

Embracing the Immaterial Universe: Toward a New Noetic Science

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For over four hundred years, Western civilization has chosen science as its source of truths and wisdom about the mysteries of life. Allegorically, we may picture the wisdom of the universe as resembling a large mountain. We scale the mountain as we acquire knowledge. Our drive to reach the top of that mountain is fueled by the notion that with knowledge we may become “masters” of our universe. Conjure the image of the all-knowing guru seated atop the mountain.

Scientists are professional seekers, forging the path up the “mountain of knowledge.” Their search takes them into the uncharted unknowns of the universe. With each scientific discovery, humanity gains a better foothold in scaling the mountain. Ascension is paved one scientific discovery at a time. Along its path, science occasionally encounters a fork in the road. Do they take the left turn or the right? When confronted with this dilemma, the direction chosen by science is determined by the consensus of scientists interpreting the acquired facts, as they are understood at the time.

Occasionally, scientists embark in a direction that ultimately leads to an apparent dead end. When that happens, we are faced with two choices: Continue to

plod forward with the hope that science will eventually discover a way around the impediment, or return to the fork and reconsider the alternate path. Unfortunately, the more science invests in a particular path, the more difficult it is for science to let go of beliefs that keep it on that path. As historian Arnold Toynbee suggested, the cultural - which includes the scientific - mainstream inevitably clings to fixed ideas and rigid patterns in the face of imposing challenges. And yet from among their ranks arise creative minorities that resolve the threatening challenges with more viable responses. Creative minorities are active agents that transform old, outdated philosophical “truths” into new, life-sustaining cultural beliefs.

From Reductionism to Holism

The path that science is currently navigating has inadvertently brought us to our current moment of global crisis. Since the modern scientific revolution, starting with the publication of Copernicus’s observation in 1543, science has perceived the universe as a physical machine operating on the mechanical principles later defined by Newton. In the Newtonian worldview, the universe is defined by its material reality and its operation understood through reductionism—the process of taking matter apart and

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Bruce H. Lipton, scientist and lecturer, received his PhD at the University of Virginia in Charlottesville (1971). He served as an associate professor of anatomy at the University of Wisconsin’s School of Medicine. Lipton’s research on mechanisms controlling cell behavior employed cloned human muscle cells. In addition, he lectured in cell biology, histology and embryology. Bruce resigned his tenured position to pursue independent research integrating quantum physics with cell biology. His breakthrough studies on the cell membrane, the “skin” of the cell, revealed that the behavior and health of the cell was controlled by the environment, findings that were in direct contrast with prevailing dogma that life is controlled by genes. Lipton returned to academia as a Research Fellow at Stanford University’s School of Medicine to test his hypotheses (1987-1992). His ideas concerning environmental control were substantiated in two major scientific publications. The new research reveals the biochemical pathways connecting the mind and body and provides insight into the molecular basis of consciousness and the future of human evolution.

studying its bits and pieces. Knowledge of the universe's parts and their interaction would allow science to predict and control nature. This notion of control is contained within determinism—the belief that with knowledge of something's parts, we can predict its behavior.

The reductionist approach to understanding the nature of the universe has provided valuable knowledge, enabling us to fly to the moon, transplant artificial hearts, and read the genetic code. However, applying this science to world problems has hastened our apparent demise. It's a simple fact that society cannot sustain itself by continuing to adhere to its current worldview. So leading-edge research is questioning fundamental assumptions long held as dogma by conventional science.

In contrast to conventional reductionism, the new noetic science is based upon holism, the belief that an understanding of nature and the human experience requires that we transcend the parts to see the whole.

Materialism and reductionism engender the idea that humans are disconnected from, and above, nature. The noetic vision emphasizes that life is derived from an integration and coordination of both the physical and the immaterial parts of the universe. The resolution of our global crisis requires the integration of reductionist and holistic perspectives. This revisioning of conventional science is seeding creative minorities who will rescue us from extinction.

Over the centuries, the accumulated knowledge of scientists has been assembled into a hierarchical construction resembling a multi-tiered building. Each

level of the building is built upon the scientific foundation provided by the supporting lower levels. Each floor of the building is distinguished as a scientific subspecialty. The foundation for the "science" building is math. Upon math is assembled the building's second level, physics. Built upon physics is chemistry, the building's third level. Chemistry serves as the platform for the fourth tier, biology. Built upon biology is the building's fifth and current top floor, psychology.

First Floor: A Foundation of Fractals and Chaos
Fundamental to this new noetic curriculum is the foundation offered by math. Mathematical laws are absolute, certain and indisputable. For centuries those laws have been used to isolate and divide the universe into separate measurable components. Future science will be built upon an emerging new math that emphasizes the disciplines of fractal geometry and chaos theory.

Fractals are a modern version of geometry, officially defined in 1983 by IBM scientist Benoit Mandelbrot. They are actually a simple mathematics based upon an equation involving addition and multiplication, in which the result is entered back into the original equation and solved again. Repetition of the equation inherently provides for a geometry expressing self-similar objects that appear at higher or lower levels of the equation's magnitude. Organization at any level of nature, like nested Russian dolls, reflects a self-similar pattern to organization found at higher or lower levels of reality. For example, the structure and behavior of a human cell is self-similar to the struc-



ture and behavior of a human, which in turn is self-similar to the structure and behavior of humanity. In short, “As above, so below.” Fractal geometry emphasizes that the observable physical universe is derived from the integration and interconnectivity of all of its parts.

Rather than endorsing a Darwinian evolution based upon random mutations and a struggle for survival, fractal geometry reveals that the biosphere is a structured cooperative venture comprised of all living organisms. Instead of invoking competition as a means of survival, the new view of nature is one driven by cooperation among species living in harmony with their physical environment. We must own that every human being counts, for each is a member of a single organism. When we war, we are warring against ourselves.

Through mathematical equations, fractal geometry derives structures resembling those of the natural world, such as mountains, clouds, plants and animals. The dynamics of those fractal structures are directly influenced by chaos theory, a math that is concerned with the nature by which small changes may cause unexpected final effects. Chaos theory defines the processes by which the flap of a butterfly’s wing in Asia may influence the formation of a tornado in Oklahoma. When chaos theory is combined with fractal geometry, the math further predicts the behavioral dynamics observed in our physical reality, from weather patterns to human physiology, from social patterns to market prices on the stock exchange.

Second Floor: Energy Physics

A century ago, a group of creative minorities launched a radical new view of how the universe works. Albert Einstein, Max Planck and Werner Heisenberg, among others, formulated new theories concerning the underlying mechanics of the universe. Their work on quantum mechanics revealed that the universe is not an assembly of physical parts as suggested by Newtonian physics but is derived from a holistic entanglement of immaterial energy waves. Quantum mechanics shockingly reveals that there is no true “physicality” in the universe; atoms are made of focused vortices of energy—miniature tornados that are constantly popping into and out of existence. Atoms as energy fields interact with the full spectrum of invisible energy fields that comprise the universe, intimately entangled with one another and the field in which they are immersed.

A fundamental conclusion of the new physics also acknowledges that the “observer creates the reality.” As observers, we are personally involved with the creation of our own reality! Physicists are being

forced to admit that the universe is a “mental” construction. Pioneering physicist Sir James Jeans wrote: “The stream of knowledge is heading toward a nonmechanical reality; the universe begins to look more like a great thought than like a great machine. Mind no longer appears to be an accidental intruder into the realm of matter . . . we ought rather hail it as the creator and governor of the realm of matter” (R. C. Henry, “The Mental Universe”; *Nature* 436:29, 2005).

Although quantum mechanics was acknowledged eighty years ago as the best scientific description of the mechanisms creating our universe, most scientists rigidly cling to the prevailing matter-oriented worldview simply because it “seems” to make better sense out of our existence. To grapple with the contradictions, the majority of physicists have chosen an easy way out: They restrict quantum theory’s validity to the subatomic world. Renowned theoretical physicist David Deutsch wrote: “Despite the unrivaled empirical success of quantum theory, the very suggestion that it may be literally true as a description of nature is still greeted with cynicism, incomprehension, and even anger” (T. Folger, “Quantum Shmantum”; *Discover* 22:37–43, 2001).

However, quantum laws must hold at every level of reality. We can no longer afford to ignore that fact. We must learn that our beliefs, perceptions and attitudes about the world create the world. Recently, Johns Hopkins physicist professor R. C. Henry suggested that we “get over it” and accept the inarguable conclusion: “The universe is immaterial - mental and spiritual” (R. C. Henry, “The Mental Universe”).

Third Floor: Vibrational Chemistry

While conventional chemistry has focused on the atomic elements as miniature Newtonian solar systems composed of solid electrons, protons and neutrons, vibrational chemistry, based upon quantum mechanics, emphasizes that atoms are made of spinning immaterial energy vortices, such as quarks. The new chemistry is concerned with the role of vibration in creating molecular bonds and driving molecular interactions. Energy fields, such as those derived from cell phones or from thoughts, interact with and influence chemical reactions.

Vibrational chemistry defines the mechanisms that mediate the mind-body connection. The body is structurally derived from over a hundred thousand different protein molecules. Proteins change shape in response to signals—harmonic vibrations in the field. The collective movement of proteins generates the behaviors we observe as “life.” Life-controlling signals originate from both physical chemicals and immaterial energy waves. The energy-protein inter-

face is the junction of the mind-body connection. Via a process called electro-conformational coupling, protein behaviors can be influenced by neural vibrational fields derived from conscious processes (T. Y. Tsong, "Deciphering the Language of Cells"; Trends in Biochemical Sciences 14:89, 1989).

Fourth Floor: The New Biology

Traditional biology, like traditional chemistry, has also been investigated using a reductionist philosophy—organisms are dissected into cells, and cells into molecular parts—to gain understanding of how they work. The new curriculum perceives of cells and organisms as integrated communities that are physically and energetically entangled within their environment. The new biological holism endorses James Lovelock's hypothesis that the Earth and the biosphere represent a single living and breathing entity known as Gaia. The study of Gaian physiology, emphasizing the participation and integration of all the Earth's organisms, would reacquaint us with our connection to the planet and to our ancient role as the Garden's caretakers.

A noetic biology will also embrace the power of epigenetics. Epigenetics, which literally translates as "control above the genes," is a newly recognized second genetic code that controls the activity and programming of an organism's DNA. This new hereditary mechanism reveals how behavior and gene activity are controlled by an organism's perception of its environment. The fundamental difference between the old DNA genetic code and the new epigenetics is that the former notion endorses genetic

determinism—the belief that genes predetermine and control our physiological and behavioral traits - while epigenetics recognizes that our perceptions of the environment, including our consciousness, actively control our genes. Through epigenetic mechanisms, applied consciousness can be used to shape our biology and make us "masters" of our own lives.

Fifth Floor: Energy Psychology

Holistic revisions in the supporting sciences of physics, chemistry and biology provide for a radically remodeled fifth tier, psychology. For centuries, our materialistic perspective dismissed the immaterial mind and consciousness as an epiphenomenon of the mechanical body. We perceived that the action of genes and neurochemicals- the hardware of the central nervous system- were responsible for our behaviors and our dysfunctions. The foundation of quantum mechanics, vibrational chemistry and epigenetic control mechanisms, however, provide for a profound new understanding of psychology: The environment along with the perceptions of the mind controls behavior and the genetics of biology. Rather than being "programmed" by our genes, our lives are controlled by our perceptions of life experiences!

The switch from Newtonian to quantum mechanics changes the focus of psychology from physiochemical mechanisms to the role of energy fields. Energy psychology would focus on the software of programming consciousness rather than the physiochemical hardware that mechanistically expresses behavior. Energy psychology directly impacts subconscious programming rather than trying to manipulate genetics,



physiology and behavior. This new understanding will also help parents to recognize the power that fundamental perceptions have on programming the subconscious mind. This recognition can then lead to developmental experiences that will enhance the health, intelligence and happiness of our children.

Penthouse: Noetic Science, A View from the Top
Such renovations to each floor of traditional science not only strengthen the building but also support a new tier, an all-encompassing field known as noetic science. Noetic science emphasizes that the structure of the universe is made in the image of its underlying field. The physical character of atoms, proteins, cells and people are controlled by immaterial energies that collectively form that field. The cel-

lular community comprising each human responds to a unique spectrum of the universe's energy field. This unique spectrum, referred to by many as soul or spirit, represents an invisible moving force that is in harmonic resonance with our physical bodies. This is the creative force behind the consciousness that shapes our physical reality.

Noetic consciousness reveals that collectively we are the "field" incarnate. Each of us is "information" manifesting and experiencing a physical reality. Integrating and balancing the awareness of our noetic consciousness into our physical consciousness will empower us to become true creators of our life experiences. When such an understanding reigns, we and the Earth will once again have the opportunity to create the Garden of Eden.

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