rather, “to be” means “to be perceived by the mind” (*esse est percipi*). Of course, this epistemological claim (which is sometimes known as “phenomenalism”) could mean disaster for the “truth” of the knowledge achieved by the “new science”.

Yet Berkeley held that the individual mind does not subjectively determine its experience of the world, as if the world were a fantasy susceptible to any individual’s whim of the moment. The reason that there is *objectivity*, that different individuals reliably perceive the same world, is that the world and its order depend on a “mind” that transcends individual minds and is universal – namely the ***Mind of God***. The universal Mind produces sensory ideas in individual minds according to certain regularities, the constant experience of which gradually reveals to man the “laws of nature”. It is this situation (of the Mind of God) that allows for the possibility of science. Thus, science is not hampered by the recognition that sense data cannot be known to have a material basis, for the mind can continue its analysis of objects just as well with the critical knowledge that these are object-for-the-mind (recurrent sense qualities and not copies of material substances). The philosopher does not have to worry about the skepticism created by Locke’s theory of re-presentation because, according to Berkeley, the world-in-itself (as such) does not exist. The ideas in the mind are the final truth. [Note how important this epistemological position would make “psychology” – if all truth is in the mind then the science of the mind -psychology - would be the most important science. Little wonder that psychology was born in and maintained an allegiance to empiricism.] *In this way Berkeley sought to preserve empiricism and solve the problem of skepticism.* As importantly of course, Berkeley also preserved the spiritual (Divine) foundation of human experience and of natural science. Brilliant!

**Hume (1711-1776)**

Berkeley was followed by David Hume who pushed the empiricist epistemological critique to the extreme, using Berkeley’s insights but turning it in a secular direction more characteristic of the modern mind’s skepticism following from Montaigne through Pierre Bayle and the Enlightenment.

Hume agreed with Locke’s general orientation. He also agreed with Berkeley’s criticism of Locke’s theory of representation. But he disagreed with Berkeley’s “idealist” position (sometimes known as “subjective idealism” to distinguish it from later “objective idealism” say of Hegel). Human experience was phenomenal only, of sense impressions, but there was no way to ascertain anything beyond sense impression, spiritual or material. Hume like Berkeley rejected Locke’s theory of re-presentation, but Hume also rejected Berkeley’s theory that ideas were objectively rooted in the Mind of God.

Hume makes a distinction between sensory impressions and ideas. Sensory impressions are the basis of knowledge and they come with force and liveliness that makes them unique. Ideas are faint copies of those impressions. Thus one can experience through the sense an impression of the color blue, and on the basis of this impression one can have an idea of that color whereby the color can be recalled. Now the question arises “what causes sensory impressions?” If every valid idea has a basis in a corresponding sensory impression, then to what impression can the mind point for its idea of causation? None! If the mind analyzes its experience without preconception, it must recognize that in fact all its presupposed knowledge is based on a continuous chaotic volley of discrete sensations, and that *on these sensations the mind then imposes its own order*.

The mind draws from its experience an explanation that in fact derives from the *mind itself*, not from experience. The mind cannot really know what causes the sensations, for it never experiences “cause” as a sensation. The mind experiences only simple impressions, atomized phenomena, and causality is clearly not one of those simple impressions. Rather it is through an association of ideas – which is only a “habit” of the human imagination – that the mind assumes that there is a cause for the sensation but this assumption in fact has no basis in sensory impressions themselves. All knowledge is then based on impressions in the mind, and we cannot assume that anything beyond the mind exists (the fact that we do assume that something external causes sense impressions is the result of a habit of mind - or what Hume called the “association of ideas”). The *causal* relation between external object and impression is never directly given in human experience. What happens is that the mind continuously receives impressions that suggest that these are caused by external objects existing continuously and independently of the mind. But the mind never experiences these objects directly (in other words the mind always mediate between ideas and object such that we can never be sure that these ideas are in fact like objects – mind as a mediating mechanism does not allow the inference to the external world). Thus, the mind may receive event A repeatedly followed by event B and on that basis the mind may project that A causes B. But the fact that A and B repeatedly follow each other (are impressions in close association, or “constant conjunction”) does not mean that the causal nexus projected between them has ever been perceived – in fact, Hume suggested that the “causal” projection/inference is an internal habit (accident) of the mind. In a sense the psychological conjunction of A and B is reified (projected as probably real) as A causes B.

Even ideas of space and time are not independent realities (as Newton had assumed) but are simply the result of experiencing co-existence or succession of impressions. Hence, space and time are only *ways* of experiencing objects. Hume claimed that all concepts originate in this way: the mind moves from the experience of particular impressions to the idea of relationship between/among impressions, and this relationship is then reified. But the idea (of relationship) is only the mind’s habit of associating impressions. *Thus, our knowledge of the world reflects the associative habits of mind and not the nature of reality.* Note here that the mind becomes the basis for knowledge – and hence the role of the study of mind (psychology) becomes all important – epistemology becomes psychology, or epistemology is naturalized!

It was part of Hume’s intention to refute the metaphysical claims of philosophical rationalism and its deductive logic (Descartes and Leibnitz). Hume held that there are two kinds of statements/propositions: One based on experienced impressions (concerning matters of fact and hence propositions that are always contingent – e.g., “it is a sunny day”) and the other based on pure intellect (concerning relations between concepts, and hence propositions that are always necessary – e.g., “all squares have four equal sides”). But the truths of pure reason (e.g., mathematics) are necessary only because they belong to a closed system that need make no reference to the external world (that is, they are true in virtue of their meaning) and hence are always analytical or tautological. So that analytical propositions can make no claims concerning metaphysics either of this world or of any other world. According to Hume, one cannot move from the statements of sensible of impressions to statements of the supersensible (since the only basis for such an inductive inference involves the claim to “causation” and causation is but constant conjunction of impression). Without impressions of concreteness and temporality, causality is meaningless. Hence, all rational metaphysical arguments as to what exists (e.g., Descartes and Leibnitz) which seek to make claims about reality beyond the temporal of contingent impressions have no epistemological grounding. Consequently, *metaphysics* (claims to know beyond sensations, e.g., God, spirit, mind, reason, but also cause, material object, etc.) is no better than mythology having nothing to say about the real world. Here we see the displacement of 2000 yrs of metaphysics (reason able to grasp the way things really are/true) by epistemology (the question of how we could possibly know any claim to what is real/true).

But for the modern secular mind Hume’s critical analysis has a more disturbing consequence still, one that undermines empirical science (and hence the “new science”) altogether. The reason is that empirical science is based on induction (from the bottom up; that is, by way of the sense/perception) and Hume has just demonstrated that induction has no certainty. The move from particulars of sense impressions to universal certainty of concepts involves cause, and cause is merely constant conjunction (subjective or psychological and hence only probable). In this context science is possible but it is a science of the phenomenal only, of appearances registered in the mind giving only subjective certainty, determined not by what is real/nature but by what is in the mind - psychology. *One can appreciate the importance of “empiricism” (quite apart from its scientific status) for the emergence of psychology as the discipline that deals with epistemology, and of epistemology as replacing metaphysics.*

It is paradoxical and ironical that Hume’ philosophy began with the intention of applying rigorous Newtonian “experimental” principles of investigation to human beings (inquiring scientists) in order to bring the successful empirical methods of the “new science” to a science (epistemology) of mind (human beings), but the ended up by *casting doubt on the objective certainty of empirical science altogether.* If human knowledge is based on empiricism (sense impressions and association) then induction can not be justified and we can never have certain knowledge of the world (and certainly not knowledge beyond the world –of God, immortality, human freedom, etc.; that is, metaphysics).

With Hume the long developing empiricist stress on sense perception, from Aristotle and Aquinas to Ockham, Bacon, and Locke culminated in the extreme. *Only the chaos of sense impressions exists and any order that these may seem to possess is imposed arbitrarily (habitually) by the mind.* Going back to Plato’s distinction between “knowledge of reality” and “opinion of appearances”, Hume held that all knowledge is merely opinion (*doxa*). Whereas Plato held sense impressions to be faint copies of Ideas, Hume held ideas to be faint copies of sense impression. In the long evolution of the Western mind from the ancient idealists/realists to modern empiricists, the basis for what is “real” is now entirely reversed. Sense experience, not ideal apprehension, was the standard of truth even as that standard (as a standard of truth) with Hume was is entirely problematic and hence skeptical/probabilistic.

Locke had retained some faith in the capacity of the human mind to grasp, however imperfectly, the general outline of the external world by means of his “combining operations”. But for Hume not only was the human mind less than perfect, it could never claim access to reality (hence truth) apart from the “habits” of (order imposed by) mind. If nothing was in the mind that was not first in the senses, and if all valid ideas were derived from sense impressions, then our knowledge of the world can only ever be problematic/probable because that knowledge could never be simply derived from sense impressions. Note what is at stake here is precisely Descartes’ concern with the question of “certitude”/truth (of the “new science”).

Pursuing this psychological analysis of human experience still further, Hume concluded that the mind itself was nothing but a bundle of disconnected sense impressions, without valid claims to substantial unity, continuous existence, or internal coherence, let alone objective knowledge. All order and coherence, including that leading to the idea of the “Self” (consciousness?) were simply mind-constructed fictions. Human beings required such fictions in order to live (adapt, survive), but there was no way to substantiate them epistemologically (philosophically).

Berkeley held that there was no necessary material basis for experience; but he was able to claim that the mind as well as the world had a certain independence derived from the mind of God. But Hume’s secular skepticism rejected even this much. There was no God, no order, no necessity, no substantial existents, no personal identity, no real knowledge – *all was contingent, constructed, and merely probable.* It was this *empiricist skepticism* of Hume that was to provoke Immanuel Kant’s philosophy in the 18th c. as the central one for the modern era.

**Kant**

The intellectual challenge that Kant faced in the second half of the 18th c was an impossible one:

(1) he had to reconcile the claims of the “new science” to genuine certain knowledge of the world and the claim of philosophy (epistemology) that experience could never give rise to such certain knowledge; and

(2) he had to reconcile the claim of religion that man was morally free and the claim of science man nature, including man, was determined by necessary (mechanical) laws.

Note that the two endeavors are closely connected. If the claims of science can ever only be probable as (Hume’s) empiricist philosophy argues, then presumably the deterministic laws of science are only probable, and then just maybe there is human freedom as religion claims is necessary for man to be moral. But the claims of science did yield knowledge of the world in a manner never before attained and, hence, the conflict Kant faced was between science and religion with philosophy playing a kind of “spoiler’s” role.

Kant’s effort in doing so was complex, brilliant, and had consequences for the remainder of the 19th and 20th centuries to this very day.

Kant too was intimately acquainted with the Newtonian “new science” and he had no doubt that this science brought certain knowledge. Kant, following Hume, had come to distrust all rationalist metaphysics as making absolute claims about reality, and also was profoundly impressed by Hume’s claim that empirical science could not meet the standards of certainty it clearly aspired to and that Kant believed science had attained.

It was, as Kant writes, Hume who awoke him from his “dogmatic slumbers” (i.e., Kant’s long training in the German rationalist school of Wolff who was Leibnitz’ systematizer). Kant came to see that man could know only the phenomenal world (and that all rationalist metaphysical claims concerning nature and universe went beyond experience and so were unfounded). All proposition of pure reason (rationalism) only led to contraries/contradictions. Whenever the mind tries to know things beyond experience – such as God, human freedom, the immortality of the soul, the infinity of the universe – it found itself caught up in illusions or contradictions. The history of metaphysics shows no progress whatsoever (in this he might have agreed with Hume). The mind required empirical evidence in order to claim to have knowledge. But God, freedom, immortality of the soul, infinity of the universe, genes and atoms were not empirical phenomena – metaphysics therefore went beyond knowledge (that is rationalist metaphysic went beyond the limits of human reason – so that human reason had limits in what it could “know” as true).

Of course Hume’s rejection of metaphysics, and his claim that all knowledge depends on sense impressions, also undermined the certainty of (the truth) of Newtonian science. But Kant was convinced that Newton’s and Galileo’s experimental science (the “new science”) did yield certain knowledge (contra Hume) on risk that otherwise we would be beset by an endless skepticism. **So Kant was confronted by an either/or: either Newton (true knowledge) or Hume (empiricist skepticism). If Hume is correct and there was no certain knowledge and the question then arises how it is that Newton succeeded. How could Newton have come to certain knowledge when the only possible knowledge, as Hume demonstrated, is merely probable?**

Kant wrote much but his main three works were three *Critiques* – First, *Critique of pure reason*, Second, *Critique of practical reason*, and Third, *Critique of judgment*.

The *First Critique* was Kant’s effort to try to reconcile Newton’s certain science and Hume’s skeptical empiricism, and in doing so to resolve the modern epistemological problem between empiricism (Locke, Berkeley, and Hume) which rejected rationalist metaphysics, as well as the epistemologically naïve certitude of Newtonian science.

The clarity and strict necessity of mathematical truths had long provided the rationalists (Descartes, Spinoza, and Leibnitz) with the assurance that in a world of modern doubt the human being had at least one solid basis for certain knowledge; reason/thinking. In fact, Kant himself had long been convinced that natural science was scientific to the extent that it approximated the ideal of mathematics (certitude). Thus, mathematics gave observation its certainty. Yet Kant had come to appreciate that extending mathematical reasoning to metaphysics could only lead to contradictions. Only within the bonds of sensory experience, as in natural science, was mathematical reasoning patently successful and yielded certitude of knowledge.

However, we have seen that because natural science relies on observation (the senses) it was also open to Hume’s criticism that all knowledge is contingent, and its apparent necessity only *psychological*. Kant had to agree with Hume’s epistemological argument and so had to conclude that even the certain laws of Euclidean geometry could not have been derived from observation. Yet Newton’s certain science was based on Euclidean geometry! But if the laws of mathematics and logic derived not from observation but from the human mind then how could they pertain to the natural world (of the senses, of observation)?

Rationalist like Descartes had assumed a mind-world causal interaction (or in Leibnitz case, a harmony which is why mathematics/reason applied to the world), but Hume’s critique now made this assumption (which Locke held and borrowed from Descartes) very unlikely. Nevertheless, the mind-world correspondence was seemingly vindicated in Newtonian science – a science of which Kant was certain.

What then was Kant’s solution (to the standoff between the certainty of Newtonian science and the skepticism of Hume’s empiricism)?

Kant proposed that the mind-world correspondence (assumed by the rationalists and by Newton’s “new science”) was vindicated in natural science. *But that the word “world” was not the naïve world of scientific observation but was the “world” as ordered/constructed by the mind.* So that for Kant the mind was not passive but active (here the bells of Leibnitz) in its structuring activity of sense data, and that the “world” is therefore precisely as it conforms to the structures of the mind. The world of science corresponds to the principles of mind precisely because the naïve, experienced, world is always already organized according the structures of mind. Cognition of the world is channeled through the mind’s categories. So the correspondence between mind and world is correct but it is correct because the world is always already structured by the mind. The necessity and certainty of scientific knowledge (Newton’s “new science”) of the world is not knowledge of a world (machine) independent of mind but of a world already permeated by mind (note the similarity her with Leibnitz). Hence, causality and necessity of knowledge of the world is possible because the world is already always the world constructed by the mind. Knowledge of the world is therefore never merely a matter of sense data/impressions/observation alone but of these *as structured by the mind*. The laws of science are the laws of the mind-structuring-sense-data. Hence the correspondence between mind and world is not the result of the mind conforming to the machine of the world but the world conforming to the structuring activities of the mind (presumably below the level of our awareness).

How did Kant arrive at this epoch making conclusion?

He began by noting that if all the contents of experience were separated off from mathematical judgments, the ideas of space and time still remained. This meant that all experience (of the senses) is located automatically in a framework of spatial and temporal relations. He called space and time “*apriori forms of human sensibility*” in the sense that they condition all that is apprehended through the senses. Thus, mathematics could accurately describe the empirical world because mathematical principles necessarily involve a context of space and time, and space and time lay at the basis of, or make possible, all sensory experience of the world. Space and time are presuppositions of, conditions for, experience (hence, they are *apriori*). Yet space and time cannot be known to exist in nature independently of mind, but neither can the world be known by the mind without space and time. Thus, space and time cannot be said to belong to the world-in-itself; rather, they are the conditions for perceiving/knowing the world in experience.

From an epistemological perspective, space and time are in the nature of “perception” (mind-world), and are not ontologically part of the nature of thing-in-themselves. (Note here that for Kant, the naively experienced/observed “world/universe is already always a “product” of the mind.)

Because mathematical propositions are based on direct intuition of spatial relations, they are apriori constructed by the mind and not derived from sense experience, and yet they are valid for experience which by necessity conforms to the apriori form for space. So while pure reason inevitably gets involved in contradictions if it attempts to apply its ideas to the world as a whole (to determine what is true part and beyond all possible experience – as in metaphysics, e.g., is the universe infinite or finite in time and space), when it comes to the *phenomenal* world of experience, time and space are not just applicable concepts they are rather inherent components of all human experience of the world.

Furthermore, analysis also reveals that the structure of mind is such that the events it perceives in space and time are subject to other principles as well, namely the *categories of understanding* such as “causation”. These categories lend certainty to scientific knowledge. Thus, all events in the phenomenal world (i.e., constructed world of mind) are causally related and hence science can proceed. The mind does not derive cause and effect from observation (as Hume also noted) but the world as experienced is already a world of causes and effects (as categories of understanding). So too with other categories of understanding such as substance, quantity, and relation, without which the mind could not comprehend the world, these are *apriori* principles of mind and serve as the framework of human perception of the world. Our experience would be chaotic and formless without the categories of understanding (*synthetic apriori).* *Experience* depends then on both *sensibility* and *categories of understanding*. The apriori categories serve then as an absolute condition of possibility for experience. The categories are apriori yet empirically applicable – and only empirically applicable, not metaphysically – fore the only world we can know is the *phenomenal world* (i.e., we can never know the world as it is in and of itself). That is the world is always only there relative to human beings (sensible intuition and the categories of understanding). Knowledge of the world is restricted to the effect sensible things have on us, and these appearances are always already structured by the perceiver/knower.

Therefore the mind never can experience what is out-there apart from the mind as if the mind could simply “mirror” objective reality; rather, reality is necessarily of human making. The world-in-itself is something we can only *think* about but never *know*.

The order we perceive in the world is therefore an order grounded in the mind: the world is forced to obey the mind (note that Kant was a “rationalist” even if a very different one from Descartes and Leibnitz). All sensibility is channeled through the filter of apriori human structures and therefore we can gain certain knowledge of the world (Kant here supports Newton’s science) but not because we are able to grasp the world-in-itself but because the world we come to know is one that is already saturated with the organization of mind. What we know is this organization (the world as experienced) and not the world-in-itself (which we cannot know and which Kant, in contrast to the phenomenal world, called the noumenal world). Knowledge/certitude is then possible because what that knowledge is of, is the phenomenal world already always structured by mind.

Kant criticized Leibniz’ rationalism for believing that reason alone (without sensibility) can determine what is real (since Kant maintained that knowledge requires sensibility of particulars), and Kan also criticized Locke and the empiricists for believing that sense impressions alone (without apriori categories) could lead to knowledge (since Kant maintained that particulars of sense are meaningless without apriori concepts). Locke was correct to deny innate ideas (in the sense of mental representations of physical reality) but Locke was wrong to deny innate formal knowledge. ***Just as thought (reason) without sensation is empty so sensation without thought is blind.*** Only understanding and sensibility together can give us valid knowledge of the world as experienced.

For Kant, the division that Hume made between the pure intellect (necessary but tautological propositions) and pure sensation (factual but contingent propositions) required a third more important concept involving both functions (sensibility and reason: synthetic apriori propositions). Without this third kind of proposition combining both reason and sensibility there could be not certain knowledge.

Hume had shown that empiricism is necessarily accompanied by uncertainty and Kant agreed that there can be no knowledge based on sensation alone. But Kant moved beyond Hume in recognizing that the history of science had progressed on the basis of concepts not derived from experience/observation alone but concepts that were already imbedded in observation/experience. Newton and Galileo theories were not just derived from empirical observation but from observations that were already structured by the human mind (I already noted that Galileo and Newton depended on the mathematics). One cannot get universal laws from mere observation of nature (like a pupil waiting for answers), but only by putting to nature shrewd questions (like a judge) that will be deliberately and precisely revealing. Science’s answers derive from the same source as its questions: human beings inquiring.

The questions scientists put to the world do require experimentation (to “test” nature) but “testing nature” can only come by way of *questions* posed to nature. The case of science reflects the more general case of all human experience. The mind can know with certainty only that which in some sense the mind has already put into the experience of nature. Knowledge then does not conform to things but things conform to human knowledge. (i.e., the mechanism of nature is already a construction of mind). Certainty is possible but *only* in the phenomenal world as it is that phenomenal world which is already the product of the mind’s order. This is Kant’s “*Copernican revolution*”: just as Copernicus explained the perceived movement of the heavens by the movement of the observer, so Kant explained the perceived order of the world by the order of the observer.

By confronting the seemingly irresolvable dialectic between Newtonian certainty and Humean (empiricist) skepticism, Kant demonstrated that our observations of the world are never neutral or free from apriori conceptual judgments. Here the Baconian ideal of empiricism as totally free from anticipations is rejected as impossible. Such freedom or neutrality works neither in science nor in daily experience. Mind is not passive but creative in science but also in everyday life. The world is not simply perceived as it is (re-presented) and then correlated with concepts, rather all perceived particulars are already permeated by concepts in order to be identified as particulars at all. Neither empiricism (without apriori concepts) nor rationalism (without sensory evidence) can constitute a viable strategy for epistemology.

*Kant redefined the task of the philosopher. Philosophy was not metaphysics in the traditional sense of determining what is real, but rather philosophy was the analysis of the* ***limits of human reason.*** *Reason cannot decide apriori on matters transcending experience but reason can determine those conditions of possibility that enable human knowledge – and those conditions belong to the structure of mind.*

**Consequences of Kant**

Now the epistemological consequences of Kant’s “Copernican revolution” were not without some disturbing features.

Kant had tied the knower to the known (they belong together and so Kant can lay claim to being a “phenomenologist”, a term later introduced first by Hegel and the Husserl), but the “known” is no longer objective reality, or the object-in-itself. It is as if the knower and known are together in a solipsistic prison. As Aquinas and Aristotle had already claimed, we know because we judge things through the medium of apriori principles, but for Kant we have no way of adjudicating whether these principles pertain to being outside of the human mind. [These principle are merely “necessary” if we are to account for our experience of the world.] In Aquinas we have the *lumen intellectus agentis*, the divine light of the active intellect, but in Kant there is only the “subjective” reality (of reason) of such principles (as conditions of possibility for knowledge). One might argue that Kant’s “critical rationalism” (concepts without sense are empty) and Hume’s “critical empiricism” (sense without concepts is blind) places limits on knowledge (***we cannot know anything transcendent-metaphysical, and we cannot know the world-in-itself***).

In retrospect then Kant’s (as well as Copernicus’) revolutions were fundamentally ambiguous: they were liberating and they were diminishing (of humankind claim to “know”). That is, both awakened within humankind an adventurous reality, and both displaced man from the center of the cosmos in case of Copernicus, and from genuine knowledge of the cosmos in case of Kant. Copernican cosmic alienation (man is nothing in this vast universe) was compounded by Kant’s epistemological alienation (man cannot ever come to know that vast universe except as it appears – phenomenal world).

However, one can also argue that Kant reversed the Copernican revolution. If Copernicus displaced man from the center of the cosmos, Kant placed man back into the center by virtue of man’s role in determining “knowledge” of the world. Of course, by making man the center of this “knowledge” of the cosmos, Kant only recognized that man could no longer directly know the intrinsic order of the cosmos (this is Kant’s rejection of rationalist metaphysics, say of Descartes or Leibnitz). Kant in a way “humanized” science (all knowledge is empirical but dependent on human sensibility and apriori principles of mind) and in doing so he also removed from scientific knowledge all certitude that this knowledge is of the machine of “nature” as it is in-itself (as both Bacon’s, the empiricist, and Descartes’, the rationalist, original program of modern science had assumed). So notwithstanding that Kant gave the mind an ennobling central status in the construction of human knowledge, in doing so he made all knowledge dependent on human subjectivity (reason) – man could know the cosmos but only human-known cosmos, not *the* cosmos (in-itself).

*Thus Kant limited the role of reason in what reason could know (in this sense he rejects metaphysics) even as he also gave reason (man) an essential role in coming to “know”, in coming to truth. Kant’s Copernican revolution thus has two sides: (1) in his defense of Newtonian science he proposed apriori forms and categories that would ensure certainty of knowledge (against empiricists skepticism), and (2) by restricting knowledge to the phenomenal world (not things-in-themselves) he restricted the capacity of human reason and* ***so made room for religious and moral truth (which are not empirical and hence could not be known).***

By restricting reason to the phenomenal, Kant freed religion and morality from the intrusion of reason and its effort to establish certain knowledge in these domains. Not only did he in doing so counter rationalists’ effort to ground faith in knowledge, but he also countered science’s mechanistic world view which would have its determinism deny the freedom of the will which is essential to morality. By restricting the competence of science to the phenomenal world, Kant opened up the possibility of faith (religious belief and moral responsibility). Science (reason) in having been limited to the phenomenal cannot rule out/on the possibility of religious/moral truths.

Thus, Kant held that one cannot “know” that God exists, yet one must nevertheless believe that God exists in order to act morally. Hence, belief in God is justified ***morally and practically***, even if it is not (theoretically) knowable but a matter of faith. Ideas of God, the immortality of the soul, and human freedom (freedom of the will) can not be known in the same way that we come to know the laws of nature. Yet for all that one cannot do one’s duty, be responsible, or believe in life after death, unless there is a God, freedom exists, and the soul is eternal. These are ideas *which must be believed as true*, so Kant’s argument goes, for otherwise there is no moral existence. With the advance of science, the modern mind could no longer base religion on a rational cosmological or metaphysical foundation, but instead it could base religion in the structure of the human situation itself (practical knowledge), and in this way Kant, following Rousseau and Luther, defined the direction of modern religious thought. Man was inwardly free from the lawfulness of the external phenomenal (scientific) world and this was the true ground of religious meaning.

Man views himself then under two different and contradictory aspects: (1) phenomenally man is subject to the laws of nature, and (2) noumenally/morally man is a thing-in-itself which can be thought (but not “known”) as being free, immortal, and subject to God.

In this position, the Newtonian and Humean influences on Kant were countered by Rousseau who stressed feeling over reason in religious experience appealing to Kant’s German pietistic roots. The inner experience of moral duty, the impulse to selfless moral virtue, permitted Kant to transcend the scientific worldview of the modern mind that had reduced the world to appearance and mechanistic necessity. ***Kant in this way rescued faith from scientific determinism*** (in the same way as he had rescued scientific knowledge from empiricist skepticism).

But of course he rescued both at the cost of their disjunction, and by restricting knowledge to the phenomenal world and subjective certainties (reason). In his heart it was clear that Kant believed that the laws of the starts and planets were fundamentally harmonious with the moral imperatives he experienced: he writes *“Two things fill the heart with ever new and always increasing awe and admiration: the starry heavens above me and the moral law within me”.* But Kant also was well aware that he could not *prove* this harmony (*a la* Leibnitz), and so the Cartesian dichotomy between mind and material cosmos took on a new and deepened form in Kant. *That is for Kant this dualism was now place inside man him/herself, between man’s phenomenal being and his noumenal moral being.*

It was to be Kant’s fate that the power of his epistemological critique outweighed his positive clams. (1) Thus, ironically the room he made for faith (by severely limiting what reason could know) began to resemble a vacuum since faith had now lost its support in reason and, of course, also in empirical science. Faith became a “psychological” option. (2) Thus, ironically the effort Kant made to assure the certainty of scientific knowledge (apriori principles) which was at the cost of a mind-independent necessity/cause, lost further support when in the 20th c the Euclidean and Newtonian categories which Kant assumed absolute (apriori principles of reason) were overturned by the new physics. If Kant was wrong about the “new science” (because Newton and Euclid were wrong) then Kant’s effort to save the “new science” from skepticism (both rationalist and empiricist) in his newly proposed critical rationalism/realism was also doomed to fail….we did not need a distinction between the phenomenal and noumenal world!

With this distinction, Kant had in effect pulled the rug out from under any human pretension to know the world-in-itself. Subsequent developments in the Western mind - the deepening relativism introduced by Einstein, Bohr, and Heisenberg, but also by Darwin, Marx, and Freud; by Nietzsche, Dilthey, Weber, Heidegger, and Wittgenstein; by Saussure, Levi-Strauss, and Foucault; by Godel, Popper, Quine, and Kuhn – radically magnified this effect, altogether eliminating any ground for subjective certainty that Kant still felt. All human experience was structured by unconscious principles and none of these were timeless or absolute. Rather these principles varied with culture, era, class, language, persons, and existential contexts. In effect, after Kant (in the 19th and 20th centuries) science, religion, and philosophy all had to find their *own grounds* for justification for none could claim access to the universe’s intrinsic nature (and Kant’s effort to limit reason in what it could accomplish also vanished – there was no limit on what scientific inquiry could accomplish vastly extending the limits Kant set for it in the *First Critique*.

**The decline of metaphysics**

The course of modern philosophy changed under the impact of Kant’s epochal distinctions. At first, Kant’s successors in Germany pursued his thinking unexpectedly in the idealist direction. In the Romantic climate of European culture in the late 18th and early 19th c, Fichte, Schelling, and Hegel suggested that Kant’s cognitive categories of reason (of mind) were in some sense ontological categories of the universe – that is, human knowledge did not point to divine reality but was ***itself*** that reality, and on that basis constructed a metaphysical system with a universal Mind that revealed itself through human reason/activity [a much more ambitious and radical claim than Leibnitz could ever imagine or accept given his Christian faith in a transcendent God.] For the idealists, Kant’s “transcendental ego” (the ego that legislates the categories and heuristic unifying principles on experience to yield knowledge) could be radically extended as an *Absolute Spirit* constituting all reality. Thus, if Kant held that it was the mind that supplied the form of experience (with the content given by sensibility), his idealist successors held that both form and content were determined by an all-encompassing Mind so that nature became an image or symbol of Mind rather than an independent existent.

Of course, among the scientifically minded modern thinkers, the speculations of the idealists could not command widespread acceptance, especially after the 19th c., for these speculations were not empirically testable, nor did idealism fit the scientific tenor of an objective and ontologically distinct conception of the universe/nature as machine. Scientific materialism, the opposite metaphysical idealism, seemed to better reflect the quality of contemporary scientific evidence. Yet materialism also seemed to assume an ultimately untestable substance – matter, rather than spirit – and materialism also failed to account for the subjective phenomenology of human consciousness and man’s sense of personal volition very different from the unconscious impersonal external world. But because materialism, or at least naturalism, the position that all phenomena could ultimately be explained by natural causes, appeared most congruent with the scientific account of the world, it constituted a more compelling framework than did idealism. Still there was much in materialism that did not seem acceptable to the modern sensibility – such as its apparently incompleteness, the uncertainty of scientific knowledge, ambiguities of scientific evidence, or because of various conflicting religious or psychological factors.

The other available metaphysical position (apart from idealism and materialism) was some form of dualism reflecting either the mind-body dualism of Descartes or else the phenomenal-noumenal dualism of Kant for this reflected the disjunction between objective physical world and subjective human awareness. With increasing reluctance of the modern mind to postulate any transcendent (divine) dimension, the nature of the Cartesian-Kantian position (both of which, as we have seen, postulated such a transcendent dimension) was to prevent any coherent metaphysical position in the 19th and 20th centuries.

Given the discontinuity of the modern experience (e.g., between man and world, and mind and matter), as well as the epistemological quandary implied by this discontinuity (how can man presume to “know” what is essentially different from his own awareness), metaphysics necessarily lost its preeminence in philosophy. *Instead, one could investigate the world as a scientist, or human experience by way of introspection, or one could avoid the discontinuity by admitting the human world’s irresolvable ambiguity and contingency, arguing instead for its existential and pragmatic transformation through a human act of will.* A universal order rationally intelligible to the contemplative observer was now precluded and, hence, modern philosophy, progressing in accord with Descartes and Locke, eventually undercut its own traditional reason-for-being.

While from one perspective, the problematic entity for the modern human being was the external world in its dehumanized objectification, from another perspective the human mind itself (the cognitive mechanism) could no longer be fully trusted. The reason is that man could no longer assume that his mind’s interpretation of the world was mirror-like (of the way things actually are). It was now possible that the mind itself was alienating (not just the world). Thus, Freud and the depth psychologists now shed doubt on the rational nature of mind.

From Hume and Kant through Darwin, Marx, and Freud an unsettling conclusion became inescapable*: human thought was determined, structured, and distorted by a multitude of unsettling factors – innate but non-absolute mental categories, habits, history, culture, social class, biology, language, imagination, emotion, personal unconscious, and collective unconscious.* In the end the human soul/consciousness could not be counted on as an accurate judge of “reality”. The original Cartesian certitude (*cogito ergo sum*) that served as the foundation of modern confidence in “reason” was no longer defensible.

As a result philosophy changed as well, concerning itself now largely with the clarification of *epistemological problems*, with an analysis of language, with the philosophy of science, or with existential/phenomenological analysis of human experience. While there is a lot of disagreement among the different schools of philosophy in the 20th c they share in one crucial point:***it is impossible to apprehend an objective cosmic order with human intelligence****.* This point of agreement is shared by such diverse philosophers as Russell, Heidegger, and Wittgenstein:

1. Because only empirical science could render provisionally corroborated knowledge about the contingent natural world of sense experience, all unverifiable and untestable metaphysical claims concerning the world as a whole were without meaning (this position became know in the 20th c. as ***logical positivism***).

2. Because human experience is all that man could know – finite, conditioned, problematic, and individual – human subjectivity and the very nature of being human necessarily permeated, negated, or made inauthentic any attempts at an impartially objective world (this position became known in the 20th c. as ***existentialism and phenomenology****).*

3. Because the meaning of any term could be found only in its specific use and context, and because human experience was fundamentally structured in language, and yet no direct relation between language and an independent deeper structure in the world could be presumed, philosophy should concern itself only with the *therapeutic clarification of language* without any commitment to a particular abstract conception of reality (this became known in the 10th c. as ***linguistic analysis or analytic philosophy***).

On the basis of these and other converging insights, the belief that the human mind could attain or should attempt any objective metaphysical overview as traditionally understood was virtually relinquished in the 20thc. With a few exceptions, philosophy was directed towards analysis of linguistic problems, scientific and logical propositions, or the raw data of human experience, all without any metaphysical implications in a classical sense. If metaphysics still had a viable function (aside from being the handmaiden of scientific cosmology) it could only involve the analysis of those factors that structured human experience: continuing Kant’s work but relativistically by examining historical, social, cultural, linguistic, existential, and psychological factors that affect “knowing”. But all efforts at metaphysical cosmic syntheses were rejected.

Philosophy then became increasingly concerned with technical, methodological, and logical niceties, and philosophy became increasingly specialized as an academic discipline having nothing to say to the lay person. Semantics became more important to philosophical clarity than universal speculations, but for most laypeople semantics held no interest. Philosophy’s traditional mandate and status had been obviated by its own development: There was no all-encompassing or transcendent or intrinsically “deeper” order in the universe to which the mind could lay legitimate claim….

**The crisis of modern science**

With both religion and philosophy in such a problematic condition, it was science alone that seemed to rescue the modern mind from pervasive uncertainty. Science achieved a golden age in the 19th and early 20th c with extraordinary advances in all its major branches, with widespread institutional and academic organization of research, and with the practical applications rapidly proliferating on the basis of systematic linkage between science and technology. The optimism of the age was directly tied to confidence in science and its power to improve indefinitely the state of human knowledge, health, and general welfare.

Religion and metaphysics continued their slow and long decline as science’s progress was accelerating. Its claim to valid knowledge of the world, even subject to post-Kantian idealist critique, continued unquestionably. In the face of science’s supreme cognitive effectiveness and rigorous impersonal precision of its explanatory structures, religion and philosophy were compelled to define their position relative to science (just as in the medieval era, science and philosophy were compelled to define themselves relative to religion). For the modern mind, it was science that presented the realistic and reliable worldview even as that worldview was limited to technical knowledge of natural phenomena and despite its lingering existentially disjunctive implications (mind-body, person-world).

But two developments radically challenged science’s cognitive and cultural status, one theoretical and internal to science, and the other pragmatic and external.

1. The theoretical challenge internal to science occurred when the classical Cartesian-Newtonian cosmology gradually broke down under the cumulative impact of several astonishing developments in physics. Beginning in the late 19th c with Maxwell’s work with electromagnetic fields, the Morley-Michelson experiment, and Becquerel’s discovery of radioactivity, then in the early 20th c with Planck’s isolation of quantum phenomena and Einstein’s special and general theories of relativity, and culminating in the 1920s with the formulation of quantum mechanics by Bohr, and Heisenberg, the long-established certainties of modern science were radically undermined. By the end of the third decade of the 20th c virtually every major postulate of the earlier scientific conception (of the “new science”) had been overturned:

The atoms as solid indestructible and separate building blocks of nature,

Space and time as independent absolutes,

The strict mechanistic causality of all phenomena,

The possibility of the objective observation of nature,

All these changes fundamentally altered the scientific world image and no one felt this more than the physicists themselves. Confronted by contradictions at the sub-atomic level, Einstein wrote: *“All my attempts to adapt the theoretical foundation of physics to this knowledge failed completely. It was as if the ground had been pulled out from under one, with no firm foundation to be seen anywhere upon which one could have built”.* Heisenberg similarly realized that the *“foundations of physics have started moving… and this motion has caused the feeling that the ground would be cut from under science”.*

Thus, solid Newtonian atoms were now discovered to be largely empty. Hard matter was no longer the fundamental substance of nature. Matter and energy were interchangeable. Three-dimensional space and uni-dimensional time had become relative aspect of a four-dimensional space-time continuum. Time flowed at different rates for observers moving at different speeds. Time slowed down near heavy objects and under certain circumstances even stopped. The laws of Euclidean geometry no longer provided the universal structure of nature. The planets moved in their orbits not because they were pulled towards the sun by an attracting force acting at a distance, but because the very space in which the planets moved was curved. Subatomic phenomena displayed a fundamentally ambiguous nature, observable both as particles and waves. The position and momentum of a particle could not be measured simultaneously. The uncertainty principle radically undermined and replaced strict Newtonian determinism. Scientific observation and explanation could not proceed without affecting the object observed. The notion of substance dissolved into probabilities and “tendencies to exist”. Non-local connections between particles contradicted strict causality. Formal relations and dynamic processes replaced hard discrete objects. The physical world of the 20th c physics resembled, in Sir James Jean’s words**, “*not so much a great machine as a great thought”.***

The consequences of this extraordinary revolution were again profoundly ambiguous. On the one hand, the continuing modern sense of intellectual progress (leaving behind ignorance of the past eras while reaping the fruits on new technology) was bolstered. Even Newton could be corrected and improved upon! Moreover, for those who regarded the mechanistic and materialistic universe as antithetical to human values, the quantum revolution represented an unexpected and welcome broaching of new possibilities. Matter’s hard substantiality had given way to a new spiritual interpretation. Freedom of the human will was given new force if subatomic particles were indeterminate. The principle of complementarity governing waves and particles suggested a broader application in a complementarity between mutually exclusive ways of knowledge, like science and religion. Human consciousness (at least observation and interpretation) was given a more central role in the larger scheme of things with a new understanding of the role of the subject’s influence on the observed object. The deep interconnectedness of phenomena encouraged a new holistic thinking about the world with many social, moral, religious and implications. Increasing numbers of scientists began to question modern science’s pervasive, if often unconscious, assumption that the intellectual effort to reduce all reality to the smallest measurable components of the physical world would eventually reveal that which was most fundamental in the universe. The reductionist program of “scientific materialism”, dominant since Descartes, now appeared myopically selective, and likely to miss the most significant nature of things.

Of course, such implications and inferences were neither universal nor even common among physicists. Modern physics was perhaps open to a spiritual interpretation, but it did not compel such an interpretation. Nor was the larger population conversant with the arcane conceptual changes wrought by the new physics. Moreover, the revolution in physics not did affect comparable theoretical reformulations in the other natural and social sciences (even as their theoretical programs were largely based on the mechanistic principles of physics). Nevertheless, many did feel that the old materialistic worldview had been irrevocably challenged, and that the new scientific models of reality offered possible opportunities for fundamental rapprochement with humanistic aspirations.

Yet these ambiguous possibilities were countered by other more disturbing factors. To begin with there was no coherent conception of the world comparable say to Newton’s *Principia* that could theoretically integrate the new data. Physicist showed no consensus as to how the new data should be integrated with any conception of the ultimate reality of things. Conceptual contradictions, disjunctions, and paradoxes were everywhere and stubbornly resisted resolution (Richard Feynman writes: *I can safely say that nobody understands quantum mechanics”.)* A certain irreducible irrationality (already recognized in the human psyche by Freud and others) now also emerged in the structure of the physical world. To this incoherence was added unintelligibility for the conceptions derived from the new physics were not only difficult for the layperson to comprehend, the presented seemingly insuperable obstacles to human intuition generally: a curved space, finite yet unbounded; a four-dimensional space-time continuum; mutually exclusive properties by the same subatomic entity; objects that were not really things at all but processes or patterns of relationship; phenomena that took no decisive shape until observed; particles that seemed to affect each other at a distance with no know link; the existence of fundamental fluctuations of energy in a total vacuum.

Moreover for all the apparent opening of science to a less mechanistic, less materialistic conception of the world, there was no real change in the essential modern dilemma: The universe was still an impersonal vastness in which man with his/her peculiar capacity for consciousness was still an ephemeral, inexplicable, randomly produced minutia. Nor was there any compelling answer to the looming question as to what ontological pretext preceded the “big-bang” birth of the universe. Nor did leading physicists believe that the equations of quantum theory described the actual world. Scientific knowledge was confined to abstractions, mathematical symbols, and “shadows”. Such knowledge was not of the world itself, a world that now seemed even more remote form the compass of human cognition.

So the contradictions and paradoxes of the new physics intensified the sense of human relativity and growing alienation that had emerged since Copernicus. *Modern man was being forced to question his inherited classical Greek faith that the world was ordered in a manner accessible to human intelligence.* P. W. Bridgman writes *“the structure of nature may eventually be such that our processes of thought do not correspond to it sufficiently to permit us to think about it at all… The world fades out and eludes us….We are confronted with something truly ineffable. We have reached the limit of the vision of the great pioneers of science, the vision, namely that we live in a sympathetic world in that it is comprehensible to out minds*” (see Huston Smith*, Beyond the post-modern era,* 1989).**What philosophy has already concluded now science also concluded. Reality may not be structured in a way that the human mind can objectively discern. Thus, incoherence, unintelligibility, and an insecure relativism compounded the earlier modern predicament of human alienation in an impersonal cosmos.**

When relativity theory and quantum mechanics undid the certainty of the Newtonian paradigm, science demonstrated (in a way that Kant as a convinced Newtonian could not have imagined) the validity of the Kantian skepticism concerning the human mind’s ability to know the world-in-itself. Because Kant was certain of Newtonian science, Kant had argued that the categories of human cognition congruent with Newton’s science were *absolute* and that these alone provided the basis for Newton’s achievement (and for human epistemological competence in general). This was Kant’s defense of Hume’s empiricist skepticism. But with the revolution in 20th c physics even this last certainty of Kant’s was lost. The fundamental Kantian aprioris (of space, time, substantiality, causality, etc.) were no longer applicable to all phenomena. Scientific knowledge, after Einstein, Bohr, and Heisenberg, was *limited and provisional*. Similarly, quantum mechanics revealed in unexpected fashion the radical validity of Kant’s thesis that the nature described by physics was not nature-in-itself but man’s relation to nature – nature exposed to human questioning.

What had been implicit in Kant’s critique (but obscured by the apparent certainty of Newtonian physics) now became explicit: Because induction can never render certain general laws, and because scientific knowledge is the product of human interpretative structures that are themselves relative, variable, and creatively employed, and finally because the act of observation in some sense produces the objective reality science attempts to explicate, the truths of science are neither absolute nor unequivocally objective.

*In the combined wake of 18th c philosophy and 20th c science, the modern mind was left free of absolutes, but also disconcertingly free of any solid ground whatsoever.*

This problematic conclusion was reinforced by the newly critical approach to the philosophy and history of science in the second half of the 20th c. influenced by Karl Popper and Thomas Kuhn. Drawing on the insights of Hume and Kant, Popper noted that science can never produce knowledge that is certain or even probable. Man observes the universe as a stranger, making imaginative guesses about its structure and workings. He cannot approach the world without such bold conjectures in the background, for every observed fact presupposes an interpretative focus. In science, these conjectures must be continually tested, yet no matter how many tests are successfully passed, any theory/explanation can never be viewed as but an imperfectly corroborated conjecture. At any time a new test could falsify it. No scientific truth is immune to such a possibility. Even the basic facts are relative, always potentially subject to reinterpretation in a new framework. Man can therefore never claim to know the essence of things. Before the virtual infinity of the world’s phenomena, human ignorance itself is infinite. The wisest strategy is to learn from inevitable mistakes (here the methodology of science begins to take on an evolutionary character).

While Popper maintained the rationality of science by upholding a fundamental commitment to the rigorous testing of theories and its fearless neutrality in the quest for truth, Thomas Kuhn’s analysis tended to undermine even this security. Kuhn agreed that all scientific knowledge required interpretative structures based on fundamental paradigms or conceptual models that allowed researchers to isolate data, formulate theories, and solve problems, but with reference to the history of scientific progress, Kuhn pointed out that the actual practice of scientists seldom conformed to Popper’s ideal systematic self-criticism by means of attempted falsification of existing theories. Thus, science typically proceeded by seeking confirmations of prevailing paradigms (gathering facts in the light of the paradigm, performing experiments on the basis of the paradigm, extending the range of applicability of the paradigm, further articulating the structure of the paradigm, and attempting to clarify residual problems concerning the paradigm), Thus, scientists seldom submit the paradigm to testing. Normal science attempts to interpret all data in conformity with the paradigm or else neglecting the data altogether. The nature of normal science it to validate the governing paradigm (even as this quest is often unconscious) and the paradigm acts as a lens through which all observations are filtered, and so the paradigm is maintained as the authoritative bulwark by common convention. Through teachers and texts, scientific pedagogy sustains the inherited paradigm and ratifies its credibility, tending to produce a firmness of conviction and theoretical rigidity not unlike education in systematic theology.

Kuhn also argued a historical thesis. Thus the gradual accumulation of conflicting data will produce a paradigm crisis and a new imaginative synthesis eventually wins scientific favor in a scientific revolution that is far from rational. This revolution (revolutionary science) depends as much on established customs of the scientific community, on aesthetic, psychological, sociological, historical factors, root metaphors and analogies, unpredictable imaginative leaps (Gestalt switches), and on dying an aging conservative scientists, as on disinterested tests and arguments. In fact the rival paradigms are seldom genuinely comparable; they are selectively based on differing modes of interpretation and hence different data sets. Each paradigm creates its own gestalt, so comprehensively that scientists working within different paradigms seem to be living in different worlds. Nor is there any common measure such as problem solving ability or theoretical coherence or resistance to falsification that all scientists will agree upon as a standard of comparison. What is an important problem for one group of scientists is not for another. Thus, for Kuhn the history of science is not one of linear rational progress moving towards an ever more accurate and complete knowledge of objective truth, but it is one of irrational shifts of vision in which a multitude of non-rational and non-empirical factors play a crucial role. Whereas Popper attempted to temper Hume’s skepticism by demonstrating the rationality of choosing the most rigorously tested conjecture, Kuhn’s analysis restored Hume’s skepticism.

*[Kuhn’s work (1962/1970) was an outgrowth of the history of science made a generation earlier by Alexandre Koyre and Frank Lovejoy. Also important was the work of Wittgenstein, as well as the logical empiricism of Rudolf Carnap and W. Quine. The widely accepted conclusion of that argument was a relativized Kantian position, one that cannot in the last analysis compute complex truths out of simple elements based on direct sensation because all such simple elements are ultimately defined by the ontology of a specific language, and there exists a multiplicity of languages, each with its own mode of construing reality. The choice of language in the end depends on one’s purposes and not on objective fact. This was an attack on inductivism.]*

With these philosophical and historical critiques and with the revolution in physics, a more tentative view of science became widespread in intellectual circles. Science was still patently powerful of course but scientific knowledge also became a relative matter: relative to the observer, physical context, scientific paradigm, social context, and theoretical assumptions. Moreover, science’s first principles might be overthrown at any point in the face of new evidence. Moreover by the latter 20th c the conventional structure of the other sciences, including Darwinian evolution, was coming under increasing pressure from alternative theories. Above all, the bedrock of the Cartesian-Newtonian worldview, for centuries acknowledged as the epitome of human knowledge, and still pervasively influential in the cultural psyche, had been shattered. The post Newtonian world order was neither intuitively accessible nor internally coherent – indeed there is scarcely any order at all.

1. Yet for all this, science’s cognitive status would still have maintained preeminence. Scientific truth might be increasingly esoteric and provisional, but it was a testable truth, continually improving, more accurate in its formulations, and practical in its technological progress: industry, agriculture, medicine, energy production, communication, transportation (technology). All provided evidence for science’s claims to viable knowledge of the world. Paradoxically, it was this same tangible evidence of progress that was to prove antithetical to the modern mind’s trust in the scientific tradition. Early in the 19th c already Ralph Waldo Emerson had warned that man’s technical achievements might not be unequivocally in his own best interests: “things are in the saddle and ride mankind”. By the turn of the 20th c just as technology was producing new wonders like the automobile, and the widespread applications of electricity, a few observers began to sense that such developments might signal an ominous reversal of human values. By the midst 20th c modern science’s ”brave new world” had started to become the subject of wide and vigorous criticism. Technology was taking over and dehumanizing man, placing him in a context of artificial substances and gadgets rather than live in nature, in unaesthetically standardized environments where means had subsumed ends, where industrial labor requirements implied the mechanization of human beings, where all problems were deemed soluble by technical research at the expense of genuine existential response. The self-propelling and self-augmenting imperatives of technological functioning were dislodging man and uprooting him from his fundamental relation to the earth. Human individuality seemed increasing tenuous, disappearing under the impact of mass production, mass media, and the spread of bleak and problem ridden urbanization. Traditional structures and values were tumbling. With increasing technological innovation, modern life was subject to unprecedentedly disorienting rapidity of change. Gigantism and turmoil, excessive noise, speed, and complexity dominated the human environment. The world of man was becoming as impersonal as the cosmos of his science. In this context, retaining any semblance of “humanity” seemed increasingly in doubt. The question of human freedom, and of man’s capacity to maintain mastery over his own creation, had become acute.

Compounding these “humanistic” critiques of science/technology were more disturbing signs of science’s untoward consequences. The critical contamination of the planet’s water, air, and soil, the manifold harmful effects on plant and animal life, the extinction of innumerable species, the deforestation of the globe, the erosion of topsoil, the depletion of groundwater, the vast accumulation of toxic wastes, the apparent exacerbation of the greenhouse effect, the breakdown of the ozone layer in the atmosphere, the radical disruption of the entire planetary ecosystem – all these emerged as direly serious problems within creasing force and complexity. Even from a short-term perspective, the accelerated depletion of irreplaceable natural resources had becoming an alarming phenomenon.

Dependence on foreign supplies of vital resources brought a new precariousness into global political and economic life. New stresses in the social fabric continued to appear – directly or indirectly tied to the scientific image – urban overdevelopment and overcrowding, cultural and social rootlessness, numbing mechanical labor, increasing disastrous industrial accidents, automobile and air travel fatalities, cancer and heart disease, alcoholism and drug addiction, mind-dulling and culture impoverishing television, film, and sports, growing levels of crime, violence, and psychopathology. Even science’s most cherished successes paradoxically entailed new and pressing problems as when medical relief of human illness and the lowering of mortality rates combined with technological advances in food production and transportation exacerbated the threat of global overpopulation. In other cases, advances in science presented new Faustian dilemmas such as are implied in genetic engineering, stem cell research, and reproductive technologies. More generally the scientifically unfathomable complexity of all relevant variables – whether global of local, in social systems or the human body, made the consequences of technological manipulation of those variables unpredictable and often pernicious.

Now all these developments reached an ominous climax when natural science and political history produced the atomic bomb. It seemed supremely, if tragically, ironic that the Einsteinian discovery of the equivalence of mass and energy, by which a particle of matter could be converted into an immense quantity of energy (a discovery by a dedicated pacifist reflecting a certain apex of human intellectual brilliance and creativity) precipitated for the first time in history the prospect of humanity’s self-extinction. With the dropping of the atomic bombs on Nagasaki and Hiroshima faith in science’s intrinsic moral neutrality (and unlimited power of benign progress) could no longer be upheld. During the protracted and global schism of the Cold War that followed, the numbers of unprecedentedly destructive nuclear weapons relentlessly multiplied until the entire planet could be devastated many times over. Civilization was now brought into peril by virtue of its own genius. The same science that drastically lessened hazards and burdens of humankind now presented the gravest menace to human survival.

The great succession of science’s triumphs and cumulative progress was now shadowed by a new sense of science’s limits, dangers, and its culpability.

Thus, the modern scientific mind found itself beleaguered on several fronts at once: (1) by epistemological critiques, (2) by its own theoretical problems arising in various fields, (3) by the increasingly urgent psychological necessity of integrating the human-world divide, and above all (4) by its adverse consequences and intimate involvement of planetary proportions. The close association of scientific research with political, military, and corporate establishments continued to belie science’s traditional self-image of detached purity. The very concept of “pure science” was now deemed illusory. The belief that the scientific mind had unique access to the truth of the world, that it could register nature like a perfect mirror reflecting an extra-historical, universal objective reality, was not only seen as epistemologically naïve, but also as serving either consciously or unconsciously specific economic and political agenda often aimed at social and ecological world domination. The aggressive exploitation of the natural environment, the proliferation of nuclear weapons, the threat of global catastrophe, all pointed to an indictment of science, and of human reason itself – humankind was in the thrall of self-destructive irrationality.

If all scientific hypotheses were to be rigorously and disinterestedly tested, then it seemed that the scientific worldview itself, the governing meta-hypothesis of the modern era, was being decisively falsified by its deleterious and counterproductive consequences in the empirical world. The scientific enterprise which in its earlier stages had presented a philosophical, cultural, religious, social, and psychological predicament now provoked a biological emergency. The optimistic belief that the world’s dilemmas could be solved by science and social engineering had been confounded. ***The West was losing its faith, not in religion this time, but in science and the autonomy of human reason.***

Of course, science was still highly valued and even revered. But science had also lost its untainted image of the *liberator of humanity*. Science lost its secure claim to virtual absolute cognitive reliability. It productions were not benign, its reductionist understanding of the nature (scientific materialism) was deficient, science was susceptible to political and economic bias, and its previously unqualified trustworthiness could no longer be confirmed. On the basis of these several interacting factors, something like Hume’s radical epistemological skepticism mixed with a relativized post-Kantian apriori structures seemed publicly vindicated. After modern philosophy’s acute epistemological critique, the principle remaining foundation for the validity of reason was empirical science but with science’s concrete consequences so terribly problematic, reason now lost its last foundation.

Not just philosophers, but many thoughtful people were forced to reevaluate the status of human knowledge. We might think that we know a lot of things, scientifically or otherwise but we clearly have no such guarantee. Man has no apriori access to universal truths; empirical data are always theory-soaked and relative to the observer; and the previously reliable scientific worldview was open to fundamental question. Scientific knowledge was stupendously effective but those effects suggested that much knowledge from a limited perspective was a dangerous thing.

**Romanticism and its fate**

**The two cultures**

From the complex matrix of the Renaissance had come forth two distinct streams of culture, two temperaments, or general approaches to human existence characteristic of the Western mind. One emerged in the scientific revolution and the Enlightenment and stressed rationality, empirical science, and skeptical secularism. The other was its polar complement, sharing common roots in the Renaissance and Greco-Roman culture (and in the Reformation as well), but tending to express just those aspects of human existence suppressed by the Enlightenment’s overriding spirit of rationalism. Conspicuously present in Rousseau, then in Goethe, Schiller, and Herder, and German Romanticism, this side of Western sensibility emerged fully in the late 18th and early 19th c. and continues to be a potent force in Western culture from Blake, Wordsworth, Coleridge, Holderlin, Schelling, Schleiermacher, the Schlegel brothers, Madame de Stael, Shelley, Keats, Byron, Hugo, Pushkin, Carlyle, Emerson, Thoreau, Whitman, and onward in many others and many diverse forms, counterculture and otherwise to the present.

The late 18th and early 19th centuries’ Romantic temperament shared much with its Enlightenment opposite and it is their complex interplay that defines our modern sensibility. Both movements tended to be humanist in (1) their high estimate of man’s powers, and (2) their concern with man’s perspective on the universe. Thus both looked to this world/nature as the setting for the high drama of human endeavor. Both looked to human consciousness and were concerned with the nature of its hidden structures. Both found in classical culture a rich source of insight and values. Both were profoundly promethean in their rebellion against tradition and in their celebration of individual human genius, its restless quest for human freedom, fulfillment, and bold exploration of the new.

But in all these commonalities there were also deep divisions. In contrast to the spirit of the Enlightenment, the Romantic vision perceived the world as a *unitary organism* rather than an *atomistic machine*, the ineffability of *inspiration* rather than the power of sheer *reason*, the *inexhaustible drama of human life* rather than the calm *predictability of static abstractions*. Whereas the Enlightenment temperament’s high evaluation of man rested on man’s unequaled rational intellect and man’s power to apprehend and exploit the laws of nature, the Romantics valued man for his imaginative and spiritual aspirations, his emotional depth, his artistic creativity and powers of self-expression and self-creation (e.g., Herder). The Enlightenment celebrated the genius of Newton, Franklin, and Einstein, while the Romantics celebrated Goethe, Beethoven, and Nietzsche. On both sides, the autonomous world-changing will and mind of modern man were apotheosized, bringing the *cult of the hero*, and the *history of great men* and their deeds. On many fronts at once the Western ego gained substance and impetus whether in the titanic self-assertions of the French Revolution and Napoleon, the new self-awareness of Rousseau and Byron, the advancing scientific clarities of Lavoisier and Laplace, the incipient feminine confidence of Mary Wollstonecraft and George Sand, or the many sided richness of human experience and creativity realized in Goethe. But for the two temperaments, Enlightenment and Romantic, the character and aims of that autonomous self were very distinct: Bacon’s utopia of infinite progress contrasted sharply with the visions of William Blake.

For the Enlightenment-scientific mind, nature was the object of observation and experiment, theoretical explanation, and technical manipulation, but for the Romantic mind, nature was a live vessel of spirit, a translucent source of mystery and revelation. The scientist wished to penetrate nature and reveal its mystery through distanced and sober analysis, the Romantic sought to unite the soul with nature in overcoming the existential dichotomy and the revelation to be discovered was spiritual essence (not that of mechanical law). While the scientist sought truth that was testable and concretely effective, the Romantic sought truth that was inwardly transfiguring and sublime. Thus, William Wordsworth saw nature itself as “ensouled” with spiritual meaning and beauty, and Friedrich Schiller saw the impersonal mechanisms of science as but a poor substitute for the Greek deities who had animated nature of the ancients. Both these modern temperaments looked to present human experience and the natural world for fulfillment but what the Romantic found was radically different, namely oneness/unity/self, from what the scientist found namely lawfulness and predictability.

The two temperaments also had very different attitudes towards the phenomena of human ***consciousness***. The Enlightenment examined the mind empirically and epistemologically, gradually becoming focused on sense perception, cognitive development, and quantitative behavioral studies. In contrast, beginning with Rousseau’s *Confessions*, the modern Romantic sequel to the ancient RC Confessions of St. Augustine, the Romantics interest in human consciousness was fueled by a newly intense sense of self-awareness and a focus on the complex nature of the human self, and was in all this unconstrained by science. Emotion and imagination, not reason and perception, were of prime importance. Not only was there a concern with exalted and noble but also with the contraries of darkness, evil, death, the demonic, and irrational. Generally ignored in the optimistic, clarified light of rational science, these themes now pervaded the work of Blake and Novalis, Schopenhauer and Kierkegaard, Hawthorne and Melville, Poe, and Baudelaire, Dostoevsky and Nietzsche. The Romantics turned ever inward to discern the shadows of existence. They explored the mysteries of interiority, of moods and motives, love and desire, fear and angst, inner conflict and contradictions, memories and dreams, experiences of the extreme and incommunicable state of consciousness that could only be grasped inwardly in epiphanic ecstasy, plumbing the depth of the human soul, bringing unconsciousness to consciousness, knowing the infinite….

In contrast to the scientist’s quest for general laws defining a single objective reality, the Romantic glorified in the unbounded multiplicity of realities pressing in on his subjective awareness, and on the complex uniqueness of each object, event, experience presented to his soul. Truth discovered in divergent perspectives was valued by the Romantic above the monolithic and univocal ideal of empirical science. For the Romantic, reality was *symbolically* resonant through and through, and was therefore fundamentally multivalent, a constantly changing complex of many-leveled meanings, even of opposites. In contrast the scientific mind saw reality as concrete, *literal*, and univocal. Against this view the Romantic pointed out that even the reality constructed and perceived by the scientific mind was at bottom symbolic (but its symbols were of an exclusively specific kind: mechanistic, material, impersonal, and were interpreted as uniquely valid. From the Romantic’s perspective, the conventional scientific view of reality was essentially a jealous “monotheism” in new clothes, wanting no other gods before it (only that of scientific materialism). The literalism of the modern scientific mind was for the Romantic a form of idolatry, myopically worshipping an opaque object as the only reality, rather than recognizing that object as a mystery, a vessel of deeper realities.

**Imagination (Goethe)**

The search for a unifying order and meaning remained central for the Romantic, but in that task the limits of human knowledge were radically *expanded* beyond those imposed by the Enlightenment and a larger range of human faculties were considered necessary for genuine cognition. Imagination and feeling now joined sense and reason to render a deeper understanding of the world. Goethe in his morphological studies sought to experience the archetypal *form or essence* of each plant and animal by saturating the objective perception (of plant or animal) with the content of his own imagination. Schelling proclaimed that “to philosophize about nature means to create nature” for nature’s true meaning could be produced only from within man’s intellectual imagination. The historians Vico and Herder took seriously the mythological mode of cognition that informed previous eras, and believed that the historian’s task was to feel himself into the spirit of other ages through an empathic historical sense, to understand from within by means of sympathetic imagination. Hegel discerned overarching rational and spiritual meaning in the vast data of history by means of “logic of passion”. Coleridge wrote that “deep thinking is attainable only by a man of deep feeling.”, and that the artist’s “esemplastic power of the imagination” gave to the human mind the ability to grasp things in their entirety, to create and shape coherent wholes out of disparate elements. Wordsworth recognized the numinous vision of the natural child as possessing a deeper insight into reality tan did the opaque disenchanted perspective of the conventionalized adult. And Blake recognized “imagination” as the sacred vessel of the infinite, the emancipator of the bound human mind, the means by which eternal realities came to expression and consciousness. Indeed, for many Romantics, imagination was in some sense the whole of existence, the true ground of being, and the medium of all realities. The imagination pervaded consciousness and constituted the world.

**Will (Nietzsche)**

For the Romantics the human will too was deemed essential in the attainment of human knowledge. The will was a force preceding knowledge and freely impelled man and the universe forward to new levels of creativity and consciousness. It was Nietzsche who combined the Romantic spiritual passion with the Enlightenment skepticism to synthesize a paradigmatic Romantic position about the relation of the will to truth/knowledge. According to Nietzsche the rational intellect could not achieve objective truth, nor could any perspective ever be independent of *interpretation* of some sort. Thus, against positivism (“*there are only phenomena/facts”),* Nietzsche held that all facts are interpretations. This holds true not merely for morality but also for physics which is also but a specific perspective to suit specific needs and desires. Every way of viewing the world was a product of hidden impulses. Every philosophy revealed not an impersonal system of thought, but an involuntary confession. Unconscious instinct, psychological motivation, linguistics distortion, cultural and history prejudice affected every human inquiry and perspective. Against the long Western tradition of asserting the unique validity of one system of concepts and beliefs – whether religious, philosophical or scientific – that alone mirrors then Truth, *Nietzsche set forth a radical perspectivism*. There exists a plurality of perspectives through which the old can be interpreted, and there is no authoritative independent criterion according to which one system can be determined as more valid than another.

But if the world is radically indeterminate, it could be shaped by a ***heroic act of will*** to affirm life and bring forth triumphant fulfillment. The highest truth, Nietzsche prophesied, was being born within man through the self-creating power of the will. All human striving for knowledge and power would fulfill itself in a new being who would incarnate the living meaning of the universe. To achieve this birth man would have to grow beyond himself so fundamentally that his present limited self would be destroyed. “*What is great in man is that he is a bridge and not a goal… Man is something that must be overcome.”* For man was the way to a new dawn and new horizons beyond the compass of the present age. The birth of this new being was not a life-impoverishing other-worldliness fantasy to be believed by ecclesiastical (religious) decree, but a vivid tangible reality to be created here and now through the heroic self-overcoming of the great individual. Such an individual (superman or overman) had to transform life into a work of art, within which he could forge his character, embrace his fate (eternal return), and recreate himself as a heroic protagonist of the world epic. Man had to reinvent himself anew, imagine himself into being. Man had to will into existence a fictive drama into which he could enter and live, imposing a redemptive order on the chaos of a meaningless universe without God. Only then could the God who had long been projected to the beyond be born within man, within the human soul. Only then could man dance god-like in the eternal flux, free from all foundations and all bounds, beyond all metaphysical constraint. Truth was not something one proved or disproved, it was something *created*. In Nietzsche, as in Romanticism more generally, the philosopher became a poet: a worldview was not judge abstractly, rationally, or empirically, but was an expression of courage, beauty, and imaginative power of the will.

The Romantic sensibility advanced new standards and values for human knowledge. Through the self-creating power of imagination and will, the human being could body forth unborn realities, penetrate invisible but altogether real levels of beings, comprehend nature and history and the cosmos’ unfolding and indeed participate in the very process of creation. A new epistemology was claimed both possible and necessary. So that the limits established by Locke, Hume, and the positivist side of Kant’s *First Critique* were boldly defied by the Idealists/Romantics.

**Past**

The 17th c. Enlightenment and the 19th c. Romantic temperaments also held very different views towards the two classical pillars of Western culture: Greco-Roman classicism and the Judeo-Christian religion. Increasingly the Enlightenment-scientific mind employed classical thought only to the extent that it provided a useful starting point to investigation/theory formulation. Beyond that every ancient was viewed mainly for its *antiquarian* interests. In contrast the Romantic temperament was still living in the realm of Olympian images and personalities, its artistic creations from Homer and Aeschylus onward were still its exalted models, its imaginative and spiritual insights still pregnant with newly discoverable meaning. While both temperaments encouraged the recovery of the classical past, they had very different motives for doing so: one, positivism, for the sake of accurate historical knowledge, the other, Romanticism, to revivify the past, to enable it to live again in the creative spirit of modern man. The rational mind viewed tradition in skeptical terms - as a contrast to currently genuine knowledge, while the Romantic mind, while similarly rebellious towards to the past and sometimes even more so, found in tradition something mysterious, a repository of collective wisdom, accrued insight into a people’s soul, and a living and changing force with its own evolutionary dynamism and autonomy. Such wisdom is not merely (past) empirical or technical knowledge, but spoke of deeper realities hidden to common sense and mechanical experiments. The Romantics initiated a new appreciation of Greco-Roman past, for the spiritually resonant Middle Ages, for Gothic architecture and folk literature, for the ancient and the primitive, for the Oriental and the exotic, and for esoteric traditions of all sorts, for the *Volkgeist* of the Germanic and other peoples, and for the Dionysian wellsprings of culture. *A new awareness of the Renaissance emerged followed by a new consciousness of Romanticism itself.* Thus, Romanticism rejected the Enlightenment’s belief in progress (superiority over the past, and modern man’s rational inevitable fulfillment), but accepted Nietzsche’s “eternal return”.

**Religion**

The issue of religion posed the same contrast. Both the Enlightenment and Romantic temperaments derived from the Reformation, for individualism and personal freedom were common to both, yet each developed different aspects of the Reformation legacy. The spirit of the Enlightenment rebelled against the strictures of ignorance and superstition imposed by theological dogma and belief in the supernatural, in favor of a straightforward empirical and rational knowledge and a liberating embrace of the secular. Religion was either rejected altogether or maintained only as rationalist *deism* or natural law ethics. In contrast the Romantic temperament towards religion was much more complex. The Romantic also rebelled against hierarchies and institution of traditional religion, against enforced belief and moralistic restrictions and hollow ritual, yet religion itself was a central and enduring element of the Romantic spirit in various versions, whether in transcendental idealism, Neo-Platonism, Gnosticism, pantheism, mystery religion, nature worship, Christian mysticism, Hindu-Buddhist mysticism, Swedenborgianism, theosophy, esotericism, religious existentialism, neo-paganism, shamanism, Mother Goddes worship, evolutionary human divinization, or some syncretism of these.

The Romantics continued to hold the sacred as a viable category where this category had long since disappeared in science. God was rediscovered in Romanticism – not the God of orthodoxy or deism, but the God of mysticism, pantheism, and immanent cosmic process; not the Judaic-Christian God the monotheistic juridical patriarch but a divinity more ineffably mysterious, pluralistic, all-embracing, neutral, or even feminine character; not an absentee creator but a numinous creative force within nature and within the human spirit.

Art itself – music, literature, drama, painting – took on an almost religious status for the Romantics. In a world made mechanical and soulless by the aftermath of the “new science”, the pursuit of beauty for its own sake took on extraordinary psychological importance. Art provided a unique point of conjunction between the natural and the spiritual, and for many modern intellectuals disillusioned with orthodox religion, art became the chief spiritual outlet and medium. The problem of grace, focused on the enigma of inspiration, now was a more vital concern to artists than to theologians. The artistic endeavor was elevated to an exalted spiritual role, whether as poetic epiphany or aesthetic rapture, as divine afflatus or revelation of eternal realities, as creative quest, imaginative discipline, as devotion to the Muses, and existential imperative or liberating transcendence from the world of suffering. Even the most secular of moderns could worship the artistic imagination and hold sacred the humanistic tradition of art and culture. The creative masters of the past became the saints and prophets of that culture, and the critics and essayists its high priests. In art, the disenchanted modern psyche could yet find meaning and purpose, a hallowed context for spiritual yearnings, a world open to profundity and mystery.

The artistic and literary culture also presented the modern mind with virtually an alternative, if more complex and variable, world picture to that of science. The cultural power of, for example, the novel in reflecting and shaping human experience – from Rabelais, Cervantes, and Fielding, through Hugo, Stendhal, Flaubert, Melville, Dostoevsky, and Tolstoy, and on to Mann, Hesse, Lawrence, Woolf, Joyce, Proust, and Kafka – constituted a constant and often unassailable counterpoint to the power of the dominant scientific world conception. Having lost belief in the theological and mythological master plots of earlier eras, the literate culture of the modern West turned its instinctive hunger for cosmic coherence, for existential order, to the narrative plots of imaginative fiction. Through the artist’s ability to give new contour and significance to experience, in the mystical crucible of aesthetic transfiguration, a new reality could be made – a “rival creation” in Henry James’ words. In the novel, as in the theatre and poetry, and the other arts was expressed a concern with the phenomena of consciousness as such, as well as with the qualitative details of the outer world, so that artistic realism could “survey the whole field” (Henry James). Here in the realms of art and of literature was pursued with rigor and nuance a broad phenomenology of human experience that was also entering into formal philosophy through William James, Henri Bergson, Edmund Husserl, and Martin Heidegger. Rather than conducting an experimental analysis of an objectified world, this tradition focused on its unceasing ambiguity, its spontaneity and autonomy, its uncontainable dimensions, its ever deepening complexity.

In this sense the Romantic impulse continued and expanded the modern mind’s movement toward **realism**, in delineating all aspects of existence, not just the conventionally and consensually validated. As Romanticism expanded its compass and shifted its focus in the course of the modern period, it sought to reflect the “authentic” character of “modern” humankind as it is actually lived, not limited to the ideal or aristocratic, or traditional subject from classical, mythological, or Biblical sources. Its mission was to transmute the mundane and commonplace into art, to perceive the poetic and mystical in the most concrete details of ordinary experience, even in the degraded and ugly. Its quest was to show “the heroism of modern life” (Baudelaire) and its anti-heroism as well. By expressing ever more precisely the variegated quality of human experience, the Romantic Movement conveyed also its confusion, its irresolution, and its subjectivity. Pressing ever deeper into the nature of human perception and creativity, the modern artist began to move beyond the traditional mimetic, representational view of art, and the spectator theory of reality underlying it. The Romantic artist sought not merely to reproduce forms, not even to discover forms, but to create forms. *Reality is not something copied it is something created.*

These radically broadening conceptions of reality could of course not be easily integrated into the positivistic (scientistic) side of the modern mind. Nor did the Romantic’s openness to the transcendental dimension of experience and its anti-science attitude (resisting all rationalist reductionism and pretensions to objective certitude) sit easily with science. As time passed, what had been medieval dichotomy between reason and faith, followed by the early modern dichotomy between secular science and Christian religion, now became a more general schism between scientific rationalism and the multifaceted Romantic humanistic culture with the latter including a diversity of religious and philosophical perspectives loosely allied with literary and artistic tradition.

**The divided worldview**

Because the Enlightenment and Romantic temperaments were deeply and simultaneously expressive of Western attitudes and yet were deeply incompatible with one another a complex bifurcation resulted in the Western worldview. With the modern psyche deeply affected by the Romantic sensibility and yet with the truth claims of science so formidable, modern man experienced an intractable division between his mind (reason) and his soul (aspirations and desires). Thus, for example, the same person could appreciate both Blake and Locke but not in a coherent manner. Yeats’ esoteric vision of history could scarcely be joined with academic history as taught in the universities. Rilke’s idealist ontology (“we are the bees of the invisible” could not readily be conjoined with the assumption of conventional science. Even such an influential sensibility as T. S. Eliot was closer to Dante than it was to Darwin.

Romantic poets, religious mystics, idealist philosophers, and counter-culture psychedelicists would claim (and often describe in detail) the experience of other realities beyond the material and argue for an ontology of human consciousness sharply differing from that of conventional empiricism. But when it came to defining basic cosmology, the secular scientific mind continued to be determined the modern worldview’s center of gravity. For without consensual validation, the Romantic’s revelations could not overcome their apparent incompatibility with the commonly accepted truths of scientific observation which remained the bottom line of modern belief. The dreamer held no fragrant rose, tangible and public, with which to demonstrate to all the truth of his dream.

Thus, while Romanticism in the general sense continued to inspire the West’s inner culture – its art and literature, its religious and metaphysical vision, its moral ideals – science dictated its outer cosmology: the character of nature, man’s place in the universe, and the limits of his real knowledge. Because science ruled the *objective world*, the Romantic perception was necessarily limited to the *subjective*. The Romantics’ reflections on life, their music and poetry and religious yearnings, richly absorbing and culturally sophisticated a those were, in the end had to be consigned to only a part of the modern universe. Spiritual, imaginative, emotional, and aesthetic concern had their place, but could not claim full ontological relevance in an objective world whose parameters were fundamentally impersonal and opaque. ***The faith-reason distinction of the medieval era and the religious-science distinction of the early modern era had become one of subject-object, inner-outer, man-world, humanities-science distinction***. A new form of the double-truth universe was now established.

As a consequence of this dualism, modern man’s experience of the natural world and his relation to that world underwent a paradoxical inversion as the modern period evolved, with the Romantic and scientific streams virtually mirroring each other in reverse.

To begin with, a gradual immersion of man into nature was visible on both fronts of this dualism. On the Romantic side, as in Rousseau, Goethe, or Wordsworth, there was an impassioned striving for conscious unity with nature both poetic and instinctual. On the scientific side, man’s immersion into nature was realized in science’s description of man in increasingly and entirely naturalistic terms (Darwin first then late genetic, and neuroscience).

But against the harmonious aspirations of the Romantics, man’s unity with nature was here in the scientific context of a Darwinian-Freudian struggle with a nature of brute consciousness – a struggle for survival, for ego integrity, for civilization. On the scientific view, man’s antagonism towards nature – and therefore the necessity of nature’s external exploitation and internal repression – was an inevitable consequence of man’s biological evolution and emergence from the rest of nature.

In the longer run however the early Romantic sense of harmony with nature underwent a distinct transformation as the modern era grew old (i.e., in the 20th c.). Here the Romantic temperament was complexly influenced by developments within Romanticism, by the sundering effects of modern industrial civilization and modern history, and by science’s view of nature as impersonal, non-anthropocentric, and random. The over-determined result was an experience of nature almost the opposite from the original Romantic ideal. Modern man now increasingly sensed his alienation from nature, his/her fall from a unitary wholeness, and his/her confinement to an absurd universe of chance and necessity (fate). No longer was the Romantic a spiritual glorious child of nature, rather modern man became an incongruent sensitive denizen of an implacable vastness devoid of meaning. Wordsworth vision has been replaced by Robert Frost:

Space ails us moderns: we are sick

with space.

Its contemplation makes us out as

small.

As a brief epidemic of microbes

That in a good glass may be seen to

crawl

The patina of this least of globes.

By contrast, and or different reasons, the temperament allied with science and technological development had lauded man’s separation from nature. Human freedom/reason from nature’s constraints, man’s ability to control his environment, and his intellectual capacity to observe and understand nature without anthropomorphic projection were indispensable values for the scientific mind. Yet this same strategy paradoxically led science to a deepening awareness of man’s intrinsic unity with nature: man’s ineluctable dependence upon and ecological involvement with the natural environment, his epistemological interrelatedness with nature that he could never completely objectify, and the concrete dangers of the modern attempt at such separation and objectification. Science thereby began to move toward a position not altogether unlike the original Romantic one in its appreciation of man’s unity with nature – although generally without the spiritual or transcendent dimensions, and without effectively resolving the theoretical and practical problems of the still fundamental human-world divide (e.g., consciousness may be found in the left temporal hemisphere).

In the meanwhile, the Romantic position succumbed to the alienation necessitated by that schism between man and nature. Nature was still impersonal and non-anthropocentric, and modern psyche’s awareness of that cosmic estrangement was scarcely dented by the incipient and partial scientific rapprochement. In the 20th c. it is true that both scientist and artist simultaneously experienced the breakdown and dissolution of the old categories of time, space, causality, and substance. But the deeper discontinuities between the scientific universe and humanistic aspiration remained unresolved. The modern experience was still vexed by a profound incoherence, with the dichotomies of the Romantic and scientific temperaments reflecting the Western worldview’s seemingly unbridgeable gap between human consciousness and unconscious cosmos. In a sense the “two cultures”, the two sensibilities, were present in varying proportions in every reflective individual of the modern West. As the full implications of the scientific worldview became explicit, that inner division was experienced as that of the sensitive human psyche situated in a (mechanistic) world alien to human meaning***. Modern man in the 20th c. was a divided animal, inexplicably self-ware in an indifferent universe.***

**Attempted syntheses: from Goethe and Hegel to Jung**

**Goethe**

There were those who sought to encompass that schism by bridging the scientific and humanistic imperatives in both method and theory. Goethe led a *naturphilosophie* movement that tried to unite empirical observation and spiritual intuition into a science of nature in a manner that would be more revealing than Newton’s, in grasping nature’s archetypal organic forms. According to Goethe, the scientist could not arrive at nature’s deeper truths by detaching himself from nature and employing bloodless abstractions to explain it, registering the external world as if it were a machine. Such a strategy would ensure that observed reality would be a partial illusion, a picture whose depths have been eliminated by an unconscious filter. Only by bringing observation and imagination into intimate interaction could man penetrate nature’s appearances and discover nature’s essence. Only then could the archetypal form in each phenomenon be elicited; only then could the universal be recognized in the particular and reunited with it.

Goethe justified his approach with a philosophical stance that sharply diverged from that of his older contemporary Immanuel Kant. Like Kant, Goethe recognized the mind’s role in constructing knowledge, yet Goethe perceived man’s true relation to nature as overcoming Kant’s dualism between the phenomenal and noumenal world. In Goethe’s vision, nature permeates everything including the human mind and the imagination. Hence, nature’s truth does not exist as something independent and objective, but is revealed in the very act of cognition. The human spirit does not simply impose order on nature (as Kant held), rather nature’s spirit brings forth its own order through man who is the organ of nature’s self-revelation. For nature is not distinct from spirit but is itself spirit, inseparable not only from man but also from God (remember Leibnitz!). God is not a remote governor of creation, but God “*holds nature close to her breast*” so that natural processes breathe God’s own spirit and power. Thus Goethe united the poet and scientist in an analysis of nature that reflected his distinctly sensuous religiosity.

**Hegel**

In a similar spirit, the metaphysical speculations of the German idealists after Kant culminated in the extraordinary philosophical achievement of Georg W. F. Hegel. Drawing on classical Greek philosophy, Christian mysticism, and German Romanticism to construct his all-encompassing systems, Hegel set forth a conception of reality that sought to unify man and nature, spirit and matter, human and divine, time and eternity.

At the foundation of Hegel’s thinking was his understanding of *dialectic*, according to which all things unfold in a continuing evolutionary process whereby every state of being inevitably brings froth its opposite. The interaction between opposites then generates a third stage in which the opposites are integrated – they are at once overcome and fulfilled – in a richer and higher synthesis, which in turn becomes the basis for another dialectical process of opposition and synthesis. Through philosophy’s comprehension of this fundamental process, Hegel asserted that every aspect of reality (human thought, history, nature, and divine reality itself) could be made intelligible.

Hegel’s overriding impulse was to comprehend all dimensions of existence in a dialectically integrated in one unitary whole. In Hegel’s view all human thought and all reality is pervaded by contradiction, which alone makes possible the development of higher states of consciousness and higher states of being. Each phase of being harbors within itself a contradiction, and it is this contradiction that acts as the engine of it movement to a higher and more complete phase. Through a continuing dialectical process of opposition and synthesis, the world is always in a process of completing itself. Whereas for most of the history of Western philosophy from Aristotle onward, the defining essence of opposites was that they were logically contradictory and mutually exclusive, for Hegel all opposites are logically necessary and mutually implicated elements in a larger truth. Truth is therefore radically paradoxical.

Yet for Hegel the human mind in its highest development was fully capable of comprehending such truth. In contrast to Kant’s more circumspect view (reason was limited to sensible intuition, and hence limited to what it could know), Hegel was a firm believer in the power of human reason believing that this human reason was ultimate grounded in divine reason and hence could penetrate the noumenal world. While Kant had argued that reason could not penetrate the veil of phenomena to reach ultimate reality (since human reason inevitably became caught up on contradiction whenever it tried to do so), Hegel saw human reason as fundamentally an expression of a universal Spirit or Mind (*Geist*) through the power of which, as in love, all opposites could be transcended in a higher synthesis.

Hegel further argued that Kant’s philosophical revolution did *not* establish final limits or necessary foundations of human knowledge, but rather was one of a long sequence of such conceptual revolutions by which man as subject repeatedly recognized that what he had thought was a being-in-itself actually received its content by means of the form given to it by the subject. The history of the human mind constantly replayed this drama of the subject becoming conscious of itself and the consequent destruction of the previously uncriticized form of consciousness. The structures of human knowledge (Kant’s “categories of understanding”) were not fixed and timeless but *historically* determined stages that evolved in a continuing dialectic until consciousness achieved absolute knowledge of itself. What at any one moment in history was seen as fixed and certain was constantly overcome by the evolving mind, thereby opening up new possibilities and greater freedom. Every stage of philosophy from the ancient pre-Socratics onward, every form of thought in human history, was both an incomplete perspective and yet a necessary step in this greater intellectual evolution. Every era’s worldview was both a valid truth unto itself and also an imperfect stage in the large process of absolute truth’s self-unfolding.

This same dialectical process also characterized Hegel’s metaphysical and religious understanding. Hegel conceived of the primal being of the world, the universal Mind/Spirit, as unfolding itself through its creation, achieving ultimate realization in the human spirit/mind. In Hegel’s understanding, the Absolute first posits itself in the immediacy of its own inner consciousness, then negates this initial condition by expressing itself in the finite world of space and time, and finally, by “negating the negation”, recovers itself in its infinite essence. Mind thereby overcomes its estrangement from the world, a world that Mind itself constituted. *Thus, the movement of knowledge evolves from consciousness of the object separate from the subject, to absolute knowledge in which the knower and know became one.*

But it was only through a dialectical process of self-negation (creation of finite world) that the Absolute could achieve its fulfillment.

Whereas for Plato the immanent and secular was ontologically dismissed in favor of the transcendent and spiritual (the “real” world of Ideas or Forms), for Hegel this world was the very condition of the Absolute’s self-realization. In Hegel conception, both nature and history are ever progressing towards the Absolute: the universal Spirit expresses itself in space as nature and in time as history. All of nature’s processes and all of history’s happening, including man’s intellectual, cultural, and religious development, constitute the teleological plot of the Absolute’s quest for self-revelation. Just as it was only trough the experience of alienation from God that man could experience the joy and triumph of rediscovering his own divinity, so it was only through the process of God becoming finite, in nature and in man, that God’s infinite nature could be expressed. For this reason, Hegel declared that the essence of his philosophy was expressed in the Christian revelation of God’s *incarnation* as man, the climax of religious truth.

When all this was proposed early in the 19th c. and for several decades afterward, Hegel’s great structure was regarded by many as the most satisfying and indeed ultimate philosophical conception in the history of Western mind, the culmination of philosophy’s long development since the Greek. Every aspect of existence and human culture found its place in this total world conception, an all-embracing totality. Hegel’s influence was considerable first in Germany and later in English speaking countries, encouraging a renascence of classical and historical studies from an idealist perspective and providing a metaphysical bulwark for spiritually disposed intellectuals grappling with the forces of secular materialism. A new attentiveness to history and to the evolution of ideas was engendered, with history seen as motivated ultimately not simply by political or economic or biological (material) factors, although these played a role, but rather by consciousness itself, by spirit or mind, by the self-unfolding of thought and the power of ideas.

**Criticism of Hegel**

Hegel also aroused much criticism. For some the absolute closure of his system appeared to limit the unpredictable possibilities of the universe and the personal autonomy of the human individual.

His stress on rational determinism of the Absolute Spirit and the ultimate overcoming of all oppositions seemed to undercut the problematic contingency and irrationality of life as well as to ignore the concrete emotional and existential actuality of human experience.

Hegel’s abstract metaphysical certitudes seemed to avoid the grim reality of death, to disregard the human experience of God’s remoteness and inscrutability. Religious critics objected that belief in God was not simply the solution to a metaphysical problem but required a free and courageous leap of faith (e.g., Kierkegaard) in the midst of ignorance and dark uncertainty.

Hegel’s philosophy was interpreted by others as a metaphysical justification for the *status quo*, and was therefore criticized as a betrayal of humanity’s drive for political and material betterment.

Later critics noted that his exalted view of Western culture in the context of world history, and of a rational civilization’s imposing itself on the contingencies of nature, could be interpreted as a justification of modern man’s hubristic impulse to domination and exploitation. Indeed, such Hegelian concepts concerning the nature of God, spirit, reason, history, and freedom appeared to be open to completely antithetical interpretations.

Hegel’s historical judgments often seemed preemptory, his political and religious implications were ambiguous, and his language and style was perplexing. Moreover, his scientific views, while informed, were unorthodox. In any case, Hegel’s idealism did not fit easily into the naturalistic worldview (scientific materialism) corroborated by science. After Darwin, writing mid 19th c., evolution no longer seemed to require an all-encompassing Spirit, nor did the conventional scientific view of evidence suggest such a Spirit. Nor, finally, did subsequent historical events provide grounds for confidence in Western man’s inevitable spiritual consummation through history.

Hegel had spoken with autocratic confidence of one who had experienced a vision of reality whose absolute truth transcended the skepticism and demands for detailed empirical tests that other systems of thought required. To his critics, Hegel’s philosophy seemed unfounded and even fantastic. The modern mind did indeed incorporate much of Hegel, above all his grasp of dialectics and the recognition of the pervasiveness of evolution and the power of history. But as an entirety, the Hegelian effort at synthesis was rejected. In fulfillment, as it were, of its own theory, Hegelianism was eventually submerged by the very reactions it helped to provoke – irrationalism (Schopenhauer) and existentialism (Kierkegaard), dialectical materialism (Marx and Engels), pluralistic pragmatism (James and Dewey), logical positivism (Russell and Carnap), and linguistic analysis (Moore and Wittgenstein), all of which were movements increasingly reflective of the tenor of modern experience. With Hegel’s decline there passed from the modern intellectual arena the last culturally powerful metaphysical system claiming existence of a universal order accessible to human consciousness.

In the 20th c. metaphysically inclined scientists such as Henri Bergson, Alfred North Whitehead, and Pierre Teilhard de Chardin sought to join the scientific picture of evolution with philosophical and religious conceptions of an underlying spiritual reality along the lines similar to Hegel. Their eventual fate was however similar to Hegel’s: brilliant and comprehensive as challenges to conventional science but *speculations that did not meet demonstrable empirical tests.* Thus, appeared to be no way to verify such concepts as Bergson’s “*élan vital*” operating in the evolutionary process, Whitehead’s evolving God who was interdependent with nature and its process of becoming, or Teilhard’s “*cosmogenesis*” in which human and world evolution would be fulfilled in an “*omega point*” of unitive Christ-consciousness. Although each of these theories of spiritually informed evolutionary process gained widespread popular response and also influenced later modern thought often in very subtle ways, the dominant cultural trend, especially in the academy, was very different.

The decline of speculative metaphysics also signaled the decline of speculative historical overviews, and epic efforts such as Oswald Spengler’s and Arnold Toinbee’s which, while admired, were also like Hegel depreciated. Academic history now *disengaged* itself from the task of discerning the “meaning” of history, the “purpose” of cultural evolution, as misguided and impossible. Instead professional historians saw their competence more properly limited to carefully defined and specialized studies, to methodological problems derived from the social sciences, to statistical analyses of measurable factors such as population levels and income statistics. The historian’s attention was better directed toward concrete details of people’s lives, especially to social and economic contexts (history from below) than to idealist image of universal principles working through great individuals for forge world history. Following the directive of the Enlightenment, academic historians saw the need to remove history entirely from the theological, mythological, and metaphysical contexts within which it had long been embedded. Like nature, history too was a nominalistic phenomenon, without spiritual preconceptions. (Much as the emergence of psychology as an academic discipline in the second half of the 19th c. was deemed to be a nominalistic/naturalistic science of mind.)

Yet as the modern era moved to its later stages, Romanticism would re-engage the modern mind from another field altogether. The decline of Hegel and of metaphysical and historical overviews (total world or grand narratives) had originated in an intellectual climate in which physical science was dominant in determining the understanding of reality. But as science began itself to be revealed (both epistemologically and pragmatically) as a relative and fallible form of knowledge (and both philosophy and religion had already lost their previous cultural preeminence) many reflective individuals began to turn inward, to the examination of consciousness itself as a potential source of meaning and identity in a world otherwise devoid of stable values. This new focus on the inner workings of the psyche also reflected an increasing sophistication with unconscious structures within the mind of the subject that were determining the ostensible nature of the object – a continuation of the Kantian project on a more comprehensive level. Thus, of all the instances of Romantically influenced science (excepting evolution theory’s dept to the Romantic ideas of organic evolution in nature and history, of reality as a constant process of becoming), the most enduring and seminal were the depth psychologies of Freud and Jung, both deeply influence by German Romanticism from stretching from Goethe to Nietzsche.

In its concern with the elemental passions and powers of the unconscious (imagination, emotion, memory, myth, dreams, introspection, psychopathology, hidden motivations, and ambivalences) psychoanalysis brought Romanticism’s preoccupations to a new level of systematic analysis and cultural significance. With Freud (who first turned to medical science after reading Goethe’s *Ode to Nature* as a student, and who throughout his life collected archaic religious and methodological statues) the Romantic influence was often hidden and inverted by the Enlightenment-rationalist assumptions that pervaded Freud’s scientific vision (Freud had one foot in positivistic science and the other foot in Romanticism). But with Jung, the Romantic inheritance became more explicit as Freud’s discoveries and concepts were expanded and deepened. In the course of analyzing a vast range of psychological and cultural phenomena, Jung found evidence of a *collective unconscious* common to all human beings and structured according to powerful archetypal principles.

Although it was clear that human experience was logically conditioned by a multitude of concrete biographical, cultural, and historical factors, subsuming all these at a deeper level appeared to be certain universal patterns or modes of experience, archetypal forms that constantly arranged the elements of human experience into typical configurations and gave to collective human psychology a dynamic continuity. These archetypes endured as *basic apriori symbolic forms* while taking on the costume of the moment in each individual life and cultural era, permeating each experience, cognition, and worldview.

The discovery of the collective unconscious and its archetypes radically extended psychology’s range of interests and insights. Religious experience, artistic creativity, esoteric systems, and the mythological imagination were now analyzed in non-reductive terms strongly reminiscent of the neo-Platonic Renaissance and Romanticism. A new dimension to Hegel’s understanding of historical dialectic emerged with Jung’s insight into the collective psyche’s tendency to bring together archetypal oppositions in history before moving towards a synthesis on a higher level. A host of factors previously ignored by science and by psychology were now recognized as significant to the psychotherapeutic enterprise and given vivid conceptual formulation:

the creativity and continuity of the collective unconscious,

the psychological reality and potency of spontaneously produced symbolic forms and autonomous mythic figures,

the nature and power of the shadow,

the psychological centrality of the search for meaning,

the importance of teleological and self-regulating elements in the psyche’s processes,

the phenomenon of synchronicities.

Freud and Jung’s depth psychologies offered a fruitful middle ground between science and the humanities – sensitive to many dimensions of human experience: concerned with art and religion and interior realities, qualitative conditions and subjective significant phenomena, yet striving for empirical rigor, rational cogency, and for practical, therapeutically effective knowledge in the context of scientific research.

But precisely because *depth psychology* was originally founded in the broader scientific worldview, its larger philosophical impact was initially limited. This limitation existed not so much because depth was vulnerable to criticism for being insufficiently scientific (compared say to behavioristic psychology or statistical mechanics), although conservative scientists sometimes argued that way even as this argument hardly carried any cultural weight since the face value of depth psychology was self-evident. But more constraining for depth psychology’s impact was the very nature of its study: given the basic subject-object dichotomy of the modern mind, depth psychology was relegated only to the mind (to the subjective) not to the “objective” world. Even if depth psychology turned out to be objectively true, it was true only in relation to subjective reality. Depth psychologies could not change the cosmic context within which human beings sought psychological integrity.

This limitation was further reinforced by the modern 20th c. epistemological critique of all human knowledge. Jung though metaphysically more flexible than Freud, was epistemologically more exacting, and repeatedly affirmed throughout his life the fundamental epistemological limits of his own theories (although he also reminded other scientists that this was true for their theories). Because Jung was grounded in Kant’s critical tradition (rather than Freud’s more conventional rationalist materialism) Jung was compelled to admit that his psychology had no necessary metaphysical implications. It is true that Jung in granting psychological reality empirical status advanced beyond Kant (in granting substance to internal experience while Kant had granted substance only to external experience): all human experience not just sense impressions had to be included in a genuine empiricism. Yet in a Kantian spirit, Jung stated that whatever the data presented by psychotherapeutic investigations, these could never provide substantial warrant for claims about the universe or reality as such. The discoveries of psychology could reveal nothing of certitude about the world’s actual constitution, no matter how subjectively convincing the evidence for a mythic dimension, an “*anima mundi*”, or a supreme deity. Whatever the human mind produced could be regarded only as a product of the human mind and its intrinsic structures, with no necessary objective or universal correlations. The epistemological value of depth psychology lay rather in its capacity to reveal those unconscious structural factors, the archetypes, which appeared to govern all mental functioning and hence all human perspectives on the world.

Thus, the nature of Jung’s domain of investigation seemed to require an exclusively psychological interpretation of his findings. They were empirical but they were only *psychologically empirical*. Depth psychology had given a deeper world to modern man, but the objective universe known by natural science was necessarily still opaque, without transcendent dimensions. It is true that many striking parallels existed between Jung’s archetypes and Platonic archetypes, but for the ancient mind, Platonic archetypes were cosmic, while for the mind and for Jung, archetypes were only psychic. Therein lay the difference between the classical Greek and the modern Romantic: Descartes, Newton, Locke, and Kant had intervened.

**[Here we must begin to examine the rise of scientific psychology just after the middle of the 19th c.]**

With the bifurcation of the modern mind between Romantic and depth psychology interiority, on the one hand, and the naturalistic cosmology of the physical sciences, on the other hand, there seemed to be no genuine synthesis between subject and object, psyche and world. Yet the therapeutic and intellectual contributions of the Freudian-Jungian tradition to 20th c culture were many, and gained more significance in each passing decade.

Indeed, the modern psyche appeared to require the services of depth psychology with increasing urgency, as a profound sense of spiritual alienation and other symptoms of social and psychological distress became more widespread. With traditional religious perspectives no longer giving solace, depth psychology itself, along with its numerous offspring, took on religious character – a new faith for modern man, a path for the healing of the soul bringing regeneration, rebirth, epiphanies of sudden insight and spiritual conversion, and a host of dogmas, priestly elites, schism, heresies, reformations, the proliferation of Protestant and Gnostic sects). Yet it seemed that salvation for the cultural psyche was not being widely accepted; it was as if the tools of depth psychology were being employed in a context riddled with a more *encompassing pathology* than subjectivist psychotherapy could hope to cure.

**Existentialism and nihilism**

As the 20th c advanced, modern consciousness found itself caught up in an intensely contradictory process of simultaneous expansion and contraction. Extraordinary intellectual and psychological sophistication was accompanied by a deliberate sense of anomie and malaise. [For example, a century of psychological “science” seems to have had little impact on people’s happiness or lack thereof.]

An unprecedented broadening of horizons and exposure to the experience of many others coincided with a private alienation of no less extreme proportions. A stupendous quantity of information had became available about all aspects of life – the contemporary world, the historical past, other cultures and peoples, other forms of life, the subatomic world, the macrocosm, the human psyche and mind – yet there was also a far less ordered vision, less coherence and comprehension, and less certainty. The great overriding impulse defining Western man since the Renaissance – the quest for independence, self-determination, and individualism – had indeed brought those ideals to reality in the lives of many, yet it had also resulted in a world where individual spontaneity and freedom were increasingly smothered (read B. F. Skinner’s *Walden two*, 1948), not just in theory by a reductionist scientism, but in practice by a ubiquitous collectivity and conformism of mass societies. The great revolutionary political projects of the modern era, heralding personal and social liberation, had gradually led to conditions in which the modern individual’s fate was ever more dominated by bureaucratic, commercial, and political superstructures. Just as man had become a meaningless peck in the modern universe, so individual persons had become insignificant ciphers in modern states to be manipulated or coerced by millions.

The quality of modern life seemed ever equivocal. Spectacular empowerment was countered by a widespread sense of anxious helplessness. Profound moral and aesthetic sensitivity confronted horrific cruelty and waste. The price of technology’s accelerating advance grew ever higher. And in the background of every pleasure and every achievement loomed humanity’s unprecedented vulnerability. Under the West’s direction and impetus, modern man burst forward and outward, with tremendous centrifugal force, complexity, variety, and speed. And yet it appeared he had driven himself into a terrestrial nightmare and a spiritual wasteland, a fierce constriction, a seemingly irresolvable predicament.

Nowhere was this problematic modern condition more precisely embodied than in the phenomenon of existentialism, a philosophy and mood expressed in the writings of Heidegger, Sartre, Camus, among others… but ultimately reflecting the pervasive spiritual crisis of modern culture. The anguish and alienation of 20th c life were brought to full articulation as the existentialist addressed themselves to the most fundamental, naked, concerns of human existence – suffering and death, loneliness and dread, guilt, conflict, spiritual emptiness, and ontological insecurity, the void of absolute values or universal contexts, the sense of cosmic absurdity, the frailty of human reason, the tragic impasse of the human condition. Sartre writes “Man was condemned to be free” (see Fromm’s *Escape from freedom*, 1941). He faced the necessity of choice and thus knew the continual burden of error. He lived in constant ignorance of his future, thrown into a finite existence bounded on each side by nothingness. The infinity of human aspiration was defeated before the finitude of human possibility. Man possessed no determining essence: only his existence was given, an existence engulfed by mortality, risk, fear, ennui, contradiction, and uncertainty. No transcendent Absolute guaranteed the fulfillment of human life or history. There was no eternal design or providential purpose. Things existed simply because they existed, and not for some higher or deeper reason. Nietzsche pronounced “God was dead”, and the universe was blind to human concerns, devoid of meaning or purpose. Man was abandoned; he was on his own. All was contingent. To be authentic one had to admit, and choose freely to encounter, that stark reality of life’s meaninglessness. The only meaning was struggle – endlessly until death.

The Romantic’s quest for spiritual ecstasy, union with nature, and fulfillment of self and society, previously buttressed by the progressive optimism of the 18th and 19th c, had met the dark realities of the 20th c – and the existentialist predicament was felt by many. Even theologians, and perhaps especially theologians, were sensitive to the existentialist spirit. The Western world was shattered by two world wars, totalitarianism, the holocaust, the atomic bomb; and belief in a wise and omnipotent God ruling history for the good of all lost all defensible grounds. Given the unprecedented tragedies of contemporary historical events, given the fall of Holy Scripture as an unshakable foundation for belief, given the lack of any compelling philosophical argument for God’s existence, and given the above all the universal crisis of religious faith in a secular age, it was impossible for many theologians to speak of God in any way meaningful to modern sensibility: thus emerged the seemingly self-contradictory but singularly representative theology of the “death of God”.

Contemporary narratives increasingly portrayed individuals caught up in a bewildering environment, vainly attempting to forge meaning and value in a context devoid of significance.

Faced with the relentless impersonal-ness of the modern world (whether a mechanized mass society or a soulless cosmos) the Romantic’s only remaining response appeared to be despair or self-annihilating defiance. Nihilism in a multitude of inflections now penetrated modern cultural life with growing insistence….The early Romantic passion to merge with the infinite began to be turned against itself, inverted, transformed into a compulsion to negate that passion. Romanticism’s disenchanted spirit increasingly expressed itself in fragmentation, dislocation, and self-parody, its only possible truths being those of irony and dark paradox. Some suggested that the entire culture was psychotic in its disorientation, and that those called mad were in fact closer to genuine sanity. The revolt against conventional reality began to take on new and more extreme forms. Earlier modern responses of realism and naturalism gave way to the absurd and the surreal, the dissolution of all established foundations and solid categories. Deconstruction! The quest for freedom became ever more radical, and its price was the destruction of any standard or stability. As the physical sciences also dismantled long-held certainties and structures, so art met science in the throes of the 20th c epistemological relativism.

Already at the beginning of the 20th c the West’s traditional artistic canon, rooted in the ideals of classical Greece and the Renaissance, had begun to be dissolved and atomized. Whereas the nature of human identity reflecting novels of the 18th and 19th c conveyed a sense of human selfhood solidly outlined against large coherent background of linear narrative logic and historical sequence, the characteristic 20th c novel was notable for a constant questioning of its own premises, an incessant disruption narrative and historical coherence, a confusing of horizons, a sophisticated and convoluted self-doubt that left characters, author, and reader in a state of irreducible suspension. Reality and identity, as Hume had precociously perceived two centuries earlier, were neither humanly ascertainable nor ontological absolute. They were fictive habits of psychological and pragmatic convenience, and in the accurately introspective, way, relativistic consciousness of the contemporary Western man, they could no longer be confidently presumed. For many, they were also false prisons, to be seen through and transcended” for were there uncertainty there was also freedom.

Half in reflection and half in prophesy, the dissonance and disjunction, radical freedom and radical uncertainty of the 20th c found full and precise expression in the arts. Palpable life in all its flux and chaos replaced the formal convention of earlier eras. The marvelous in art was sought through the aleatory (luck), the spontaneous, and the happenstance. Whether in painting, poetry, music, theatre, an insistent amorphousness and indeterminacy governed artistic expression. Incoherence and disturbing juxtaposition constituted the new aesthetic logic. The anomalous became normative, the incongruous, the fractured, the stylized, the trivial, the allusively obscure became standards. Concern with the irrational ands subjective, compounded by the overriding impulse to break free from conventions and expectations, often rendered an art intelligible to but an esoteric few – or so elliptically inscrutable as to preclude communication altogether. Each artist became the prophet of his own new order and dispensation, courageously breaking the old law and forging a new testament…

Art’s task was to make the world strange, to shock dulled sensibility, to forge a new reality by fragmenting the old. In art as in social practices, rebellion against a constricting and spiritually destitute society required the earnest, even systematic flouting of traditional values and assumptions. The sacred, made bland and empty by centuries of pious convention, seemed better expressed in the profane and blasphemous. Elemental passions and sensation could best draw forth the aboriginal wellsprings of the creative spirit. In Picasso as in the century he mirrored, there arose a Dionysian compound and unbound eroticism, aggression, dismemberment, death, and birth. Alternatively, artistic revolt took the form of simulating the modern world in its metallic aridity, with the minimalists mimicking the scientific positivist in their striving for an expressionless art – an impersonal objectivism stripped of interpretation, flatly depicting gestures, forms and tones devoid of subjectivity or meaning. In the view of many artists, not just intelligibility and meaning but beauty itself was to be abjured, for beauty, too, could be a tyrant, a convention to be destroyed.

It was not simply that the old formulae had been exhausted, or that artists sought novelty at any cost. Rather, the nature of contemporary human experience demanded the collapse of old structures and themes, the creation of new ones, or the renouncing of any discernable form or content whatever. Artists had become realists of a new reality – of an ever-growing multiplicity of realities –lacking any precedent. Thus, their artistic responsibilities sharply diverged

From those of their predecessors; radical change, in art as in society, was the 20th c overriding them, its dominant imperative and its inescapable actuality.

Yet a price was paid. “*Make it new*”, Ezra Pound decreed, but later he reflected “*I cannot make it cohere*”. Radical change and ceaseless innovation lend themselves to an un-aesthetic chaos, to incomprehensible and barren alienation. The late modern experiment threatened to fray into meaningless solipsism. The results of incessant novelty were creative but seldom enduring. Incoherence was authentic but seldom satisfying. Subjectivism was perhaps fascinating but too often irrelevant. The insistent elevation of the abstract over the representational sometimes seemed to reflect little more than the growing incapacity of the modern artist to relate to nature. In the absence of established aesthetic forms or culturally sustained modes of vision, the arts in the 20th c became notable for a certain quality of graceless transience, an undisguised self-consciousness regarding their own ephemeral substance and style.

By contrast, what was constant and cumulative in 20th c art was an increasing ascetic striving for an uncompromised essence of art that gradually eliminated every artistic element that could be regarded as peripheral or contingent – representation, narrative, character, melody, tonality, structural continuity, thematic relation, form, content, meaning, purpose – moving inevitably toward an end point in which all that remained was blank canvas, an empty stage, silence. Reversion to distantly past or foreign forms and standards seemed to offer the only way out, but these, too, proved short-lived gambits incapable of taking root in the restless modern psyche. Like philosophers and theologians, artists were finally left with only the self-reflective and fairly paralyzing preoccupation with their own creative processes and formal procedures, and not infrequently the destruction of the results. The earlier modernist faith in the great artist who alone was sovereign in an otherwise meaningless world gave way to the post-modern loss of faith in the artist’s transcendence. Richard Sukenick in “The death of the novel” (1969), writes:

*The contemporary artist is forced to start from scratch; reality does not exist, time does not exist, personality does not exist. God was the omniscient author but he died; now no one knows the plot, and since reality lacks the sanction of a creator, there is no guarantee as to the authenticity of the received version. Time is reduced to presence, the content of a series of discontinuous moments. Time is no longer purposive, and so there is no density, only chance. Reality is, simply, our experience, and objectivity is of course an illusion. Personality, after passing through a stage of awkward self-consciousness, has become a mere locus for our experience. In view of these annihilations, it should be no surprise that literature, also, does not exist – how could it? There is only reading and writing… ways of maintaining a considered boredom in the face of the abyss.*

Perhaps, on a less futile note, we can say that the actor epitomizes the postmodern artistic ethos, and to personify the post-modern identity generally, for his/her reality remains deliberately and irreducibly ambiguous. Irony pervades all action; performance is all. The actor is never univocally committed to an exclusive meaning, to a literal reality. Everything is “as if”.

The underlying powerlessness of the individual on modern life pressed many artists and intellectuals to withdraw from the world and to forsake the public arena. Fewer felt capable of engaging issues beyond those immediately confronting the self and its private struggle for substance, let alone committing to universal moral visions that no longer appeared tenable. Human activity, artistic, intellectual, and moral, was forced to finds its ground in a standard-less vacuum. Meaning seemed to be no more than an arbitrary construct, truth only convention, reality undiscoverable. Man, it began to be said, following Jean Paul Sartre, was a “*futile passion”.*

Underneath the superficial clamor of an often frenetic and hyper-stimulated daily existence (endless sport, music, film, and a host of other festivals), an apocalyptic tone started to pervaded many aspects of cultural life, and as the 20th c advanced there could be heard, with accelerating intensity an frequency, bell-tolling declarations concerning the decline and fall, the deconstruction and collapse of virtually every one of the West’s great intellectual and cultural projects: the end of theology, the end of philosophy, the end of science, the end of literature, the end of art, the end of culture itself. Just as the Enlightenment-scientific side of modern mind found itself undermined by its own intellectual advances and radically challenged by its technological and political consequences in the world, so too the Romantic side, reacting to similar circumstances but with a different and often more prophetic sensibility, found itself both disillusioned from within and thwarted from without, apparently destined to hold transcendent aspirations in a cosmic and historical context devoid of transcendent meaning.

Thus, Western man enacted an extraordinary dialectic in the course of the modern era – moving from a near boundless confidence in his own powers, his spiritual potential, his capacity for certain knowledge, his mastery over nature, and his progressive destiny to what appeared to be a sharply opposite condition: a debilitating sense of metaphysical insignificance and personal futility, spiritual loss of faith, uncertainty in knowledge, a mutual destructive relationship with nature, and an intense insecurity concerning the future. In four centuries of modern man’s existence, Bacon and Descartes (optimism) had become Kafka and Beckett (pessimism).

Something was indeed ending! So it was that the Western mind in response to these many complexly interwoven developments. Had followed a trajectory that by the late 20th c had largely dissolved the foundations of the modern world view, leaving the contemporary mind increasingly bereft of established certainties, yet fundamentally open in ways it was never before. And the intellectual sensibility that now reflects and expresses this unprecedented situation, the over-determined outcome of the modern mind’s extraordinary development of increasing sophistication and self-deconstruction, is the post-modern mind.

**The post-modern mind**

The central prophet of the post-modern mind was Friedrich Nietzsche with his radical perspectivism, his sovereign critical sensibility, and his powerful, poignantly ambivalent anticipation of the emerging nihilism in Western culture. We also see (like Socrates at the birth of the classical Greek mind, Jesus at the birth of Christianity, and Galileo at the birth of modern science) a post-modern analogy to archetypal sacrifice and martyrdom with extraordinary inner trial and imprisonment, in Nietzsche’s intense intellectual ordeal, extreme psychological isolation, and eventual paralyzing madness – who signed his last letter “The Crucified” – and death at the turn of the 20th c.

Like Nietzsche the post-modern intellectual situation is profoundly complex and ambiguous - perhaps in its very essence. What is called “post-modern” varies considerably from context to context, but in its most general and widespread form, the post-modern mind may be viewed as an open-ended, indeterminate set of attitudes that has been shaped by a great variety of intellectual and cultural currents, ranging from pragmatism, existentialism, Marxism, psychoanalysis, feminism, hermeneutics, deconstruction, and post-empiricist philosophy of science, etc. Out of this maelstrom of highly developed and divergent tendencies emerged a few shared working principles.

There is an appreciation of the plasticity and constant change of reality and knowledge,

A stress on concrete experience over fixed abstract principles, and

A conviction that no single apriori thought system should govern belief or investigation.

It is recognized that human knowledge is subjectivity determined by a multitude of factors

That objective essences or things-in-themselves are neither accessible nor positable,

That the value of all truths and assumptions must be continually subjected to direct testing,

The critical search for truth is constrained to be tolerant of ambiguity and pluralism,

And that the outcome of this search will necessarily be relative and fallible.

Hence the quest for knowledge must be *endlessly self-revising (see the various schools of that are counted as part of scientific psychology: behaviorism, functionalism, cognitivism neuroscientism, etc)*. One must try the new, experiment and explore, test against subjective and objective consequences, learn from one’s mistakes, take nothing for granted, treat everything as provisional, assume no absolutes. Reality is not solid, self-contained given but a fluid, unfolding process, an open universe, continually affected and molded by one’s actions and beliefs. It is possibility rather than fact. One cannot regard reality as a removed spectator against a fixed object; rather, one is always and necessarily engaged in reality, thereby at once transforming reality and being transformed by it. Although intransient and provoking in many respects, reality must in some sense be hewed out by means of the human mind and will, which are themselves already enmeshed in that which they seek to understand and effect. The human subject is an embodied agent (habitus), acting and judging in a context that can never be wholly objectified, with orientations and motivations that can never be fully grasped or controlled. The knowing subject is never disengaged from the body or from the world, which form the background and conditions every cognitive act.

The inherent human capacity for concept and symbol formation is recognized as fundamental and necessary element in human understanding, anticipation, and creation of reality. The mind is not a passive receiver of an external and ordered world, but the mind is an active and creative processor of perception and cognition. Reality is in some sense constructed by the mind, and many such construction are possible and none necessarily sovereign. While human knowledge may be bound to conform to certain biological subjective structures, there is a degree of indeterminacy in these that combined with the human will and imagination, permit an element of freedom in cognition. **Implicit here is a relativized critical empiricism and a relativized critical rationalism – recognizing the indispensability of both concrete investigation and of rigorous argument, criticism and theoretical formulation, yet also recognizing that neither procedure can claim any absolute foundation. There is no empirical fact that is not already theory-laden, and there is no logical argument or formal principle that is apriori certain. All human understanding is interpretation, and no interpretation is final.**

The prevalence of the Kuhnian concept of “paradigms” in current discourse is characteristic of post-modern thought, reflecting a critical awareness of the mind’s fundamentally interpretative nature. This awareness has not only affected the post-modern approach to past cultural worldviews and the history of changing scientific theories, but has also influenced the post-modern self-understanding itself, encouraging a more sympathetic attitude toward repressed and unorthodox perspectives and a more self-critical view of currently established ones. Continuing advances in psychology, anthropology, sociology, history, and linguistics have underscored the relativity of human knowledge, bringing increased recognition of the Eurocentric character of Western thought, and of the cognitive bias produced by factors such as class, race, and ethnicity. Especially penetrating has been the analysis of gender as a crucial factor determining and limiting what counts as truth. Various forms of psychological analysis, cultural as well as individual, have further unmasked the unconscious determinants of human experience and knowledge.

Reflecting and supporting all these developments is a radical perspectivism that lies at the heart of post-modern sensibility: perspectivism rooted in the epistemologies of Hume, Kant, Hegel (historicism), and Nietzsche, and later articulated in pragmatism, hermeneutics, and post-structuralism. In this understanding the world cannot be said to possess any features in principle prior to interpretation. The world does not exist in-itself, independent of interpretation, rather the world comes into being through interpretation. The subject of knowledge is already embedded in the object of knowledge; thus the human mind can never stand outside the world judging it from an external vantage point. Every object of knowledge is already part of a pre-interpreted context and beyond that context are only other pre-interpreted contexts. All knowledge is mediated by signs and symbols of uncertain provenance, constituted by historically and culturally variable predispositions and influenced by unconscious human interests. Hence, the nature of truth and reality, in science no less than in philosophy, religion, art, is radically ambiguous. The subject can never presume to transcend the manifold predispositions of his/her subjectivity. One can at best attempt a fusion of horizons, a never-complete rapprochement between subject-object. Less optimistically one must recognize the insuperable solipsism of human awareness against the radical illegibility of the world.

On the other side of all this openness and indeterminacy of postmodernism, there is the lack of any firm ground for a worldview. Both inner and outer realities have become unfathomably ramified, multi-dimensional, malleable, and unbounded – bringing to spur courage and creativity but also a potentially debilitating anxiety in the face of unending relativism and existential finitude. The conflicts of subjective and objective testing, an acute awareness of cultural parochialism and historical relativity of all knowledge, a pervasive sense of radical displacement and uncertainty, and a pluralism bordering on distressing incoherence all contribute to the post-modern situation/condition. To even speak of *subject distinct from an object,* as distinguishable entities, is to presume more than can be known. With the ascendance of the post-modern mind, the human quest for meaning in the cosmos has devolved upon a hermeneutic enterprise that is disorientingly free-floating: the post-modern human exists in a universe whose significance is at once utterly open and without warrantable foundation.

Of the many factors that have converged to produce this intellectual position, it has been the analysis of language that has brought forth the most radical skepticism in epistemology – and it is these currents that have identified themselves most consciously as “post-modern”. Again many sources contributed to this development – Nietzsche’s analysis of the problematic relation of language to reality, C. S. Peirce’s semiotics positing that all human thought takes place in signs, Ferdinand de Saussure’s linguistics positing the arbitrary relation between word and object, sign and signified; Wittgenstein’s analysis of the linguistic structuring of human experience; Heidegger’s existential-linguistic critique of metaphysics; Edward Sapir and B. L. Whorf’s linguistic relativity hypothesis to the effect that language shapes the perception of reality; Michel Foucault’s genealogical investigations into the social construction of knowledge; and Jacques Derrida’s deconstructionism challenging the attempt to establish the secure meaning of any text. The upshot of all this is the radical relativization of all knowledge, all claims to sovereign truth, and hence the revision of the goals of intellectual life.

Basic to this thought is the thesis that al human thought is ultimately generated and bound by idiosyncratic cultural-linguistic form of life. Human knowledge is the historically contingent product of linguistic ands social practices of particular local communities of interpreters, with no assured ever-closer relation to an independent a-historical reality. Because all human experience is linguistically pre-structured, and yet the various structures of language possess no demonstrable connection with an independent reality, the human mind can never claim access to any reality other than that determined by its local form of life (consisting of endless “stories”).

Language is a cage (Wittgenstein).

Moreover, linguistic meaning itself can be shown to be fundamentally unstable because the contexts that determine meaning are never fixed, and beneath the surface of every apparently coherent text can be found a plurality of incompatible meanings. No interpretation of a text can claim decisive authority because that which is being interpreted inevitably contains hidden contradictions that undermine coherence. Hence all meanings are ultimately undecidable – there is no true meaning (unless we stipulate it and the symbol of language becomes a sign designating a thing). No underlying primal reality can be said to provide a foundation for human attempts to represent truth. Texts refer only to other texts, in an infinite regress, with no secure basis in something external to the text. One can never escape the play of signifiers. The multiplicity of incommensurable human truths exposes and defeats the conventional assumption that the mind can progress ever forward to a bearer grasp of what is true/real. Nothing certain can be said about the nature of truth, except perhaps that it is, (Richard Rorty) “*what our peers will let us get away with saying”.* ***Here knowledge/truth is truly bound to power, of individuals and institutions – Foucault).***

Here in a sense the Cartesian critical intellect has reached its furthest point of development, doubting all, applying a systematic skepticism to every possible meaning. Without any divine foundation to certify the word, language possess no privileged connection to truth. The fate of human consciousness is ineluctably nomadic, a self-ware wandering through error.

The history of human thought is a history of idiosyncratic schemes, ambiguous interpretative vocabularies having no ground beyond what is already saturated by their own metaphorical and interpretative categories. Post-modern philosophers can compare and contrast, analyze and discuss the many perspectives human beings have expressed, the diversity of symbol systems, the various ways of making things hang together, but they cannot pretend to possess an extra-historical Archimedian point from which to judge whether a given perspective validly represents truth. Since there is no indubitable foundation to human knowledge, the highest value for any perspective it its capacity to be temporarily useful or edifying, emancipatory or creative – though it is recognized that these valuations are themselves ungrounded except in the personal and cultural taste/inclination. For any effort at justification is itself only another social practice with no foundation beyond social practice.

The most prominent philosophical outcome of these various post-modern developments has been a many-sided critical attack on the Western philosophical tradition from Platonism onward. The whole project of that tradition to grasp and articulate a foundational reality has been criticized as futile, as an exercise in linguistic game playing, a sustained but doomed effort to move beyond elaborate fictions of its own creation. More pointedly, such a project has been condemned as inherently alienating and oppressively hierarchical – an intellectually imperious procedure that has produced an existential and cultural impoverishment, and that has led ultimately to the technocratic domination of nature, and the social-political domination of others. The Western mind’s overriding compulsion to impose some form of totalizing reason – theological, scientific, and economic – on every aspect of life is accused of being not only self-deceptive but destructive.

Spurred on by these and many other developments, post-modern critical thought had encouraged a vigorous rejection of the entire Western intellectual canon as long defined and privileged by more or less exclusively male, white, European elite. Received truths concerning “man”, “reason”, “civilization”, and “progress” are indicted as intellectually and morally bankrupt. Under the cloak of Western values too many sins have been committed. Disenchanted eyes are now cast onto the West’s long history of ruthless expansionism and exploitation – the rapacity of its elites from ancient to modern times, its systematic thriving at the expense of others, its colonialism and imperialism, its slavery and genocide, its anti-Semitism, its oppression of women, people of color, minorities, transsexuals, the working classes, the poor, its destruction of indigenous peoples throughout the world, its arrogant insensitivity to other cultural traditions and values, its cruel abuse of all forms of life, it blind ravaging of virtually the entire planet.

In this radically transformed cultural context, the contemporary academic world has increasingly concerned itself with the critical deconstruction of traditional assumptions through several overlapping modes of analysis: sociological, political, historical, psychological, linguistic, and literary. Texts of every category are analyzed with an acute sensitivity to rhetorical strategies and political functions they serve. The underlying intellectual ethos is one of disassembling established structures, deflating pretensions, exploding beliefs, un-masking appearances – a *hermeneutics of suspicion* in the spirit of Marx, Nietzsche and Freud. Post-modernism is in this sense “antinomian”, a movement that assumes a vast un-making of the Western mind, deconstructing, de-centering, disappearance, dissemination, demystification, discontinuity, difference, dispersion, etc. Such terms express an epistemological obsession with fragments or fractures, and a corresponding ideological commitment to minorities in politics, sex, and language. To think well, to feel well, to act well, according to the episteme of unmaking, is to refuse the tyranny of wholes: *totalization in any human endeavor is potentially totalitarian* (reflecting Hegel’s description of self-fulfilling abstract skepticism which sees only nothing and must wait for something to come along so it can also throw it out).

The pretense of any form of omniscience, philosophical, religious, scientific, must be abandoned. Grand Narratives (theories and universals) cannot be sustained without producing empirical falsification and intellectual authoritarianism. To assert general truths is to impose spurious dogma on the chaos of phenomena. Respect for contingency and discontinuity limits knowledge to the local and specific; any alleged comprehensive accounts are at best useful fictions masking power relationship, violence, and subordination.

Properly speaking then there cannot be a “post-modern” worldview. The post-modern paradigm is by its very nature fundamentally subversive of all paradigms, for at its core is the awareness of reality as being at once multiple, local and temporal, and without foundation. John Dewey recognized this situation at the start of the 20th c. namely that “*despair of any integrated outlook and attitude is the chief intellectual characteristic of the present age*” and this quote has been enshrined in Jean-Francois Lyotard’s definition of post-modernity as “*incredulity towards meta-narratives*”.

Here paradoxically we recognize something of the old confidence of the modern mind in the superiority of its own perspective. But whereas the modern mind’s superiority stemmed fro its awareness of possessing in an absolute sense more knowledge than its predecessors, the post-modern mind’s sense of superiority derives from its special awareness of how little knowledge can be claimed by any mind, itself included. Yet by virtue of that self-relativizing critical awareness, the post-modern mind recognized that a quasi-nihilist rejection of any and all forms of totalization and meta-narrative – of any aspiration to intellectual unity, wholeness, or comprehensive coherence – is itself a position not beyond questioning, and cannot on its own principles ultimately justify itself any more than can the various metaphysical views against which the post-modern mind had defined itself. Such a position presupposes a meta-narrative of its own, one perhaps more subtle than others, but in the end no less subject to deconstructive criticism. On its own terms, the assertion of the historical relativity and cultural linguistic bondage of all truth and knowledge must itself be regarded as reflecting but one more local and temporal perspective having no necessarily universal or extra-historical value. Everything could change tomorrow! Implicitly, the one post-modern absolute is critical consciousness, which, by deconstructing al, seems compelled by its own logic to do so to itself as well. This is the unstable paradox that permeates the post-modern mind.

But this post-modern mind has been prone to dogmatic relativism and a compulsively fragmenting skepticism, and if the cultural ethos that has accompanied it sometimes deteriorated into cynical detachment and spiritless pastiche, it is evident that the most significant characteristic of the larger post-modern situation – its pluralism, complexity, and ambiguity – are precisely the characteristics necessary for the potential emergence of a fundamentally new form of intellectual vision, one that might preserve and transcend the current state of extraordinary differentiation. In the politics of the contemporary worldview, no perspective – religious, scientific, or philosophical – has the upper hand, yet that situation has encouraged an unprecedented intellectual flexibility and cross-fertilization, reflected in the widespread call for, and practice of, open conversation between different understandings, different vocabularies, and different cultural paradigms.

Looked at as a whole, the extreme fluidity and multiplicity of the contemporary intellectual, cultural, and political scene can scarcely be exaggerated; not only is the post-modern mind itself a maelstrom of unresolved diversity, but virtually every important element of the Western intellectual past is now present and active in one form or another, contributing to the vitality and confusion of the contemporary *Zeitgeist (spirit of the time)*.

With all previous held assumption being questioned, there remain few, if any, apriori strictures on the possible, and many perspectives from the past have re-emerged with new relevance. Hence any generalizations about the post-modern mind have to be qualified by recognition of the continuing presence or recent resurgence of most of its major predecessors – the entire history of ideas. Various still vital forms of the modern sensibility, of the scientific mind, of Romanticism, and the Enlightenment, of Renaissance syncretism, of Protestantism, Roman Catholicism, and Judaism - all of these at various stages of development and ecumenical interpenetration – continue today to be influential factors. Even elements of the Western cultural tradition going back to the Hellenic era and classical Greece – Platonic and pre-Socratic philosophy, Hermeticism, mythology, and mystery religions – have been re-emerging to play new roles in the current intellectual scene. Moreover, these have been joined, affected, by a multitude of cultural perspectives fro outside the West, such as Buddhism and Hindu mystical traditions, by underground cultural steam within the West, such as Gnosticism and the major esoteric traditions; and by indigenous and archaic perspectives antedating Western civilization altogether, such as Neolithic European and native American spiritual traditions – all gathering now on the intellectual stage as if for some kind of climatic synthesis.

The cultural and intellectual role of religion has of course been drastically affected by the secularizing and pluralistic developments of the modern age, but while in most respects the influence of institutionalized religion has continued to decline, the religious sensibility itself seems to have been revitalized by newly ambiguous intellectual circumstances of the post-modern age. Contemporary religion has been revitalized as well by its own plurality, finding new forms of expression and new sources of inspiration and illumination ranging from Eastern mysticism and psychedelic self-exploration to liberation theology and eco-feminist spirituality.

Although the ascendance of secular individualism and the decline of traditional religious belief may have precipitated widespread spiritual anomie, it is evident that, for many, these same developments ultimately encouraged new forms of religious orientation and greater spiritual autonomy. In growing numbers, individual have not only felt compelled but free to work out for themselves their relationship to the ultimate conditions of human existence, drawing on a far wider range spiritual resources to do so. The post-modern collapse of meaning has thus been countered by an emerging awareness of the individual’s self-responsibility and capacity for creative innovation and self-transformation in his/her existential and spiritual response to life. Following the suggestions implicit in Nietzsche, the “death of God” has begun to be assimilated and reconceived as a positive religious development, as permitting the mergence of a more authentic experience of the numinous, a larger sense of deity. On the intellectual level, religion no longer tends to be understood reductively as a psychological or culturally determined belief in non-existent realities, or explained away as an accident of biology, but is recognized as a fundamental human activity in which every society and individual symbolically interprets and engages the ultimate nature of being.

Science too, while no longer enjoying the same degree of sovereignty it possessed in the modern era, continues to retain allegiance for the unrivalled pragmatic power of its conceptions and the penetrating rigor of its method and its products (technology). Because the earlier knowledge claims of modern science have been relativized by both the philosophy of science and the concrete consequences of scientific and technological advance, that allegiance is no longer uncritical, yet in these new circumstances science itself has been seemingly freed up to explore new and less constrictive approaches to understanding of the world. It is true that individuals who yet subscribe to an allegedly unified and self-evident “scientific worldview” of the modern type are seen as having failed to engage the larger intellectual challenge of the age (and so receiving the same judgment in the post-modern era that the ingenuous religious person received from science in the modern era). In virtually all contemporary disciplines, it is recognized that the prodigious complexity, subtlety, and multivalence of reality far transcend the grasp of any one intellectual approach, and that only a committed openness to the interplay of many perspectives can meet the extraordinary challenges of the post-modern era. But contemporary science has itself become increasingly self-aware ands self-critical, less prone to naïve scientism, more conscious of its epistemological and existential limitations. Nor is contemporary science singular, having given rise to a number of divergent interpretations of the world, many of which differ sharply from what was previously the conventional scientific vision.

Common to these new perspectives has been the imperative to re-think and re-formulate the human relation to nature, an imperative driven by the growing recognition that modern science’s mechanistic and objectivistic conception of nature was not only limited but fundamentally flawed. Major theoretical interventions such as Gregory Bateson’s “ecology of mind’, David Bohm’s theory of implicate order, Sheldrake’s theory of formative causation, McClintock’s theory of genetic transposition, Lovelock’s Gaia hypothesis, Prigogine’s theory of dissipative structures and order by fluctuation, Lorenz and Feigenbaum’s chaos theory, and Bell’s theorem of non-locality have pointed to new possibilities for a less reductionist scientific world conception. Evelyn Fox Keller’s methodological recommendation that the scientist be capable of empathic identification with the object he/she seeks to understand reflects a similar orientation of the scientific mind. Moreover, many of these developments within the scientific community have been strengthened and often stimulated by the re-emergence of and widespread interest in various archaic and mystical conceptions of nature.

A further crucial development encouraging these integrative tendencies in the post-modern intellectual milieu has been the epistemological re-thinking of the nature of the imagination, carried out on many fronts in sociology, anthropology, religious studies, philosophy of science, and spurred above all by the work of C. G. Jung and the epistemological insights of post-Jungian depth psychology. Imagination is no longer simplistically conceived as in opposition to perception and reason; rather perception and reason are recognized as always informed by the imagination. With this awareness of the fundamental mediating role of the imagination in human experience has also come an increased appreciation of the power and complexity of the unconscious, as well as new insight into the nature of archetypal patterning and meaning. The post-modern philosopher’s recognition of the inherently metaphorical nature of philosophical and scientific statements (Feyerabend, Barbour, and Rorty) has both affirmed and more precisely articulated with the post-modern psychologist’s insight into archetypal categories of the unconscious that condition and structure human experience and cognition (Jung, James Hillman). The long-standing philosophical problem of universals, which had been partly illuminated by Wittgenstein’s concept of ‘family resemblances” (the idea that what appears to be a definite commonality shared by all instances covered by a single general word in fact often comprises a whole range of indefinite, overlapping similarities and relationships) has been given new intelligibility through depth psychology’s understanding of archetypes. In this conception, archetypes are recognized as enduring pattern or principles that are inherently ambiguous and multivalent, dynamic, malleable, and subject to diverse cultural and individual inflections, and yet posses a distinct underlying formal coherence and universality.

An especially challenging intellectual position that has emerged out of modern and post-modern developments is one which, recognizing both the essential autonomy of the human being and a radical plasticity in the nature of reality, asserts that reality itself unfolds in response to the particular symbolic framework and set of assumptions that are employed by each individual and each society. The fund of adapt available to the human mind is of such intrinsic complexity and diversity that it provides plausible support for many different conceptions of the ultimate nature of reality. The human being must therefore choose among a multiplicity of potentially viable options, and whatever option is chosen will in turn affect both the nature of reality and the choosing subject. In this view, although there are many defining structures in the world and in the mind that resist or compel human thought and activity in various ways, on a fundamental level the world tends to ratify, and open up according to, the character of the vision directed toward it. The world that the human being attempts to know and remake is in some sense projectively elicited by the frame of reference with which it is approached.

Such a position emphasizes the immense responsibility inherent in the human situation, and the immense potential. Since evidence can be adduced and interpreted to corroborate a virtually limitless array of worldviews, the human challenge is to engage that worldview or set of perspectives which brings forth the most valuable, life-enhancing consequences. The “human predicament” is here regarded as the human adventure: the challenge of being, *in potentia*, a radically self-defining entity (not in the sense of the “no exit” box of secular existentialists which unconsciously assumed specific apriori metaphysical limits) in a universe that is genuinely open. Because the human understanding is not unequivocally compelled by the data to adopt one metaphysical position over another, an irreducible element of human choice supervenes. Hence there enter into the epistemological equation, in addition to intellectual rigor and social-cultural context, other, more open-ended factors such as will, imagination, faith, hope, and empathy. The more complexly conscious and ideologically unconstrained the individual or society, the more free is the choice of worlds, and the more profound their participation in creating reality. This affirmation of the human being’s self-defining autonomy and epistemological freedom has a historical background going back to the Renaissance and Pico’s Oration, appearing in different forms in the ideas of Emerson and Nietzsche, James and Rudolf Steiner among others, but has been given new support and further dimensions by a wide rage of contemporary intellectual developments, from philosophy of science to sociology of religion.

More generally, whether in philosophy, religion, or science, the univocal literalism that tended to characterize the modern mind has been increasingly criticized and rejected, and in its place there appeared a greater appreciation of the multidimensional nature of reality, the many-sidedness of the human spirit, and the multivalent symbolically mediated nature of human knowledge and experience. With that appreciation also emerged a growing sense that the post-modern dissolving of the old assumptions and categories could permit the emergence of entirely new prospects for conceptual and existential reintegration, with the possibility of richer interpretative vocabularies, more profound narrative coherencies. Under the combined impact of the remarkable changes and self-revisions that have taken place in virtually every contemporary intellectual discipline, the fundamental modern schism between science and religion has been increasingly undermined. In the wake of such developments, the original project of Romanticism – the reconciliation of subject and object, human-being and nature-being, spirit and matter, conscious and unconscious, intellect and soul – has remerged with new vigor.

Two antithetical impulses can therefore be discerned in the contemporary post-modern intellectual situation: (1) one pressing for a radical deconstruction and unmasking of knowledge, beliefs, worldviews, and (2) the other for a radical integration and reconciliation. In obvious ways the two impulses work against each other, yet more subtly they can be seen as working together as polarized but complementary tendencies. Nowhere is this dynamic tension and interplay between the deconstructive and integrative more dramatically evident than in the rapidly expanding body of work produced by women informed by feminism.

Carolyn Merchant, Evelyn Fox Keller, and other historians of science have analyzed the influence exerted on the modern scientific understanding by gender biased strategies and metaphors supporting a patriarchal conception of nature – as a mindless, passive feminine object, to be penetrated, controlled, dominated, and exploited.

Paula Treichler, Francine Wattman Frank, Susan Wolfe, and other linguists have meticulously explored the complex relations between language, sex, and society, illuminating the multiplicity of ways women have been excluded or depreciated through the implicit codings of linguistic conventions.

New and powerful insights have emerged from the work of Rosemary Ruether, Mary Daly, Beatrice Bruteau, Joan Chamberlain Engelsman, and Elaine Pagels in religious studies; of Marija Gimbutas in archeology; Carol Gilligan in moral and developmental psychology; Stephanie de Voogd and Barbara Eckman in epistemology; and a host of feminist scholars in history, anthropology, sociology, jurisprudence, economics, ethics, aesthetics, literary theory, and cultural criticism.

As a whole, the feminist perspective has brought forth the most vigorous, subtle and radically critical analysis of conventional intellectual and cultural assumptions in all of contemporary scholarship. No academic discipline or area of human experience has been left untouched by feminist reexamination of how meanings are created and preserved, how evidence is selectively interpreted and theory molded with mutually reinforcing circularity. How particular theoretical strategies and behavioral styles have sustained male hegemony, how women’s voices have remained unheard through centuries of social and intellectual male dominance, how deeply problematic consequences have ensued from masculine assumptions about reality, knowledge, nature, society, and the divine.

Such analyses have in turn helped to illuminate parallel patterns and structures of domination that have marked the experience of other oppressed peoples and forms of life. Given the context in which it has arisen, the feminist intellectual impulse has been compelled to assert itself with a forceful critical spirit that has often been oppositional and polarizing in character. Yet precisely as a result of that critique, long established categories that sustained traditional oppositions and dualities (between male and female, subject and object, human and nature, body and spirit, self and other) have been deconstructed and reconceived, permitting contemporary mind to consider less dichotomized alternative perspectives that could not have been envisioned within previous frameworks. In certain respects the implications, both intellectual and social, of feminist analyses are so fundamental that their significance is only beginning to be realized in the contemporary mind.

So on many fronts, the post-modern mind’s insistence on pluralism of truth (and it overcoming of past structures and foundations) have opened a wide range of possibilities for approaching the intellectual and spiritual problems that have long confounded the modern mind. The post-modern era is an era without consensus on the nature of reality, but it is blessed with an unprecedented wealth of perspectives with which to engage the great issues that confront it.

Still the contemporary intellectual milieu is riddled with tension, irresolution, and perplexity. The practical benefits of pluralism are repeatedly undermined by stubborn conceptual disjunctions. Despite the frequent congruence of purpose, there is little effective cohesion, no apparent means by which a shared cultural vision could emerge, no unifying perspective cogent or comprehensive enough to satisfy burgeoning diversity of intellectual needs and aspirations. Gertrude Stein (1874-1946) writes: “*In the 20th c. nothing is in agreement with anything else”*. A chaos of valuable but seemingly incompatible interpretations prevails, with no resolution in sight. Of course such a context provides less hindrance to the free play of intellectual creativity than would the existence of a monolithic cultural paradigm. Yet fragmentation and incoherence are not without its own inhibiting consequences. The culture suffers both psychologically and pragmatically from a philosophical anomie that pervades it. In the absence of any viable, embracing cultural vision, old assumptions remain blunderingly in force, providing for an increasingly unworkable and dangerous blueprint for human thought and activity.

Faced with such a differentiated and problematic intellectual situation, thought people engage in the task of evolving a flexible set of premises and perspectives that would not reduce or suppress complexity and multiplicity of human realities, yet could also serve to mediate, integrate, and clarify. The dialectical challenge felt by many is to evolve a cultural vision possessed of a certain intrinsic profundity or universality that, while not imposing any apriori limits on the possible range of legitimate interpretations, would yet somehow bring an authentic and fruitful coherence out of present fragmentation, and also provide a sustaining fertile soil (ground) for the generation of unanticipated new perspectives and possibilities in the future. Given the nature of the present situation, however, such an intellectual task seems surpassingly formidable (like having to string the great Odyssean bow of opposites and then send an arrow through a seemingly impossible multiplicity of targets).

The intellectual question that looms in our time is whether the current state of profound metaphysical and epistemological irresolution is something that will continue indefinitely, taking perhaps more viable, or more radically disorienting, forms as the years and decades pass; whether it is in fact an entropic prelude to some kind of apocalyptic denouement of history; or whether it represents an epochal transition to another era altogether 9an era that would bring in a new form of civilization and a new worldview with principles and ideals fundamentally different from those that have impelled the modern world through its dramatic trajectory.

**At the millennium**

*Turning and turning in the widening gyre*

*The falcon cannot hear the falconer;*

*Things fall apart; the center cannot hold;*

*Mere anarchy is loosed upon the world…*

*Surely some revelation is at hand.*

William Butler Yeats, “The second coming”

As the 20th c is now closed, a widespread sense of urgency is tangible at many levels, as if the end of an aeon has indeed come. It is time for intense expectation, of striving, of hope, and uncertainty. Many sense that the great determining force of our reality is the mysterious process of history itself, which in the North American context seems to be hurtling toward a massive disintegration of all structures and foundations, a triumph of the Heraclitean flux.

Near the end of his life Toynbee wrote:

Present-day man has recently become aware that history has been accelerating – and this at an accelerating rate. The present generation has been conscious of this increase in acceleration in its own lifetime; and the advance in man’s knowledge of his past has revealed, in retrospect, that the acceleration began about 30,000 years ago… and that this has taken successive “great leaps forward” with the invention of agriculture, with the dawn of civilization, and with the progressive harnessing (within the last two centuries) of titanic physical forces of inanimate nature. The approach of the climax foreseen intuitively by the prophets is being felt, and feared, as a coming event. Its imminence is, today, not an article of faith; it is a datum of observation and experience. (*Encyclopedia Britannica 15th edition*)

There is a powerful crescendo in the dramatic series of utterances by some of the West’s great thinkers and visionaries concerning the imminent shift in the ages. Friedrich Nietzsche in whom, as Albert Camus writes, “nihilism became conscious for the first time”, who had foreseen the cataclysm that would befall European civilization in the 20th c. realized within himself the epochal crisis that would finally come when the modern mind conscious of its destruction of the metaphysical world, namely the “death of God”. Nietzsche writes:

What were we doing when we unchained this earth from its sun? Whither is it moving now? Whither are we moving? Away from all suns? Are we not plunging continually? Backward, sideward, forward, in all directions? Is there still any up or down? Are we not straying as through an infinite nothing? Do we not feel the breath of empty space? Has it not become colder? Is not the night continually closing in on us? (*The gay science*)

The sociologist, Max Weber, also saw the ineluctably consequences of the modern mind’s disenchantment of the world, saw the yawning void of relativism left by modernity’s dissolution of traditional worldviews, and saw that modern reason, in which the Enlightenment had placed all it hopes for human freedom and progress, yet which could not on its own terms justify universal values to guide human life, had in fact created an *“iron cage”* of bureaucratic rationality that permeated every aspect of modern existence. Weber writes:

No one knows who will live in this cage in the future, or whether at the end of this tremendous development entirely new prophets will arise, or there will be a great rebirth of old ideas an ideals, or if neither, mechanized petrification, embellished with a sort of convulsive self-importance. For of the last stage of this cultural development, it might well be truly said: “specialists without spirit, sensualists without a heart, this nullity imagines that it has attained a level of civilization never before achieved. (*The Protestant ethic and the spirit of capitalism*).

“only God can save us”, said Heidegger at the end of his life.

And Jung, at the end of his life, compared our age to the beginning of the Christian era 2000 years ago:

A mood of universal destruction and renewal…, has set it mark in our age. This mood makes itself felt everywhere, politically, socially, and philosophically. We are living in what the Greeks called the *kairos* (the right moment) for a “metamorphosis of the gods” of the fundamental principles and symbols. This peculiarity of our time, which is certainly not of our conscious choosing, is the expression of the unconscious man within us who is changing. Jung writes:

Coming generations will have to take account of this momentous transformation if humanity is not to destroy itself through the might of its own technology and science…. So much is at stake and so much depends on the psychological constitution of modern man…. Does the individual know he is the makeweight that tips the scales? (*The undiscovered self,* Vol. 10)

Our moment in history is a pregnant one. As a civilization, as a species we have come to the moment of truth, with the future of the human spirit, the future of the planet, hanging in the balance. If ever boldness, depth, and clarity of vision were called for, from many, it is now. Yet perhaps it is this very necessity that could summon forth from us the courage and the imagination we now require. Nietzsche’s Zarathustra says:

*And how could I endure to be a man, if man were not also poet and reader of riddles and…. A way to new dawns.*