The Union of Spirit and Matter: Science, Consciousness, and a Life Divine

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Abstract: The once unbridgeable chasm between spirit and matter is closing. While the scientific method and scientific materialism have brought untold benefits to humanity, quantum physics has changed our view of matter as solid, objective, and obvious to a view that is more complex and which includes the possibility that consciousness has a part in manifesting reality. This shift mirrors Sri Aurobindo's integral philosophy, which states that the universe is a manifestation of consciousness. This manifestation occurs through a process of involution followed by evolution, the next step of which is the emergence of a suprahumanity whose native state of consciousness will be supramental. Interestingly, some of Mother Mirra Alfassa's experiences in bringing supramental consciousness into her body bear similarities to the discoveries of quantum physics. Unlike previous spiritual realizations, the supramental realization has the power to unify spirit and matter and usher in a life divine on earth.

Keywords: Consciousness, evolution, involution, integral philosophy, integral yoga, Mother Mirra Alfassa, quantum physics, science, singularity, spirituality, Sri Aurobindo, supermind.

Introduction

Through the ages, spirit and matter have been seen as absolute opposites: spirit as ethereal, immaterial, ineffable; matter as objective, solid, and obvious. Both have been thought to be the ultimate reality, both have inspired humanity, and the chasm between them has been called unbridgeable.

But Sri Aurobindo and Mirra Alfassa (more commonly known as the Mother), two great spiritual teachers of the 20th century, thought otherwise. Their ideal was to join the heights and depths together to bring about a spiritual transformation—here, on earth, in the conditions of the material universe. This transformation wouldn't be a change of life into something purely subtle where, e.g., evolved beings ascend into light bodies and disappear from the physical plane. It would be an integral transformation that would not cast away the energies and capacities of matter, but bring out its hidden possibilities and innate divinity so that the spiritual summits and

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the material base of existence would be united in a divine life on earth (Sri Aurobindo, 1998, p. 522).

Spirit vs. Matter

A long tradition exists of religious teachings that urge seekers to shun the profane world and prepare for a heavenly afterlife, or to stop reincarnating and head for Nirvana. Sri Aurobindo notes that this revolt of spirit against matter has influenced the Indian mind for the last 2,000 years:

the general conception of existence has been permeated with the Buddhistic theory of the chain of Karma and with the consequent antimony of bondage and liberation, bondage by birth, liberation by cessation from birth. Therefore all voices are joined in one great consensus that not in this world of the dualities can there be our kingdom of heaven, but beyond, whether in the joys of the eternal Vrindavan or the high beatitude of Brahmaloka, beyond all manifestations in some ineffable Nirvana or where all separate experience is lost in the featureless unity of the indefinable Existence. And through many centuries a great army of shining witnesses, saints and teachers . . . have borne always the same witness and swelled always the same lofty and distant appeal—renunciation the sole path of knowledge, acceptation of physical life the act of the ignorant, cessation from birth the right use of human birth, the call of the Spirit, the recoil from Matter. (Sri Aurobindo, 2005, pp. 26–27)

Of late the opposite tradition has dominated in the West, where a spirit-denying materialism...

insists on Matter as a reality, the relative world as the sole thing of which we can in some sort be sure and the Beyond as wholly unknowable, if not indeed non-existent, a dream of the mind, an abstraction of Thought divorcing itself from reality. (Sri Aurobindo, 2005, p. 20)

As both a spiritual practitioner and a writer for a national science laboratory, I have experienced both sides of the divide.

The World According to Science

At the National Center for Atmospheric Research (NCAR), a research laboratory in Boulder, Colorado, where geoscientists study the earth, oceans, clouds, and sun using blazingly fast supercomputers, I worked for 16 years in the field of scientific computing. My colleagues, holding advanced degrees in math, physics, and computer science, exhibited bemused skepticism during lunchtime conversations that turned to "higher consciousness." This was to be expected. Firstly, because by default, humans always associate the real with the materially perceptible. Our physical senses cannot perceive anything immaterial—though we have other senses that can (Sri Aurobindo, 2005, p. 21). But secondly, at a research laboratory like NCAR it's not the world within, but the world without that matters. The purpose of science is to gain knowledge about the processes of nature—in this case, atmospheric processes. What's important here is to measure

and analyze data; to develop testable hypotheses and make accurate predictions; to conduct experiments and share results with other scientists, who replicate those results—or challenge them if they're wrong or incomplete; and of course to use mathematical tools to quantify and solve problems.

This objective, empirical, methodical approach to knowledge is called the scientific method. It has fostered an age of rationality, brought tremendous technological progress to society, and resulted in untold benefits for humanity. It has also resulted in a materialistic way of thinking that, due to its tremendous success in widening our understanding, has spread throughout much of the world and strongly shaped the modern mind.

It is important to remember that when this way of thinking first appeared in Europe in the 1600s, it was revolutionary. Religion was the sole arbiter of truth and people were tried for heresy for saying that the earth moved around the sun.

Sri Aurobindo says that the brief period of rationalistic materialism the world has been going through has helped humanity a great deal—it has swept away irrational dogmas, perverting superstitions, and misleading imaginations. Advancing knowledge, he says, should be based on a clear, pure, and disciplined intellect—and as human consciousness evolves toward higher levels, it's necessary sometimes to return to sensible fact, to the concrete realities of the physical world (Sri Aurobindo, 2005, pp. 12–13).

It even may be said that the supraphysical can only be really mastered in its fullness—to its heights we can always reach—when we keep our feet firmly on the physical. . . . And it is certainly the fact that the wider we extend and the surer we make our knowledge of the physical world, the wider and surer becomes our foundation for the higher knowledge, even for the highest, even for the Brahmavidya. (Sri Aurobindo, 2005, p. 14)

Anomalies and Contraindications

It's interesting, however, that he calls our current age a "brief" period of rationalistic materialism. If that's true, and if the materialistic paradigm is not the sole truth of things, certain anomalies and contraindications might start to appear suggesting that this view, while valid for certain purposes, may not be the complete picture. That indeed, has been the case, starting around the end of the 19th century.

At that time, scientists had a picture of the universe they thought was nearly complete (Walker, 2000, p. 24). It was based on the Newton's laws of motion, Maxwell's equations for electricity and magnetism, and the laws of thermodynamics (Orzel, 2009, p. 231). In this view all things are made of matter, all things that happen are the result of physical interactions, reality is objective and "out there," and mind and consciousness are irrelevant.

Then in 1905 Einstein revolutionized the understanding of matter, energy, space, and time with his special theory of relativity. He showed that mass, the very substance of an object, is convertible to energy, and that space and time are elastic, depending on your point of view. This

was the first scientific indication that physical reality depends in some way on the observer (Walker, 2000, pp. 37–41).

Meanwhile, Max Planck discovered that light seems to be radiated and absorbed in spurts that release packets of energy called quanta (Walker, 2000, p. 43). He found this quite perplexing, because scientists could demonstrate the opposite—that light was a spread-out wave. But Einstein liked Planck's idea, and five years later proposed that light itself is a stream of discrete particles. This laid the groundwork for a brand new kind of physics: quantum theory.

The New Physics

By the 1920s, physicists realized that photons, protons, electrons, atoms, molecules, all the tiniest components of matter, behave sometimes like particles but sometimes like waves of energy. This seemed impossible: how could a photon, for example, be both a tiny particle and a spread-out electromagnetic wave? Experiments proved it, however, and as scientists developed the math to deal with the strange new problem of wave-particle duality, they saw that their solutions had created a newer and deeper mystery: the measurement problem (Walker, 2000, p. 49).

A quantum particle is mathematically described in terms of a probability wave or "wave function." This means that the particle hovers in a sort of superposition of all possible states and doesn't have a definite location, momentum, or even a discrete existence until it is observed or measured, at which point the wave function collapses and the particle takes on distinct, objective properties. No one has been able to figure out how this transition from probability to concrete reality takes place, but in some way the observer—the person who designs and conducts the experiment, who takes the measurement—seems to play a key role in bringing fuzzy quantum particles into structured form (Wallace, 2007, pp. vii—viii).

This would seem to suggest that mind or consciousness plays a key role in materializing reality. However, this is such an astounding idea that it's widely rejected by physicists, who want nothing to do with consciousness, many of whom are still today striving to find alternative explanations for the collapse of the wave function.

Some decide the best course is to not spend a lot of time thinking about it—their job is physics, not metaphysics, so they simply use the equations, which work, and concentrate on pragmatic results. This approach has been called "Shut up and calculate!" (Mermin, 2004).

A Profound Discovery

Meanwhile, there's yet another revelation that's come from quantum theory, and this one is the most astonishing of all. Newtonian physics sees the world as consisting of independent, separate objects that interact with each other locally, like a pool cue and a billiard ball, through physical influences that cannot exceed the speed of light.

Early in the development of quantum theory, however, scientists became aware of something called quantum entanglement. This happens when two particles are associated or entangled with

each other so that measuring one instantly determines the state of the other. Einstein realized that if the two particles were far enough apart, they'd have to communicate faster than the speed of light. He called this "spooky action at a distance," hated it, and thought that because it was predicted by quantum theory, there was something wrong with quantum theory (Schwartz & Begley, 2002, p. 346).

In fact, there wasn't. In 1964 it was proven that no matter how far apart two entangled particles are, even halfway across the universe, they do influence each other instantly—in no time at all, outside of time. This nonlocal influencing is not subject to the speed of light, does not diminish with distance, and links one location to another without crossing space, without decay, without delay (Herbert, 1985).

Physicist Henry Stapp calls this "the most profound discovery of science" (Schwartz & Begley, 2002, p. 343), because it shows that the old view of a clockwork universe, where all objects are separate and interact only at the local level through material processes that obey the laws of classical physics, is not completely true. Rather, it shows that underlying the local reality of objective, separate objects and phenomena, there's a nonlocal reality in which nothing is separate and everything is connected.

A More Intimate Knowledge of Self and World

So quantum physics has taken us from a solely materialistic view of the world in which matter is solid, forces are physical, objects are separate, reality is objective, and what we perceive with the outer senses is what's real to a view considerably more subtle, complex, and multilayered in which matter is energy, time and space are relative, particles are waves, objects don't exist until they are observed, entangled bits of matter communicate faster than light—and in which consciousness may just possibly have a part.

Thus science, in its search to find the reality of matter, has brought us to the door of the immaterial—a door that opens on enormous vistas of the future, for Sri Aurobindo says that since the soul of science is its search for knowledge, as it reaches the borders of the supraphysical, its very rush will carry it onward. The success it's had with the visible world is just a hint of what it could bring to the exploration of what lies beyond (Sri Aurobindo, 2005, p. 16).

Meanwhile, according to Sri Aurobindo, three things will remain from the centuries of scientific materialism: the truth of the physical world and its importance, the scientific method of knowledge, and the importance of earth life and the human endeavor. These will stay, he says, but be transformed in the light of a vaster and more intimate knowledge of self and world (Sri Aurobindo, 1998, p. 195).

The World According to Consciousness

We just saw that according to quantum theory, the discrete existence of particles apparently depends on observation or measurement, that is, on there being a conscious observer—which seems to imply that consciousness plays some part in creating material reality. This doesn't make

sense if consciousness is an incidental byproduct of matter. As Nobel physicist Eugene Wigner notes, if the atoms in your brain produce your consciousness, but your consciousness somehow brings those very atoms into existence, that's a paradox (Schwartz & Begley, 2002, p. 283).

It's a paradox, however, that doesn't exist for Sri Aurobindo. Drawing from the wisdom and experience of Indian yoga—which is its own kind of science—he says that behind and beyond the appearances of the universe and involved in every particle of the universe, there's an Omnipresent Reality that is at once an unknowable, indefinable, featureless Absolute and the source of all things and determinations.

This Omnipresent Reality puts forth the universe by the power of what might be called its universal intelligence, which is basically another word for consciousness; and that consciousness is *the* fundamental thing in existence. It extends from the supreme spiritual heights down through the material world in a continuous spectrum that has different grades or levels. Sri Aurobindo calls these levels planes of consciousness, and they're the infrastructure on which the universe is built. It is the gradual precipitation of consciousness through its various planes that manifests the universe.

This process starts at the summits of being with *sachchidananda*, a transcendent and unmanifest plane of infinite existence, infinite consciousness-force, and infinite delight. Emerging from sachchidananda is the supermind, or supramental, a vast unity consciousness that embraces both infinite oneness and infinite diversity, and which begins to physically manifest the universe.

Out of supermind comes the plane of universal mind. Mind is the power of consciousness to divide things into parts, to measure and limit; the role of mind is to translate infinity into the terms of the finite (Sri Aurobindo, 2005, pp. 173–174). Then comes life, a power of vitality and energy; and finally matter, which is the ultimate division of consciousness into tiny bits. Thus, according to Sri Aurobindo, it is consciousness precipitating downward through its various planes that manifests the universe. If we accept this point of view, we see that because matter derives from life, and life derives from mind, ultimately, mind is the cause of atomic existence (Sri Aurobindo, 2005, p. 252).

This may sound familiar, for quantum physics also indicates that somehow (and most inexplicably), mind brings quantum particles into existence. We will return to this idea shortly.

Voluntary Involution

First, however, let's examine the precipitation of consciousness downward through its various modes or planes. Sri Aurobindo calls this process *involution*, and it's a process by which consciousness gradually limits itself by focusing on a particular aspect of reality to the exclusion of others. This is actually a power consciousness has: the power of exclusive concentration. (We experience the same thing when we become utterly absorbed in reading a book and lose track of everything around us.) With involution, consciousness becomes more and more involved with what it is doing, until eventually it becomes so involved that it forgets itself in the oblivion of matter (Sri Aurobindo, 2005, pp. 604–610).

We might ask why consciousness would want to do that; what was it thinking? Many spiritual teachings say it was thinking delusionally—the physical world is a deception of *maya*, or at the very least a catastrophic fall from grace. But Sri Aurobindo says, no—without this exclusive concentration of consciousness, manifestation would be limited to the higher worlds— or to a cosmos that's static and unchangeable.

The Purpose of the Universe

Involution was the necessary basis for individuation—to protect the individual from the largeness of infinity so that behind that defense an individuality could be worked out in time and space in order that consciousness could realize its own delight, one just in the undifferentiated, supracosmic realms, but cosmically and individually and in infinite multiplicity; so that it could experience delight to the smallest and most precise degree—fine-grained delight, objectified, intimate, infinitely varied and particular; dynamic delight of becoming that can't be experienced in the transcendent beyond. There is a purpose to this universe, Sri Aurobindo says, and the purpose is to materialize delight (Sri Aurobindo, 2005, p. 612).

It may not look like that to us ordinary beings in the physical world, and that is, firstly, because due to the exclusive concentration of consciousness, we are superficially unaware that in our true nature we are the infinite consciousness. Of course, the remedy for that is to become aware, which is the reason we do yoga (Sri Aurobindo, 2005, p. 615). But secondly, this materialization of delight is a long cosmic process, an unfolding, and it's not yet complete; we can see that just by looking at the world today. On the other hand, this very unfolding is its own kind of delight. Sri Aurobindo says there's a joy that's impossible in the higher planes— the joy of discovery, which is one of the greatest joys of conscious being (Sri Aurobindo, 2005, p. 428).

Sri Aurobindo says that evolution is just such a progressive revelation, taking place in geologic time and on a cosmic scale: a progressive revelation of the consciousness that involved itself in matter and which is now awakening, step by step, to the miracle of its infinite being.

Meanwhile, we and all the many who come into this world are in essence one with that underlying consciousness and so are willing participants in that joy of self-discovery. We're drawn into the world for the very sake of the soul's adventure—for what Sri Aurobindo calls "the adventure of consciousness and joy" (Sri Aurobindo, 1997, p 2).

A Change Beyond Imagining

Just to clarify, evolution is not the opposite of involution. If it were, as we evolved we would drop our bodies, drop our life energy, drop our mentality, and eventually return to the featureless Absolute. Evolution is something else—the gradual development *in matter* of material forms that increasingly express higher, more subtle, and more powerful modes of consciousness. Life is the first step of that evolution. Mind is the second step. Now nature is about to take a third great evolutionary step, developing out of humanity a supra-humanity or even a new species whose

² In its ultimate essence (sachchidananda), consciousness is one with existence and delight.

native mode of consciousness will be supramental. We saw this supramental consciousness before during the involution, when supermind put forth from itself the universe. Now we're seeing it from the other side of evolution. This is mind-boggling, for it means that those who make the evolutionary transition will possess that supramental consciousness while materially embodied—and possess the infinite existence and bliss of sachchidananda, the highest term of the supermind, as well.

We hear the word "singularity" a lot these days, usually in the context of a technological singularity, superhuman intelligence, the end of the Mayan calendar, the year 2012. But this is a singularity beyond singularities; this will be a change beyond imagining. Because when we pass through the barrier that separates mind from supermind, we'll retain physical bodies but leave behind the divided, fragmented world of ordinary mental perception and regain identity with Omnipresent Reality.

Physicists are searching for a unified field theory, but this will truly be the unified field, for supermind is a unity consciousness—it unifies and embraces; e.g., the infinite and the finite; oneness and diversity; immutable silence and dynamic movement; personality and impersonality; the individual, the cosmic, and the transcendent. It is also an oceanic, global consciousness of irresistible harmony and a compelling force of truth and beauty.

It is this that will bring a life divine in the material world and the union of spirit and matter. Previous spiritual realizations didn't reach the level of supermind and didn't have the power to transform universal nature; but supermind is the ultimate creative force, and does have that power.

The Supramental Sense

Of course, as with any great world-changing movement, there are always early adopters; and Sri Aurobindo and the Mother were early adopters of the supermind. They developed an integral yoga by which human nature can be transformed into supramental nature. They also left many books, including 13 volumes of first-hand reports (*Mother's Agenda*) describing what it's like to perceive with the supramental sense and bring the supermind into the very cells of the body.

Weirdly enough, these reports sound sometimes like descriptions of quantum particles before the collapse of the wave function—particles that exist in all positions simultaneously and behave like waves till they're measured. The Mother says, for instance, that a supramentalized cell is no longer individual in the separate sense—it's as if it's omnipresent (Van Vrekhem, 2002, p. 180). Her body too feels no limits, as if it's spread out everywhere (Satprem, 1982, p. 36). She also speaks repeatedly of a material consciousness that feels like the movement of corporeal waves (Satprem, 1982, p. 22).

We recall now how Sri Aurobindo says that mind, i.e., the consciousness of division and separation, is the cause of atomic existence, and also how quantum physics seems to indicate that observation—by someone with mental consciousness, of course—collapses the wave function.

Perhaps supermind, which differentiates without dividing and expresses multiple points within a single oneness, perceives matter as wave-like; or perhaps supramentalized matter somehow behaves differently than mentalized matter. In fact, the Mother says that as matter is permeated by the supermind, it develops new qualities of subtleness, suppleness, penetrability, plasticity, fluidity, and much less rigidity of form (Mother, 1984, p. 58).

The Mother also talks about perceiving a kind of material mesh enveloping the earth that connects events, linking them and making them interdependent; she says that if one has power over a part of this mesh, one can change a whole range of circumstances that in appearance are unrelated (Satprem, 1982, p. 211). Einstein might have called this "spooky action at a distance," but it sounds like nonlocality and quantum entanglement to me.

Integrating Scientific and Yogic Knowledge

I'm making these connections between science and yoga because I think there are some interesting connections to make. The Mother once said that although the practice of science and yoga are different, what's discovered will be the same because there aren't two things to be found, but one—the Omnipresent Reality.

I also want to bring up again, here, Sri Aurobindo's conviction that the more knowledge we have of the physical world, the better is our foundation for the highest spiritual knowledge:

Nothing can be more remarkable and suggestive than the extent to which modern Science confirms in the domain of Matter the conceptions and even the very formulae of language which were arrived at, by a very different method, in the Vedanta,—the original Vedanta, not of the schools of metaphysical philosophy, but of the Upanishads. And these, on the other hand, often reveal their full significance, their richer contents only when they are viewed in the new light shed by the discoveries of modern Science . . ." (Sri Aurobindo, 2005, p. 16)

In 1961 the Mother observed that as she pursued the minute work of supramentalizing her body, she knew nothing from a chemical, biological, medical, or therapeutic point of view (Satprem, 1982, p. 70). Perhaps now in the age of widespread instant access to information, and as more people take up this work, it will be possible to integrate scientific and yogic knowledge to a greater degree than ever before.

The Union of Spirit and Matter

Of course, it's long way from mind to supermind; there are many difficult passages, intervening states, and challenges to overcome. But it is a journey worth taking, for Sri Aurobindo says that the supermind will give to the body a fullness of capacity far beyond anything now possible (Sri Aurobindo, 1998, p. 25).

The Mother says that the physical realization of divinity will bring a tremendous concentration of energy, a power and reality that exists in none of the other states of

consciousness; it will be something solid, unalterable, complete (Anonymous, n.d., p. 298), with a precision and exactness down to the atom (Satprem, 1982, p. 35).

In the supramental consciousness, Sri Aurobindo says, we will feel the divine light and power and bliss above us and descending into us, filling every strand of our nature, every cell and atom of our being, flooding our soul and mind and life and body, surrounding us like an illimitable sea and filling the world, suffusing all our feeling and sense and experience, making all our life truly and utterly divine (Sri Aurobindo, 1998, p. 563).

And the Mother says, "I saw that secret, I saw that it is in earthly matter, on earth, that the Supreme becomes perfect" (Satprem, 1982, p. 35). "Anything we can humanly feel or see is nothing compared to that," she adds. "I have never seen or felt anything so beautiful as that . . . I've had hours . . . the most wonderful hours ever possible on earth" (p. 161).

I believe that's what we can be looking forward to.

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