

Evolution of Consciousness: An Indian Perspective¹

Ulrich Mohrhoff

At a time when the brain was still thought to be a machine, there was a notion that science had exorcised the ghost in the machine. Today we know better. What has been exorcised is the machine. We cannot inquire into the relation between mind and matter if we have no idea what matter is. As far as science is concerned, matter can only be defined as “that which satisfies the laws of physics.” This tells us nothing about the nature of matter, other than that it satisfies the laws of physics. As the philosopher-physicist Carl Friedrich von Weizsäcker said, “Matter, which we can now define only as that which satisfies the laws of physics, may be spirit insofar as the spirit can be objectified.”

Consciousness appears to many to be the greatest theoretical challenge of our time. The mystery is that the world appears to exist twice, once *in itself*, independently of our minds, and once again *for us*, in our minds. The mystery is not the widely discussed “hard problem of consciousness,” which is the problem of explaining how physical processes in a brain give rise to the qualities that adorn the experienced world, which philosophers nowadays refer to as “qualia.” This problem only arises if one *assumes* that physical processes give rise to qualia. Whether this is the case depends on what we mean by “physical processes.” If we mean processes that are governed by physical laws — mathematical laws that only contain *quantities* — then there is no intelligible way for physical processes to give rise to qualia. If, on the other hand, by “physical processes” we mean processes that *do* give rise to qualia, then we don’t know what they are.

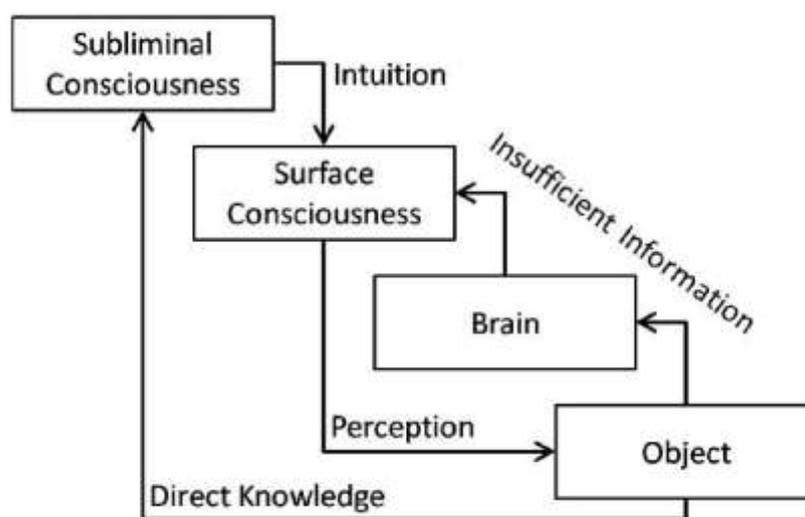
It is not only the sensations of colour, sound, taste, smell, and touch that fail to be reducible to quantities. Our experiences of space and time are qualitative as well. Time is not just a set of numbers called “instants,” and space is not just a set of triplets of numbers called “positions.” The word “position” has a *qualitative* meaning, which it derives from *phenomenal* space — the expanse that contains our perceptions and imaginations — and the word “instant,” too, has a *qualitative* meaning, which it derives from the successive character of *experienced* time.

Patterns of electrochemical pulses in a brain can yield quantitative parameters that *correlate* with the qualitative aspects of experience, including the *qualitative* experience of the expanse of space and the *qualitative* experience of succession or change, but they cannot *produce* these qualitative aspects, let alone give rise to the conscious self by which they are experienced. The information that the brain extracts from the images falling on

¹ Lecture delivered at the 37th European Congress – 30 July to 3 August – Paris, France.

the retinas in our eyes is encoded in quantitative parameters that need to be *interpreted*. The interpretation of these parameters *presupposes* acquaintance with phenomenal space and time, and such acquaintance is not something that neural processes can provide. If the spatiotemporal aspects of the experienced world are also aspects of a world that exists independently of our minds, then the resemblance of the experienced world to this objective world must be based on a knowledge that is *not* encoded in patterns of neural activity, for this knowledge is needed to decode the information that is encoded in these patterns.

Our normal, waking consciousness therefore depends on two sources of information: the information that enters the brain through the sensory organs, and an intuitive knowledge that originates in a subliminal consciousness, a consciousness capable of knowing its objects directly, without mediating representations, as illustrated by this diagram.



Presently the most promising philosophical alternative to materialism in the philosophy of mind is *panpsychism*, which has a growing number of advocates among contemporary philosophers. Panpsychism holds that consciousness is, or is part of, the intrinsic nature of “that which satisfies the laws of physics.” The cogency of this doctrine, however, depends on what else is known or assumed about “that which satisfies the laws of physics.” If we assume with Teilhard de Chardin that what satisfies the laws of physics is corpuscles, then we are, as he wrote, “logically forced to assume the existence in rudimentary form ... of some sort of psyche in every corpuscle.” William James reasoned along similar lines. Each atom of matter has an atom of consciousness linked with it, and “just as the material atoms have formed bodies and brains by massing themselves together,” he wrote, “so the mental atoms ... have fused into those larger consciousnesses which we know in ourselves and suppose to exist in our fellow-animals.”

The difficulty with this version of panpsychism is that it is hard to see how our rich internal lives could emerge from the rudimentary psyches of material atoms. But this is not what

they emerge from. At bottom, what obeys the laws of physics is not atoms or corpuscles. As I have explained in my previous lecture, what quantum physics describes is not a world of interacting objects. Quantum physics describes the *manifestation* of such a world. Instead of being its constituents, atoms and subatomic particles are instrumental in its manifestation. What ultimately exists is not a multitude of constituent particles but a single, intrinsically undifferentiated Being. This manifests a world of interacting objects, and it does this by entering into reflexive spatial relations – relations which it entertains with itself, and which have the character of relations between different locations.

Both the manifested world and our rich internal lives have their origin in this intrinsically undifferentiated Being. For this does not simply *manifest* a world of interacting objects; it manifests this world *to itself*. Being relates to it not only as the substance that constitutes it but also as the consciousness that contains it. It is at once the single substance *by* which the manifested world exists, and the ultimate self or subject *for* which it exists.

Essentially as well as potentially, we are this ultimate self and substance. But in order to make the connection, we need to understand *how* Being enters into spatial relations with itself, and *why*. For this I can think of no surer guide than the original Vedanta of the Upanishads, which describes Being in the triple terms of *sat*, *chit*, and *ānanda*.

Ānanda – the intrinsic nature of Being – transcends the dichotomy of subject and object. We can describe it either objectively as an infinite Quality or subjectively as an infinite Delight or Bliss.

Being has the power to manifest its inherent Quality or Delight in finite forms, and the closest description of this manifestation available to us is that of a Consciousness which creates its own content.

In the original creative poise of Being, *sat* (or substance) and *chit* (or consciousness) remain undifferentiated. There is but one self, which is coextensive with the content of its consciousness and identical with the substance that constitutes the content.

A first self-modification of this original creative poise gives rise to a new poise of relation between Being and its manifestation. In this poise the self adopts a multitude of standpoints within the content of its consciousness. It views this content from a multitude of locations. It thereby takes on the aspect of a multitude of subjects that are objects for each other. There now exists a distance between the perceiver and the perceived, and each object is seen from outside, in perspective. It is here, in this secondary poise of Being's creative consciousness, that the dichotomy of subject and object becomes a reality. It is also in this poise that the familiar three dimensions of space – viewer-centred depth and lateral extent – come into existence.

The process by which Being takes on the aspect of a multitude of conscious beings may be described as a multiple concentration of consciousness. A further departure from the original poise of relation between Being and its manifestation ensues when this multiple concentration of consciousness becomes exclusive. Here, at last, is something with which

we are familiar. For we all know the phenomenon of exclusive concentration, when our consciousness is focused on a single object or task, while other goings-on are registered subconsciously, if at all. A similar phenomenon reduces the single self, which creates and experiences the content of its consciousness from a multitude of locations, to individuals who have lost sight of their identity with that single self. One result of this loss of identity is that the individual self, confined to a particular standpoint, no longer commands the process of creation in its entirety.

The process of creation is the process by which infinite Quality manifests itself in finite forms. This process takes place in two stages, the development of Quality into expressive *ideas*, and the realization of ideas by an *executive force*.

In its original creative poise, consciousness encompasses the entire process. Individuals who are no longer aware of being a single self interacting with itself from a multitude of locations, also are no longer aware of the infinite Quality at the heart of existence. While the characteristic activity of their consciousness remains the formation of expressive ideas, they receive the qualities which their ideas serve to express from a source of which they are no longer conscious. Their consciousness is closer to the consciousness we are familiar with, but it does not suffer from the debilitating consequences of an evolutionary past.

A further modification of the relation between Being and its manifestation gives rise to individuals whose characteristic activity is the execution of ideas rather than their formation, individuals who receive even the ideas they execute from a subliminal source. And finally, when the multiple exclusive concentration of the consciousness aspect of Being is carried to its logical conclusion, it results in individuals who also lack the power to execute ideas. Since this power is responsible for the existence of individual forms, the result is a multitude of *formless* individuals, which are none other than the particles studied by physicists.

To summarize: What we learn from quantum physics is that there is a single, intrinsically undifferentiated Being, and that this manifests the world by entering into spatial relations with itself. What quantum physics cannot tell us is *how* this Being enters into spatial relations with itself, and why. But if we identify this Being with the ultimate Reality described by the Upanishads as *sat-chit-ānanda*, we learn that the creation of the physical world is the final outcome of an *involutionary* process of consciousness – a process of progressive self-concealment. First the ability to develop infinite Quality into expressive forms disappears from the scene, then the ability to form expressive ideas is lost, and finally even the ability to execute expressive ideas as finite forms no longer exists. The end result is a multitude of formless beings, which are the fundamental particles of physics.

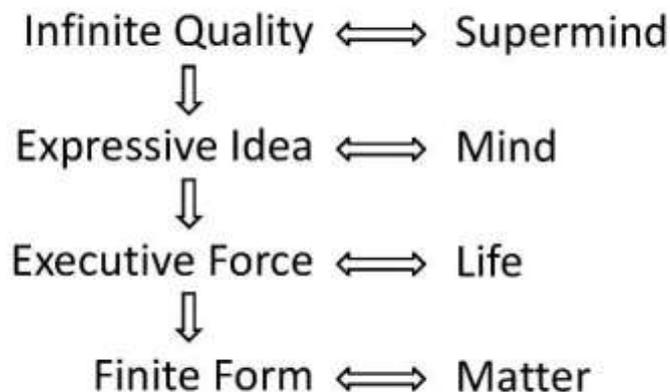
Now, why would Being want to manifest a world in which none of its creative powers are in evidence? I would like to answer this question by quoting the Indian philosopher and mystic Sri Aurobindo, who was also a poet and a freedom fighter:

a play of self-concealing and self-finding is one of the most strenuous joys that conscious being can give to itself, a play of extreme attractiveness. There is no greater pleasure for man himself than a victory which is in its very principle a conquest over difficulties, a victory in knowledge, a victory in power, a victory in creation over the impossibilities of creation.... There is an attraction in ignorance itself because it provides us with the joy of discovery, the surprise of new and unforeseen creation.... If delight of existence be the secret of creation, this too is one delight of existence; it can be regarded as the reason or at least one reason of this apparently paradoxical and contrary Lila.

Lila is a term of Indian philosophy that describes the manifested world as the field for a joyful sporting game made possible by self-imposed limitations. The game made possible by Being's progressive self-concealment is the game of evolution. In this physical world, Being has done a Houdini.

Fundamentally, evolution is the gradual reversal of the exclusive concentration of consciousness that culminated in the creation of matter. Because the last casualty of this involutory process was the power to execute ideas, it is the first to evolve. This power is the fundamental characteristic of *life*. The second power to evolve is the power to form ideas, which is the fundamental characteristic of *mind*. The last, which has yet to evolve, is the power to develop infinite Quality into expressive ideas.

The terms "matter," "life," and "mind" are notoriously hard to define. Every attempt to define them is inextricably linked to a theory from which they derive their meanings. Thus a materialist will define "life" and "mind" in terms of material states and processes and leave "matter" undefined, while an idealist will define "matter" and "life" in terms of mental states and processes and leave "mind" undefined. In my opinion, these terms are best defined as stages of the process of creation as envisaged by Sri Aurobindo. Mind then is essentially the power to form ideas, and life is essentially the power to realize ideas in material forms. For each stage there is a corresponding creative principle, as shown in this slide.



What the idealistic philosophies miss is that there is a principle beyond mind, a supramental consciousness one with Being, intrinsically aware of the infinite Quality inherent in Being, and capable of casting it into material forms. What the dualistic philosophies miss is the principle of life, the executive force which makes it possible not only to realize ideas in material forms but also to perceive material forms – to reproduce them as mental representations.

It won't surprise you that I do not agree with the Darwinian doctrine that random mutations and environmental selection pressures are sufficient to account for the evolution of species. It is not hard to see where this doctrine comes from. It results from what the philosopher Thomas Nagel has called "the bizarre view that we, at this point in history, are in possession of the basic forms of understanding needed to comprehend absolutely anything."

At bottom, all we can rationally understand is what can be reduced to laws. If there is something that is fundamentally inexplicable in terms of natural laws, we consider it random. Because evolution has aspects that cannot be explained in terms of natural laws, the rationalist is compelled to attribute the origin of species to random mutations, in addition to biological processes that *are* intelligible in terms of natural laws.

The fact that I am critical of Darwinism, however, does not mean that I am an advocate of Intelligent Design. The constraints under which a designer works are different from the constraints under which evolution works. If Being has the power to enter into reflexive relations and to subject these relations to physical laws, then it also has the power to modify these laws. If there are limits to this power, they are self-imposed. Thus while a designer makes use of the physical laws without being able to change them, evolution works through modifications of these laws.

The objection may be made that modifications of the laws of physics have never been observed. But this is what we should expect. Considering the Houdiniesque purpose of this evolutionary manifestation, it stands to reason that the range of possible modifications will be seriously limited — so limited that no presently feasible experiment can reveal statistically significant departures from what the physical laws predict.

The Force at work in the physical world has two purposes to pursue. Its first aim is to bring into play the creative powers of life and mind — the power to execute ideas and the power to generate ideas. Because it has to effect this through tightly constrained modifications of the physical laws, the evolution of life necessitates the creation of increasingly complex organisms, and the evolution of mind necessitates the creation of increasingly complex nervous systems. The second aim is to express, at any stage in the course of evolution, by whatever means available at that stage, the infinite Quality at the heart of reality. This accounts for the immense variety and undeniable beauty of living forms.

It used to be said that qualities (like colours and sounds) are “nothing but” quantities (such as electromagnetic or acoustic frequencies). It would, however, be much closer to the truth to say that quantities are nothing but means of manifesting qualities. And here I am not speaking merely of sensory qualities; I am also speaking of the transcendental qualities of beauty and goodness. While beauty is the way in which the intrinsic nature of Being manifests itself in forms, goodness is the way in which it manifests itself in actions.

At the origin of every beautiful thing is a quality that cannot be reduced to the form through which it manifests itself. This is the fundamental reason why evolution has aspects that cannot be understood in terms of natural laws — aspects which the rationalist is compelled to attribute to factors that are purely random. The link between quality and form is incomprehensible to a consciousness whose characteristic activity is the formation of ideas. It is accessible only to a consciousness whose characteristic activity is the development of quality into expressive ideas — a *supramental* consciousness that is directly aware of the qualities to which it gives expression. If our social world exhibits an appalling lack of beauty and goodness, it is because this consciousness has yet to evolve.

Closely related to the mystery of consciousness is the enigma of free will. We believe that our actions result from voluntary decisions. While these decisions are invariably constrained by pressures and circumstances of which we are more or less aware, we believe that the ultimate responsibility rests with us. We experience ourselves and conceive of ourselves as the authors of our decisions and actions. But are these intuitions trustworthy?

Those who believe that these intuitions are sound may welcome the idea that the physical processes which take place in our brains, are susceptible to modification. They may argue that our conscious minds control the movements of our bodies through modifications of the brain’s physical or default mode of operation. But do they? Neuropsychological investigation, phenomenological introspection, and most systems of Indian philosophy all seem to agree that the movements of our bodies are *not* controlled by our conscious minds.

Hence, if something modifies the brain's physical mode of operation, it is not our conscious mind.

It is well documented, for instance, that we remove our hands from a fire before we feel the pain, even though it seems to us retrospectively that we removed our hands in response to the pain. And while we pride ourselves on the ability to make rational decisions and to carry them out, there are two gaping holes in the phenomenology of rational action. There is a gap between our reflecting on the pros and cons of a particular course of action and the decision to carry it out. There is another gap between the will or intention to carry out a particular action and its actual performance. While folk psychology fills these gaps with a fictional self-in-charge — *I* reflected, *I* decided, *I* acted — all that is warranted by introspection is that thoughts occurred, a decision was taken, and an action was performed.

What light does Indian philosophy shed on the enigma of free will? Many systems of Indian philosophy share the fundamental distinction between *purusha* and *prakriti*, or soul and nature. *Prakriti*, which includes our minds, operates deterministically. The *purusha*, mistakenly identifying himself with certain physical and certain mental operations of *prakriti*, wrongly believes that *he* chooses and acts when in fact his thoughts, his motives, and his choices are determined by *her* — *prakriti*.

The practical importance of this metaphysical distinction lies in the fact that the *purusha* can become aware of his independence from *prakriti*. It is within our possibilities to adopt the attitude of a detached witness, who experiences thoughts, feelings, and actions undistorted by any sense of authorship, ownership, or responsibility. This is not an intellectual stance but a foundational spiritual experience. It is a first decisive reversal of the exclusive concentration by which most of us are confined to their surface waking selves. Adopting this attitude, we can become aware of the actual determinants of our thoughts, our motives, and our actions, and becoming aware of them, we are once and for all disabused of our libertarian illusions.

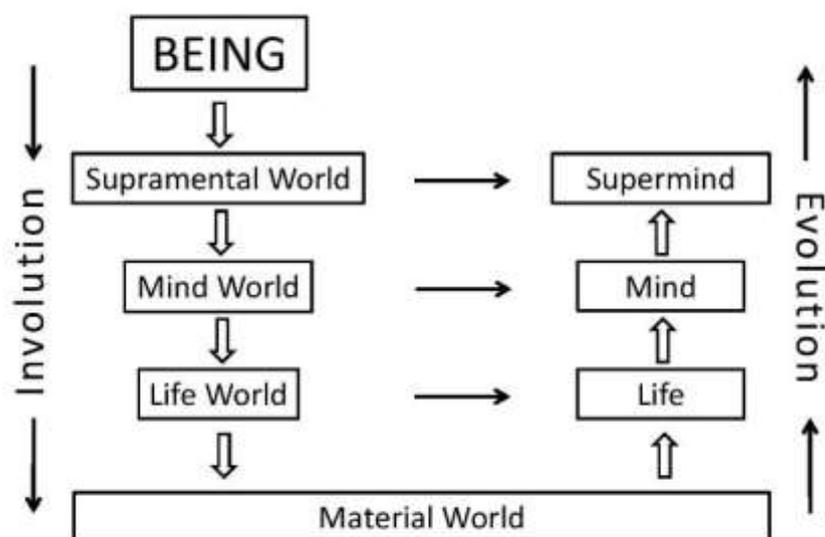
Paradoxical as it may seem, this disillusionment is the first step towards genuine freedom. For the *purusha* then finds that *prakriti* functions as she does by his own permission. It becomes possible for him to exert an inner control, which has nothing to do with his erstwhile libertarian imaginations. It is this inner control that will eventually give us the power to consciously modify the physically determined operations of our brains.

Two important claims are being made here, each raising a further question. The first claim is that once we are capable of entering a consciousness that is subliminal to our ordinary waking selves, we can become aware of the actual determinants of our thoughts and actions. This raises the question of what these determinants are. The second claim is that we can learn to exert an inner control, and this raises the question: to what ends shall we use this newly acquired power?

To be able to answer these questions, we need to remind ourselves of the different poises of relation between Being and its manifestation, which mark the stages of Being’s progressive self-concealment. These poises constitute a series of supraphysical worlds, planes of existence, or frames of experience. There is a supramental world where all individuals are a single self interacting with itself from a multitude of locations and expressing its infinite Quality in finite forms and actions. There is a mind world, whose inhabitants have lost sight of their mutual identity. They experience themselves primarily as thinkers, as creators of self-realizing ideas. Finally there is a life world, whose inhabitants experience themselves primarily as actors and creators of forms.

While supraphysical planes of existence are known in many esoteric traditions, their relevance to the physical world has been explained with particular lucidity by Sri Aurobindo. Because each particle of matter is not merely an instance of Being but Being itself, the powers to generate and to execute ideas are present in matter, but only in potentiality. What compels them to emerge is an action that originates from a corresponding supraphysical plane. I quote:

It is the pressure of the life-world which enables life to evolve and develop here in the forms we already know; it is that increasing pressure which drives it to aspire in us to a greater revelation of itself and will one day deliver the mortal from his subjection to the narrow limitations of his present incompetent and restricting physicality. It is the pressure of the mind-world which evolves and develops mind here and helps us to find a leverage for our mental self- uplifting and expansion, so that we may hope to enlarge continually our self of intelligence and even to break the prison walls of our matter-bound physical mentality. It is the pressure of the supramental and spiritual worlds which is preparing to develop here the manifest power of the spirit and by it open our being on the physical plane into the freedom and infinity of the superconscient Divine.



This slide summarizes Being's descent into involution via a series of supraphysical worlds, the evolution of Being's creative powers in reverse order, and the roles played by the supraphysical worlds in effecting this evolution.

What, then, are the actual determinants of our thoughts, motives, and actions? When we enter the consciousness which is subliminal to our ordinary waking selves, we find that, insofar as they are not determined by the physical operation of our brains, our thoughts and actions are determined by subliminal influences that originate either from our fellow-beings in this world or from a supraphysical world.

Coming to the second question, once we are able to exert an inner control over these influences, in what light shall we use this control? What will determine the choices we then make? To cut a long story short, our decisions will then be determined by the qualitative essence of our being, which in Indian philosophy is known as our *svabhāva*.

What is this “qualitative essence of our being”? How does it fit into the Vedantic scheme of things? It is, quite simply, an aspect of the infinite Quality which is the essence of Being. As we are, essentially, selves of a single Self, so we are, essentially, particular instances of this infinite Quality.

It may not be amiss to think of evolution as starting out not with one but with two multitudes, a multitude of formless particles and a multitude of souls — if you allow me to refer to the essential quality of our being as our “soul.”

Between these two multitudes there initially yawns a gulf: while the soul at first lacks the power to develop its essential quality into ideas and forms, the world of particles at first lacks the power to execute ideas, except for the idea of an inanimate universe, by which idea the stage for the drama of evolution was set.

Evolution may be likened to the construction of a bridge between our qualitative essences and the realm of material forms. This bridge is being built from both ends. Once life and mind are sufficiently evolved on the side of material forms, and once the *purusha* has disengaged himself from *prakriti*, has acquired the power to modify her deterministic operations, and has become aware of his soul, he will use this power to manifest his soul in the material world. He will express as much of his *svabhāva* as his physical and mental nature permit at any given stage of his spiritual evolution, but he will also work to transform his physical and mental nature into an ever more plastic and obedient instrument for self-expression.

As the scope of *prakriti*'s mental and physical operations expands, the natural being becomes an increasingly effective instrument of self-expression for the soul, and the soul's power of self-expression grows as a result. As the soul's power of self-expression grows, the scope of *prakriti*'s mental and physical operations expands. This positive feedback loop results in a progressive integration of soul-power and nature-force — the power by which the soul modifies the determinisms of nature, and the force that obeys them. Its final outcome — however distant in time — will be nothing less than the complete fusion of soul-

power and nature-force. This fusion calls for the evolution of the supermind, for that alone can overcome the constraints imposed by “this apparently paradoxical and contrary Lila.”

We have reached the limits of what is humanly conceivable. As I said, all we can rationally understand is what can be reduced to laws. Since Being’s power to modify its self-imposed constraints cannot be explained in terms of another self-imposed constraint, we simply don’t know how it works. If the constraints are loosened, more will be possible while less will remain comprehensible. If the constraints were removed, everything would become possible and nothing would be comprehensible any more to our mental way of knowing.

Unfortunately, or rather fortunately, the evolution of the supermind will remove the constraints. As you will remember, it was due to them that the evolution of life had to depend on the creation of complex organisms, and that the evolution of mind had to depend on the creation of a complex nervous system. Once the constraints are removed, that complexity will have served its purpose. Once the integration of nature-force into soul-power is complete, the *purusha* no longer needs a brain to develop his essence of quality into ideas, and he no longer needs a complex biological organism to give his creative ideas a material form.

All of this seems perfectly preposterous, to be sure, but let us try to understand why. The evolution of consciousness consists in a successive emergence of new ways of experiencing the world. Our theoretical dealings with the world are conditioned by the manner in which we, at this point in history, experience the world. While the theoretical models that we know how to construct have enabled us to learn much about the evolutionary past, they are bound to leave us clueless as to how a supramentally conscious being will experience the world. But this means that they leave us clueless as to the true nature of the world and its possibilities, given that the world is the creation of a supramental consciousness.

We may not know how the world is perceived by an organism as alien as a bat, but there are earlier expressions of human consciousness which reveal how our present mode of consciousness differs from the earlier modes. Consider, for instance, the ancient notion that the world is contained in a sphere, which has the fixed stars attached to its boundary, the firmament. *We* cannot but ask: what is outside that sphere? Those who held this notion could not, because for them the third dimension of space — viewer-centred depth — did not at all have the reality that it has for us. This is precisely why they could not handle perspective in drawing or painting, and why they were unable to arrive at the subject-free stance which is a prerequisite of modern science — all this became possible only during the Renaissance. Their way of making sense of the world was mythological, while ours is scientific. And just as mythological thinking could not foresee the technological explosion made possible by science, so scientific thinking cannot foresee the radical changes that will be wrought by the evolution of a new poise of relation between self and world.

Our very concepts of space, time, and matter are bound up with, are creations of our present mode of consciousness. It is not matter that has created consciousness; it is consciousness that has created matter, first by carrying its multiple exclusive concentration

to the point of being reduced to a multitude of formless particles, and again by evolving our present mode of experiencing the world, which is capable of integrating our location-bound perspectives into a subject-free world of three-dimensional objects. Ahead of us lies a consciousness that transcends our time- and space-bound experience of the world, a consciousness to which our theoretical dealings with the world will seem as dated as the mythological explanations of the pre-scientific era seem to us. This consciousness will add another *qualitative* dimension to the experienced world. Matter will become transparent. It will reveal its ultimate Constituent, and this will be known to be one with the ultimate Subject. To conclude with a couple of lines from Sri Aurobindo's epic poem *Savitri*,

The Spirit shall look out through Matter's gaze
And Matter shall reveal the Spirit's face.