

Spirit, Matter, and Life

Spiritualism – The Substantive Reality of the Spirit

Many scholarly questions have had the good fortune not to be discussed outside scholarly circles. Others have been dragged into every assembly and forum and handled by every group, thus giving them an altered aspect, making the work of students and researchers difficult or even tending to throw them off the track from the first. The questions of spirit and body and God and the world belong to the latter group. Perhaps no one has not raised these questions for himself and somehow resolved them for himself, The first questions man, with his inquiring nature, asks himself are What am I and What is this world I am in? Man must satisfy himself somehow vis-i-vis these questions. Accordingly, everyone forms a kind of egology and world-view.

Because the question of spirit and body is one of these shopworn questions, one which everyone has heard about from birth, first from nurse, mother, and grandmother, and later from preachers, poets, and public speakers, everyone has accumulated impressions and associations concerning the subject, along with a special way of thinking about it. Therefore, many may be prepared to read that the spirit is a mysterious, invisible being that, “providentially” hidden behind the veil of the body, masking itself in it, and carrying out interventions more mysterious and irregular than those ascribed to jinn and ghouls from behind its palpable mass, accomplishes everything from behind this outward, artificial, and borrowed curtain that is the body.

Much of our poetry immediately brings this picture to mind: The spirit is a celestial bird, and the body is only an ephemeral cage built for it through special causes. The spirit is a falcon dwelling in a lote-tree that unexpectedly has come to lodge in the torturous alcove of the body: It is a king who has chosen the hovel of the body for his castle and may grant more importance to this hovel than to himself and who may cover its exterior with brocades and himself sit naked and unadorned.

I do not mean to criticise the language of poetry, which is what it is and could not be anything else. The language of poetry, like that of sermon and pulpit, is different from the language of science and

philosophy because its object is different. The language of any discipline is a key made for that discipline. A key is useful only in that lock for which it was designed.

Persons who have a compound personality speak in more than one language. One who is both poet and philosopher speaks in the languages of poetry and philosophy, which remain separate. For example, compare how and in what language Avicenna discussed spirit, body, and the relation between them in his books of philosophy (such as the *Shifa'* and the *Isharat*) on the one hand and in his famous "Ayniyya" *qasida* on the other, whose opening line is "It descended to you from the highest locus, [And grew] filled with pride and refusal." We must distinguish the languages of science and philosophy from the languages of poetry and the pulpit so that we do not, like so many atheists and materialists, become faced with grave and unpardonable errors.

In fact, philosophers have theories that correspond with what appears in the language of poetry. For instance, Plato holds that the spirit is an eternal substance preexistent to the body. When the body is ready, the spirit "descends" from its level and is "attached" to the body. This theory is totally dualistic in that it regards spirit and body as two separate and disjoined substances and sees their relation as something accidental and nominal, like the relation of bird and nest or of rider and mount. It recognises no substantial and natural connection representing a kind of unity and essential connection between them.

But before long, Plato's student, Aristotle, demolished this theory. Aristotle noted that Plato and his predecessors had focused on the aspect of duality and contrast between spiritual phenomena and physical phenomena but ignored their unity and interdependence. Aristotle noted that one cannot regard the interrelation and interdependence of spirit and body as superficial, like that of bird and nest or that of rider and mount, but that the relation of spirit and body is certainly more profound and natural.

Aristotle regarded the relation of spirit and body as belonging to the species of relation of the form to the matter in which it originates, with the difference that, because the rational faculty is abstract, it is a form with matter, not a form in matter. The idea that the spirit is an eternal substance *in actu* does not persist into Aristotle's philosophy.

The spirit is not eternal; it is created in time. At first it is purely potential. It acquires no sort of prior knowledge; it actualises all its knowledge in this world. The same idea in a slightly different form is reflected in Avicenna. The duality, separation, and alienness in Plato's philosophy has been largely obviated in the philosophies of Aristotle and Avicenna, in which this matter has been based on the well-known Aristotelian theories of hylomorphism and of generation and corruption.

Although Aristotle's theory is most noteworthy for its advantages over its predecessor, especially for its rejection of the spirit-body duality and its advocacy of a kind of real and substantial unity and interrelation of spirit and body, it nonetheless is not devoid of major ambiguities and difficulties. These difficulties pertain to the question of how the natural relation of matter and form is to be depicted and to

the question of generation and corruption. Further steps in the worlds of science and philosophy were necessary if the curtain were to be lifted from over this mystery or if the topic were even to be addressed in a rational and satisfactory way.

The precursors to this intellectual and scientific transformation appeared in Europe and created a revolution in the fullest sense of the word. Revolution threw out the good with the bad. All past foundations and structures were cast down at one stroke. The revolutionaries designed a new scheme for everything. The famous French philosopher, Descartes, articulated a new scheme of spirit–body dualism that in time became the one scheme to accept, reject, or revise.

Descartes admitted three realities: God, the soul, and the body. In conceiving that the soul has thought and intelligence but not dimension and the body has dimension but not thought and intelligence, he came to believe that soul and body are separate things. The objection raised, first by other Europeans, against Descartes's theory is that he had considered only the aspects of duality, difference, and contrast obtaining between spirit and body, but offered no explanation of how spirit and body, which he says represent extremes of disparity and contrast, came to be conjoined. It is important to consider how they connect and are united, what sort of relation obtains between them.

Descartes's theory is in this respect a kind of regression, a reversion to Plato's theory. We seem to be back to the story of the bird and the nest. Because Descartes entertains conceptions of innate qualities and essences and so regards the soul as a phenomenon *in actu*, his theory resembles Plato's.¹ His theory falls as far short as Plato's of explaining the relation between spirit and body.

This regression or reversion turned out to be very costly. The essential and natural relation of body on the one hand and spirit or spiritual qualities on the other is not something one can ignore; one cannot content oneself with noting their discrepant and contrastive aspects. Intelligent people after Descartes sought to discover the relation of these two entities.

Modern philosophers laboured to discover what sort of relation physical phenomena have with spiritual, and in the course of their labours highly divergent schools and theories arose, marked by all kinds of excess. Some have even denied all duality of spirit and body in regarding all psychical phenomena as normal and natural properties of material compounds, and others have denied all such duality in regarding body and matter as unreal, as a mere phantasmagoria displaying itself to the spirit. Still others have wearied of the search and declared the subject beyond man's power to explore.

Although modern scholars and philosophers have gotten nowhere in studying the identity of spiritual phenomena and the nature of the relation of spirit and body, researchers in all fields, especially biology, physiology, and psychology, have had tremendous and amazing results. They at times may not have noted the implications of their findings for spiritual questions or for questions of the nature of the relation between spirit and body, but their work has opened the way for study of these questions.

Among post–Avicennan Islamic philosophers, no original research into this question was done directly,

but enormous transformations and advances occurred in the most general and basic questions of first philosophy, that is, the questions surrounding being.² These advances had an indirect but tremendously important effect on most other philosophical questions, among them questions of motion and of the unity versus the duality of spirit and body.

Mulla Sadra, who spearheaded this transformation in the approach to questions of being, concluded from the new, excellent, and powerful principles he had forged that, in addition to the overt, accidental, and sensible motions governing the superficial phenomena of the world, there is a deep, substantial motion inaccessible to the senses that is the principle of these overt and sensible motions. If one is to postulate hylomorphism, one must postulate it only on the basis of this motion. The appearance and formation of physical species are based on the law of motion, not on that of generation and corruption.

The soul and the spirit arise in accordance with this law of motion. The soul is formed within the matrix of physical matter. Matter has the capacity to nurture an entity in its lap that is on the plane of the supernatural. No wall or membrane exists between the natural and the supernatural, and there is nothing to prevent a material being from transforming into an extramaterial being through a gradual evolution.

Neither Plato's nor Aristotle's conceptions of the source for the formation of the soul and the nature of its relation to the body is correct. The nature of the relation between life and matter, or between spirit and body, is more natural and more substantial than they supposed. It is like the kind of relation between a stronger and better developed stage of a thing to a weaker and less well developed stage of it. Or to put it perhaps more aptly, it is like the relation of one dimension to the other dimensions. That is, matter in its transformation and evolution expands in a new direction additional to the three physical or spatial dimensions and to the temporal dimension by which essential and substantial motion is quantified. This new direction is independent of the other four, the spatiotemporal directions.

In calling this direction a dimension, I do not mean it is a kind of extension or that it is susceptible to mental analysis, like other quantifiable. Rather, I mean only that matter finds a new direction to expand into, one in which it wholly sheds the quality of materiality.

We are now in a position to address this question: Are spiritual properties the product of an admixture or a synthesis of material elements, like the other properties that matter exhibits in isolation or in compound entities? Or does physical matter, insofar as it is physical and material, lack such properties and effects, such that they appear only as matter evolves in its essence and substance, coming to have in its essence a degree of being according to which it is extramaterial and extraphysical? Spiritual properties would relate to that degree of being and reality. I now have no need to confine our discussion to the human spirit and the psychical phenomena of man, as is conventional. I can start lower and extend this discussion to vital phenomena and effects as such.

The difference that can be allowed between mental effects and other vital effects, that the one is abstract and the others not, is not at issue here. What concerns us is the idea that the spirit is not a property or

effect of matter, but a substantial entelechy that appears for matter and is in turn the source for effects more numerous and various than those of matter.³ This is true of all life. Whatever the reality of life, whether or not it is possible for us to perceive the inner reality and core of life, those beings we call living or animate, the plants and animals, have activities and effects not witnessed in other, dead or inanimate, beings.

Beings of this class have the property of self-preservation and place themselves at a remove from the effects of environmental factors. They use a wholly internal power to equip themselves for life in a particular environment and so array their internal defences as to be able to combat factors in that environment or to use them to further their survival in it.

A living being has the property of adaptation to the environment, which arises from its internal processes. An inanimate being, however, has no such property, and if it is placed in an environment containing factors destructive to it, it can exhibit no activity oriented to its survival and in fact cannot combat environmental factors. For example, a living being has the property of acclimation. If it encounters a stressful external factor, at first it is heavily affected and distressed, and its equilibrium is lost; but it gradually acclimates and acquires a sort of immunity to the external factor.

This immunity is an effect of internal functions and of the property of adaptation to the environment, which it acquires to the extent of its capacity. If a plant, an animal, or even a member of an animal's body is placed in an environment wherein it contacts something injurious, something that poses a threat to its equilibrium and survival, it gradually arms itself to resist that factor in that environment. When a human hand that is soft and fine is first faced with carrying a hard and rough material such as brick, it is unable to stand up, but gradually that hand acclimates; that is, an internal power in its tissues brings about changes that enable it to resist the new factor.

A living being has the power of assimilation. Under the influence of an internal factor, it automatically draws external materials to itself and, through special processes of decomposition and resynthesis, uses them for its own survival. However, this property does not exist in inanimate beings.

Wherever living beings and organic factors appear, they gradually grow, renew themselves, and evolve. They augment their power until they are ready to reproduce; thereafter they wane and disappear, having given perpetuity to their existence in their progeny.

Whenever life appears, it predominates over environmental conditions and triumphs over the lifeless elements of nature. It alters nature's compounds and makes of them a new synthesis. Life is designer, modeller, engineer, and artist, and it evolves in these very capacities. Life has goals and makes choices. It knows its way and its object. It slowly follows the road it adopted millions of years ago, toward a definite object and destination that will be unattainable save at the utmost degree of perfection.

All these properties exist in living beings and not in inanimate beings. In the words of A. Cressy Morrison, "Matter has no initiative, but life brings into being marvellous new designs and structures."⁴

Here we perceive fully how life itself is a special force, a separate entelechy, and an added process that appears in matter and that exhibits various further processes and effects.

Invaluable research has been carried out in the area of life and the properties of living beings, research that makes quite plain the substantive reality of the vital force. Many researchers have perceived this truth and referred to this substantive reality of the vital force in their work.⁵ They have noted that this vital force is an extramaterial force in nature and that biotic phenomena are the effect of this force and not simply of the synthesis, the addition, subtraction, and combination, of material constituents.

These latter processes are a necessary but not sufficient condition for the emergence of life. Then there were those like the famous biologist, Lamarck, who denied the substantive reality of the vital force and formally declared that living nature must be studied from the standpoint of mechanics. What impelled them to deny the substantive reality of the vital force was their equation of such a reality with a duality, an existence for the vital force separate from matter and its effects.

They supposed that if the vital force had a substantive reality, this fact would entail its being independent of the environment and environmental factors, its being the same in all environments, its unsusceptibility to influence by environmental factors, and its independence of the physicochemical processes of the body. Scientific observations have demonstrated the contrary in each instance. Lamarck said life is nothing but a physical quality. All the qualities of life depend on physical or chemical causes and originate in the organism's structure. Lamarck evidently supposed that if the vital force had substantive reality, this fact would necessitate its being independent of physicochemical causes and its not having its origin in the organism's material structure.

Descartes's dualistic theory, his regression or reversion to Plato's theory, wound up being very costly because it obliged scientists to conclude that whenever they contemplated a substantive reality for the vital force, they were denying the substantial and essential connection of life and body and were thinking of them as two opposing poles.

Descartes himself, in arriving at this dualism of body characterised by dimension and soul characterised by thought and intelligence and in positing a deep gulf between the two, was compelled to deny life as a substantive force in other-than-human beings. Incredibly, he regarded the structure of all animals – except man – as purely mechanical and denied all perception and feeling in animals. He claimed animals have no perception, no feeling, no pleasure, no pain. When they move or call out, this behaviour does not arise from feeling or will. These machines have been so constructed as to display these effects at these times, whereas we imagine that they result from feeling or will!⁶

Modern scientific research supports the theory of the substantive reality of the vital force. The theory of evolution of species further supports the concept of the vital force and its governance of and predominance over matter and the inanimate forces of matter. Darwin, the original champion of this theory, did not seek to demonstrate the substantive reality of the vital force but rather at first based his

work on natural selection, which he saw as the result of random, undirected changes in nature. But as he inquired closely into the secret of evolutionary advance and the ordered evolution of species, he was obliged, as he says, “to admit a character for living nature.” He spontaneously arrived at this conclusion, to such a degree that some of his contemporaries said to him, “You speak of natural selection as if it were an active force or a supernatural power.”⁷

Those who study the psychical aspects of man, without intending to show the substantive reality of human life or to derive a philosophical conclusion from their researches, have arrived at such a conclusion. Freud, the psychologist and founder of psychoanalysis, set off a revolution in psychology. He concluded from his studies and clinical work that the researches of the physiologists and the anatomical studies of the brain with its convolutions constituted an inadequate approach to mental illness.

He discerned a hidden system of intelligence relative to which man's overt and everyday intelligence and self-awareness are superficial. He noted that the diseases of the spirit that arise from complexes themselves have a substantive reality and give rise to organic illnesses. One must approach the treatment of these illnesses spiritually and resolve these complexes, and thus even their physical symptoms will often be alleviated.

The treatment of physical illnesses by spiritual means and even the treatment of some organic diseases by spiritual means represent no new discovery – such physicians as Muhammad ibn Zakariya Razi and Avicenna used it – but today this technique has found extraordinary breadth of application.⁸ It wholly affirms the substantive reality of life and especially of the spirit. But what is noteworthy in Freudianism is the discovery of the hidden mind and also of a range of complexes. Formerly, moral and physical afflictions were explained simply as a range of engrams (*adat*). An *engram* is a state resulting from the repetition of an act and is said to be a quasimaterial process.

When we first bend a straight stick, it returns, but not quite fully. After we repeat this process many times, the stick remains bent. An engram was said to be something similar, something like the folding of a sheet of paper. Through repetition of an act, permanent effects, called moral virtues or sins, would be left on the furrows of the brain. But the theories of a hidden mind and of complexes demonstrated that the dynamics of morality involve quite different processes.

Freud did not seek by his theory to demonstrate the substantive reality of the vital force or life's governance of matter. Rather, where he moves from the area of scientific researches in which he shows such mastery to the area of philosophical inference, in which he shows no such competence, he arrives at certain objectionable theories unworthy of his stature. This does not detract from the value of his scientific researches.

Some of Freud's students, such as Jung, wholly disagreed with their master over the method of deriving philosophical conclusions from psychological theories. They did much to throw light on the substantive reality of the vital force in their theories; they imparted a “supernatural” dimension to Freud's theory.

What is most difficult here is not to see the difference between body and psyche or between matter and life. Even before the European researchers provided such clear evidence for the substantive reality of the vital force, superficial observation revealed these differences plainly enough. What is more difficult is to arrive at a sound conception of the relation of body and psyche. This difficulty has led many scholars to withhold belief from the substantive reality of the vital force. This difficulty has been resolved in the finest way in the philosophy of Mulla Sadra.

The question of the substantive reality of the vital force has a supernatural aspect. If life were an effect and property of matter, it would have no such aspect, in that it would exist as a latent effect of matter in the elemental state or in compounds. When a living organism appears, nothing would actually be created; no entelechy would be created in matter. But according to the theory of the substantive reality of the vital force, matter in its essence lacks life; life is created and added when a capacity appears in matter. In other words, matter becomes alive in the course of its movement toward perfection; it gains an entelechy that it had lacked. In consequence, it gains effects and modes of activity that it had lacked. Therefore, the being that comes alive actually has been created.

Although inanimate matter in the elemental state does not have the property of life, what is there to prevent this property from emerging in consequence of the interaction of these material constituents? When several material or extramaterial constituents are compounded and interact, each yields some of its effects to the others and receives some of the others' effects. An intermediate temper results. It is absurd that through the synthesis of several constituents an effect should appear other than the combined effects of the constituents or a quality intermediate to their effects, unless the synthesis of these constituents makes it possible for a faculty or a force higher than those of any of these constituents to come into being as a substantial entelechy and to impart a real unity to these constituents.

Therefore, if it is asked what there is to prevent the property of life from appearing in consequence of the synthesis and interaction of material constituents, this question calls for further clarification. If it is meant that, in consequence of the interaction of material constituents, the capacity appears for a substantive force, the vital force, and so this force does come into being, and with it the properties of life, this is correct. But if it is meant that, in the absence of a vital force, properties of life appear inconsistent with the properties of any of life's constituents, this is absurd and impossible.

Another hypothesis might be proposed. Although matter lacks life in its essence and life is a force superior to material and inanimate forces – just as, according to scientific research, there is in the physical universe a certain fixed quantity of energy and the formation and disappearance of inanimate entities does not constitute creation but rather consists of a set of coalescences and dispersals of material constituents and transfers of energy – so we may posit a special mode of energy for life, such that, like other forces, vital forces would not be created. Rather, through these coalescences and dispersals and transfers of energy, they would be concentrated in certain instances. Thus, animation

would not involve creation.

The concept of vital energy must be clarified. Is this energy inanimate or animate in its essence? If it is animate, does an entity *have* life? Is life a thing apart from the entity, which has been compounded or conjoined with it? Or is this entity life itself? If the energy is animate or inanimate, there is no difference between vital energy and other energies in respect to this question (of how animacy is to be explained and how this energy produces life), in that either this energy is not alive at all (the first hypothesis) or the agent of life is a thing external and added to the entity's essence. If this entity is life itself, an abstract being (life, or the vital force) has descended a level and, preserving its effects, has become matter, which is absurd. What the philosophers call "descent" when they say that nature and matter have descended from the supernatural is not this transfer and transduction of energies.

If we deny that there is creation in inanimate matter but hold that the appearance of these entities is nothing more than the coalescence and dispersal of material constituents and the transfer of energies, we are saying something scientists agree is incorrect in reference to animate beings. The character of life is such that one cannot hypothesize that there is some certain fixed quantity of it; one cannot regard the appearance of animate beings as a transfer of life from one locus to another, as, in truth, a kind of transmigration.

The phenomenon of life cannot be assigned a certain fixed quantity; it has been on the increase since the day it appeared on earth. If at times much life has perished in a mass extinction, this power did not concentrate elsewhere. Life and death are a kind of expansion and contraction, but an expansion and contraction arising from above the plane of natural being. They constitute an emanation coming from the unseen and returning to the unseen.

As Oswald Kulpe says in criticism of materialism:

Materialism stands in contradiction to a fundamental law of modern natural science, the law of the conservation of energy; according to which the sum of energy in the universe always remains constant, and the changes that take place all about us are simply changes in the distribution of energy, and involve an absolutely uniform transformation or exchange. The law evidently implies that the series of "physical" processes is a closed chain, in which there is no place for a new kind of phenomenon: the "psychical" or "mental." Brain processes, e.g., despite their extreme complexity, must be included in the circle of causes and effects, and all the changes produced in the brain substance by outside stimulus conceived of as propagated and diffused in a purely chemical or physical way.

A theory of this universal validity leaves the mental side of things "all in the air"; for how the secondary effect of mentality can be produced without any the least loss of energy upon the physical side, is difficult to say. The only logical thing to do is to co-ordinate mental processes, as representing a special form of energy, with the ordinary chemical, electrical, thermal and mechanical energy, and to assume that the same uniform relation of transformation and exchange obtains between them as between the various

“physical” energies. But apart from the fact that this view is nowhere mentioned, still less worked out in any detail, in materialistic literature, there are several objections to it upon general grounds, all leading to the same conclusion, that the idea of energy as defined by natural science is inapplicable to mental processes.⁹

A. Cressy Morrison says:

The rise of man the animal to a self-conscious reasoning being is too great a step to be taken by the process of material evolution or without creative purpose.

If the reality of purpose is accepted, man as such may be a mechanism. But what operates this mechanism? For without operation it is useless. Science does not account for the operator, nor does Science say that it is material.

Matter has never done more than its laws decree. The atoms and molecules obey the dictates of chemical affinity, the force of gravity, the influences of temperature and electric impulses. Matter has no initiative, but life brings into being marvellous new designs and structures.¹⁰

The *hukama'*, in discussing cause and effect or the odder phenomena of nature (as Avicenna does in the tenth section of the *Isharat*), speak of spiritual influences and forces. Mulla Sadra composed a chapter of the *Asfar* on the subject of cause and effect titled “On the Fact that Thought and Imagination are Sometimes the Origin for the Creation of Phenomena.” In this chapter, he seeks to demonstrate the governance, predominance, and effect of thought and imagination, which are phases of life, upon matter. He introduces various subjects in this chapter, among them that of the effect of the suggestion and imagination of health or of illness in actually producing either condition. ¹¹

Today no place remains for the ancient Democritean idea that the universe is a purely mechanical one and that creation consists solely in the coalescence and dispersal, or the combination and synthesis, of particles.

Scientific research has thoroughly deflated the materialists' hubris. No longer may someone say, as did Descartes and others, give me matter and motion, and I will construct a universe. The warp and woof of the universe have too many threads for being to be confined to matter and the sensible and accidental motion of matter.

The Qur'an and Life (The Qur'an and a Question Regarding Life)

Repeated mention is made of life in the Noble Qur'an. The following are mentioned in its verses repeatedly as signs (*ayat*) of divine wisdom and providence: the animation of beings, the successive appearance of living things, the evolution of life, the system of creation of living organisms, and the properties of life – comprehension, intelligence, perception, hearing, sight, guidance, inspiration, and instinct. Each is a very interesting subject in itself.

One of the points the Qur'an makes about life is that life is in God's hands; it is God Who gives life and takes life. The Noble Qur'an, with its special logic, is saying that life is not at the disposal of any other than God; no one else can give or take life.

In the *Sura* Baqara, Abraham is related to have said to a contemporary tyrant,

“It is my Lord Who gives life and death” (2:260).

The *sura* Mulk describes God as

“He Who created death and life” (67:2).

There are many verses in the Qur'an that speak of God simply as the Giver of Life and the Giver of Death and that predicate these functions directly to Him. That is, they exclude agents other than God from them. Likewise, the verses that attribute acts of reanimation of the dead to certain prophets stipulate that these acts occur “by God's permission.” An example is Al 'Imran:

“And [appoint him a messenger to the Israelites] with the message, 'I have come to you with a sign from your Lord: I create for you out of clay the figure of a bird. I breathe into it, and it is a bird, by God's permission. And I heal the born blind and the lepers, and I raise the dead, by God's permission'” (3:49).

Overall, this is one of the points of difference between theists and materialists, the theists regarding the origin and creator of life as something external to nature and the materialists regarding matter itself as creative of life.

There is a subtle yet vast difference between the logic of the Qur'an as to God's being the Creator of Life and the standard logic of theists in this matter. It exemplifies the miraculous quality of this Noble Book. If theistic scholars were to familiarize themselves with this logic, not only could they extricate themselves from the materialists for good, but they could free those unfortunates from the clutches of supposition and error as well.

Usually, when scholars seek to relate life to *Tawhid* and God's will, they bring up the issue of life's appearance on earth and raise the question of how it first appeared. Clear scientific evidence shows that life has a beginning on earth, that is, that no species of living organism, plant or animal, has existed into the indefinite past, in that the earth itself has a finite and ascertainable age and has not been capable of sustaining life over the whole of its many millions of years of existence.

By what means did these organisms first appear? Our immediate experience is that an individual is always born of another individual of its own species. Wheat springs from wheat, barley from barley, horse from horse, camel from camel, human being from human being. Nature forbids the spontaneous generation of, say, an animal or a tree from a mass of pure earth. Living organisms always have their origins in other living organisms; for instance, they are released as germ cells or seeds to grow in a

suitable environment.

How did this process begin? Does each of these species have its origin in a single individual? If so, how did this individual appear? Nature forbids that an organism should be unpreceded by an egg and a sperm or by some material released by a prior organism. One would therefore be forced to say an exception, a “miracle,” had occurred, that the hand of divine power had emerged from its sleeve to create that individual.

Or do all these species have a common origin? Do they all relate as a family? Assuming all these various organisms trace through one or more lines to a single unicellular organism, how did this organism appear? Has not science demonstrated that no organism appears except through other organisms? So has an exception, a miracle, occurred? Has the divine will intervened such that a suddenly a single cell has appeared? [12](#)

Here the partisans of the materialistic theory see themselves compelled to advance a hypothesis that not even they can accept. The theists take this point as proving the existence of a creator, saying that certainly a supernatural power has intervened to cause the appearance of this first life; certainly, God's will has manifested itself to bring it into being. Likewise Darwin, personally a theist, having resolved the question of speciation to his own satisfaction and considering the one or more organisms that first appeared on earth, without deriving from other lifeforms, said that these have found life through the divine breath. [13](#)

A. Cressy Morrison says on this same subject:

It has been suggested by some that life arrived from some planet as a germ which escaped unharmed and after an eternity in space settled upon the earth. Such a germ could hardly survive the absolute zero temperature of space, and if it did, the intense short-wave radiation would kill it. Here, if it survived, it must have found the right place, the ocean probably, where an amazing combination of circumstances brought about its rebirth and the beginning of life here. Besides, this puts the question back one step, for we can ask how did life originate on any planet.

It has been generally held that neither mere environment, no matter how favourable to life, nor any combination of chemical and physical conditions which could be brought about by chance, can bring life into existence. Disregarding this question of the origin of life, which is, of course, a scientific mystery, it has been suggested that a little speck of matter, a giant molecule, but still so small that no regular microscope could even glimpse it, added atoms, upset its cohesive balance, divided, and the separate parts repeated the cycle, and thus took on the aspects of life; but no one yet claims it took on life itself. [14](#)

Here Cressy Morrison seeks to demonstrate that, because life cannot be explained through material and natural causes, it must have appeared through the intervention of a creator. He considers the first appearance of man, the great transformation that led to the appearance of a rational and thinking being, a being with an extraordinary capacity for thought, the power to produce sciences:

“The rise of man the animal to a self-conscious reasoning being is too great a step to be taken by the process of material evolution or without creative purpose.”¹⁵ What Morrison says exemplifies the manner of thinking and deductive reasoning that has been applied to the question of the relation of life to God's will.

For all man has tried, he has been unable to form the constituents of a living organism by scientific means. He has not, for instance, succeeded in producing a synthetic grain that would have the property of life, that would grow and seed if planted, from chemicals. He has been unable to produce an animal or human germ cell that could become an animal or a human being. Scientists, however, have spared no effort in this attempt, and it is yet not fully clear to them whether they will succeed one day or this feat is wholly beyond the power of human science and industry.

This question of the future, like the question of the beginning of life has created a stir in the world. Those theists who say God is the author of life and who address the relation of life and God's will in the manner exemplified by Morrison's work have held that human effort along these lines is futile because life is not by the hand of man but depends on God's will: Man cannot of his own volition, by the means of science and industry, create life whenever he pleases. The prophets, in animating dead matter, did so through God's permission. It is impossible and absurd for someone to do such a thing without God's permission. If he wishes to do so with God's permission, he must join the ranks of God's prophets and perform miracles, for God does not enact miracles except through the instrumentality of His prophets and saints.

These theists have taken this present incapacity of man as proof for their position: See what would happen if man should form a grain of wheat that did not differ from natural wheat in its chemistry, that would be identical with it, but that lacked life. This would be the case because life depends on God's will and must appear by God's permission, which He has not given to any other than His prophets.

The Noble Qur'an, too, says explicitly that God is the Author of life and denies that any other can intervene to create life. But nowhere do we find the Qur'an invoking the beginning of the life of man or of other animate beings to demonstrate this point. On the contrary, it calls this existing and observable system to witness and regards this very system in process of life as the system of creation and perfection. The Qur'an says that God is the Author and Creator of life, but in ascribing life to God's creatorship, it does not refer to the first day and contrast it to later days.

It says that these very systematic transformations of life constitute the creation. For instance, it says in the blessed *sura* Mu'minin:

“Truly We created man from an extract of clay, then We made the droplet into a clot, and then We made the clot into a little lump, and then We made the little lump bones and clothed the bones with flesh, and then We produced it as another creation. So blessed be God, the best of creators!” (23: 12–14).

This noble verse refers to the transformation and evolution of the embryo according to a determinate

system and says that ongoing acts of creation follow this same evolutionary pattern. It is said in the *sura* Nuh:

“What is the matter with you, that you do not look to God for dignity, while He has created you by stages?” (71: 13–14).

It is said in the *sura* Zumar:

“He creates you in the wombs of your mothers, creation after creation, in a threefold darkness” (39:6).

It is said in the *sura* Baqara:

“How is it you disbelieve in God when you were dead and He gave you life I Then He will give you death, then life again, and then you will return to Him” (2:28).

It is said in the *sura* Hajj:

“It is He Who gave you life, will give you death, then will give you life again” (22:66).

There are many other verses to this effect, in all of which this same system we witness in process is called the system of creation. The opening of a seed under the earth, the growth of herbs and the foliation of trees in the spring are all spoken of as the new creation, the ongoing acts of creation of God. Nowhere do we see the Qur'an holding that creation and God's will to produce life are confined to a single first human being or first animal that appeared on the earth as the sole creature of God or product of God's will.

Mention is made in the Noble Qur'an of the creation of a first human being, but not in demonstration of *Tawhid* or to argue that the existence of a first human being shows that the hand of divine power emerged from the sleeve to manifest God's will in the act of creation. The hand was never in the sleeve and never will be.

In telling the story of Adam, the Qur'an alludes to many moral and edifying teachings, such as: man's worth to reach the station of divine creativity, man's abundant capacity for knowledge, the angels' humility before knowledge, man's capacity to outstrip the angels, the detrimental effects of avidity and arrogance, how sin causes man to fall from the highest planes of being, how repentance saves man and returns him to the station of nearness to the Truth, and admonition to man not to be led astray by Satanic temptations.

But the special and exceptional circumstance of Adam's creation is in no way related to the subject of *Tawhid* and recognition of the Creator. Because the object in telling the story of Adam consists in a series of moral and edifying teachings, not in a calling to witness the beginning of life in testimony to *Tawhid*, mention of the first human being is felt to suffice, and no mention is made of how the other

species of animals found life on earth.

When theists consider the first living being and find no way to account for its life, they say, "It came into existence through the divine breath." But just as the Noble Qur'an regards this divine breath as the life of the first human being, it regards it as the life of all other human beings, which take shape through the system in process.

At one point, God says to the angels regarding the first human being,

"When I have set him in balance and have breathed into him of My spirit, do fall down in prostration to him" (15:29, 38:72).

Elsewhere He says,

"And We created you, then shaped you, then told the angels, 'Prostrate to Adam'" (7:11).

Plainly, in this verse, the creation, the inbreathing of the spirit, and the humbling of the angels have been generalised to all human beings. [16](#) It is said in the *sura* Sajda:

"He Who has made everything He has created good – He began the creation of man with clay, then He made His progeny from an extract of despised fluid, then He fashioned it and breathed into it of His own spirit. And He gave you hearing, and sight, and hearts. Small thanks you give!" (32:7)

As exegetes have said, and as the context indicates, the pronoun *hu* (it) in *sawwahu* (He fashioned it) refers to *nasl* (progeny), not to *al-insan* (man). Theists turn to the first appearance of life when they seek to attribute life to God's will. The Noble Qur'an never takes this turn in its method of *Tawhid*, but treats life with its evolution as such as the direct product of God's will, without distinguishing between the beginning of life and its continuation.

This difference between the Qur'an's logic and others' logics springs from a more fundamental difference. These theists seek to know God through the negative aspect of their knowledge, not through its positive aspect. That is, when they are confronted with an unknown, they drag God into it. They always seek for God amid what they do not know. That is, they always look to those things for which they know no natural cause, and when they come up with some striking instance of such a thing, they at once exclaim, "This, certainly, has come into being through God's will!" [17](#) It follows that the more unknowns they rack up vis-a-vis the natural causes of things, the more evidence they see for their conception of *Tawhid*, and the more they learn of these causes, the more their faith diminishes.

For some theologians and adherents to the school of *Tawhid*, the supernatural is like a storehouse for their ignorance: Whatever they do not know, do not understand, or have not found a natural cause for, they at once ascribe to the supernatural. [18](#) They see the traces of the supernatural in instances where, as they believe, something out of the ordinary has occurred and the natural order has been disrupted

and has broken down.

Because they have not found the natural cause for an event, they substitute a supernatural cause for it) failing to note, first, that the supernatural also has a logic and law and, second, that if a cause should supplant a material and natural cause, it too must be material and natural, on a level with matter and nature, not supernatural. Nature and the supernatural are aligned longitudinally, not latitudinally. A natural cause cannot supplant a supernatural cause, and a supernatural cause cannot occur on the plane of a natural cause.

The Qur'an never cites cases in which it would appear the natural order has been disrupted and has broken down in demonstration of *Tawhid*. It cites cases having natural elements and causes familiar to people; it calls the system itself to witness.

In the special case of life, the logic of the Qur'an is premised on life's being wholly a sublime emanation from a plane above that of sensible bodies, by means of whatever law and reckoning the emanation takes place. Therefore, the evolution of life is creative and perfective. According to this logic, it makes no difference whether life appeared on earth in an instantaneous creation or gradually, in successive creations. This logic is premised on the assumption that sensible matter is essentially lacking in life and that life is an emanation, a light, that it must be emanated from a higher source. Thus, the laws of life in any form represent this law of creation.

The difference in plane of being between matter and life is a demonstrable scientific fact. If we seek to discover a supernatural basis for life by reference to this difference in plane of being, we shall have proceeded from the positive aspect of our knowledge, not from its negative aspect. We shall no longer need to draw down the supernatural from its own level to supplant the natural whenever we are at a loss for the natural cause of something. Rather, we shall have to surmise that a natural cause, which our knowledge has yet to encompass, is at work.

In the "Safar-i Nafs" section of the *Asfar*; Mulla Sadra takes Fakhr-i Razi to task on this point, saying, "I am amazed at how whenever this man and those like him seek to demonstrate the principle of *Tawhid* or some other principle of religion, they go looking for some situation where the natural cause is unknown, where as they suppose the order of the universe has broken down and calculations collapsed."¹⁹

According to the Noble Qur'an, creation is not an instantaneous phenomenon. An animal or a human being continuously undergoes creation in traversing the stages of evolution. The whole universe is continuously undergoing creation.

The contrary idea is that creation is confined to a moment. In considering the creation of the universe, one has reference to that first moment in which the universe was created and emerged from nonexistence. It is as if the universe cannot be viewed as created except on such an assumption.

Similarly, in considering the createdness of life, one is supposed to have reference to that first moment

in which life began. This is a Jewish way of thinking.

“The Jews say, ‘God’s hand is shackled.’ May their hands be shackled and may they be accursed for what they have said” (5:67).

This conception of the relation of life to God’s will, that inevitably seeks to relate it to God’s will by reference to its beginning, is a product of Jewish thought. This Jewish conception gradually has spread everywhere, and, unfortunately, the *mutakallimin* of Islam have come under its influence. This “moment” has no place in Qur’anic teachings.

I noted earlier that some have asked if man is capable of making a living being. Will he be able, for instance, to fabricate a human zygote that, after implantation in a womb or other suitable environment, will develop into a complete human being? Some theists, who see the relation between life and God’s will as restricted to the first appearance of life and other exceptional instances, vehemently deny this possibility. But, in Qur’anic teachings, there is nothing to prevent it.

The immense structural complexity of living organisms must be considered. Will man one day be capable of discerning all the mysteries of the material organization of a living cell and of discovering the natural law whereby such a cell is produced? I can express no opinion on such a question; it is outside my competence. Scientists say that higher and more profound than the creation of earth, planets, solar systems, and all else is that of the substance called protoplasm.

If one day man discovers the law of the creation of living things – just as he has discovered the laws of many other entities – if he achieves all the conditions and assembles all the material constituents for synthesis of a living organism, will that synthetic being be alive? It will definitely be alive. It is absurd that the conditions for the existence of an emanation should be fully met and that emanation not be realized. Is not the Essence of Unity eternally self-sufficient, absolutely perfect, and absolutely effulgent? Is not the necessary Being in Essence necessary from all standpoints and in all respects?

Where does the idea that God is the sole Author of life, that beings other than God are excluded from the acts of giving or taking life, fit in? The Noble Qur’an itself makes this point. If one day man is graced with success in this area, what in the final analysis he will have accomplished is to bring about the conditions for life, not to create life. Man will not be giving life; he will be perfecting the capacity of matter to receive the emanation of life. He will be the agent of motion, not the source of being.

If one day man is graced with such a success, this will be a major work of scientific discovery, but it will be no more an intervention in the creation of life than that of the father and mother in creating the life of the child through copulation or that of the farmer in creating the life of the grain through planting. In none of these instances is man the creator of life; he is the one who brings about the conditions for some material substance to receive life. The Noble Qur’an expresses this point in the best possible way in the blessed *Sura Waq’i’a*:

“Have you seen that which you emit? Do you create it or are We the Creators?” (56:58–59).

The miracles of the prophets represent acts of which man is incapable through his normal knowledge and power. The prophets did not arrive at this knowledge and power by normal means; they bore an extraordinary degree of knowledge and power that carried them above the plane of nature, enabling them to be sources for such magnificent acts. If people should one day succeed in [producing life], they will not be accomplishing what the prophets accomplished through God's permission. If ordinary people should one day gain the ability to bring about the conditions for life, it will be similar to the way people today can destroy the conditions but cannot cause life to withdraw. The emanation of life is in God's hands. One might say that man could bring about or remove the capacity of matter to receive life by discovering the laws of the emanation and withdrawal of life.

I have said that life is not the act of man, which it is beyond the realm of human action, since to give or to take life is in the hands of God. And I have said that man may be able to bring about the conditions for life.

I am not, however, suggesting a division of labour, some works belonging to man and not to God and others belonging to God and not to man. Rather, I have delimited and qualified human action, not delimited and qualified God's action. God's action is absolute and unlimited; what is qualified and limited is the action of the creature. This point has far-reaching implications. For further discussion, I refer you to *Usul-i Falsafa va Ravish Ri'alism*, volume 5.

Tawhid and Evolution

In order fully to understand this section, the reader must bear in mind the contents of the two preceding sections. In “Spiritualism,” I made the point that life is a reality accompanying matter under certain special conditions. A duality does not govern the relation of matter and life³ and they are not two conjoined realities but matter and life are two levels of one being, each level having special properties.

At certain stages of its evolution and under special conditions, matter transforms into life. As everything transforms from a less perfect to a more perfect form, the less perfect being of inanimate matter transforms into the more perfect form of the living organism. Life is not the creation or effect of inanimate matter but an entelechy or activity that is added to it. Matter in its essence does not possess life, such that it could express or manifest it. Matter has a receptivity vis-à-vis life that becomes apparent under certain conditions, not the property of creating or giving life.

In other words, matter cannot create or give life. This system of living organisms we see before us is a system of receptivity from the standpoint that it is associated with matter and a system of creativity from the standpoint that it is associated with a higher plane.

Life transforms, intervenes in, governs, and makes matter behave as a function of its own

determinations. If life were the creation, effect, or product of matter, it would not be able to so influence its own cause and origin or to have determinations superior to the determinations of inanimate matter able to govern them. Biologists and psychologists, without seeking to arrive at a conception of the substantive reality of life, have arrived at results that demonstrate such a reality. Even the theory of natural selection, seen by most authorities as having a materialistic character, when gone into more deeply, demonstrates the governance and substantive reality of life.

In "The Qur'an and Life," I considered the mode of relation between life and the supernatural, or God's will, and I explored the marvellous logic that is one of the features of the Noble Qur'an. I dwelt on two points in particular. First, that an erroneous idea of Jewish origin as to the meaning of the creation has appeared in the world. It inevitably attaches the creation to a moment. That is, whenever one attempts to visualise the creation of the universe or of life, one begins by asking, "At what moment did it emerge from nothingness; when did it begin?" The question of this moment never arises in the logic the Noble Qur'an first propounded.

The second point is that innumerable persons approach the question of *Tawhid* and theology by attempting to know God by negative means. They seek for God amid their ignorance, not amid their knowledge. Whenever they are at a loss to explain the cause of an event, they drag God into it. Thus, in dealing with the question of the createdness of life or that of the createdness of the universe, they dwell on the moment of its first appearance because in their view nothing is less known than how life or the universe appeared. This idea of negative theology amounts to the basis for the idea that creation is confined to a moment.

This Jewish idea on the one hand and this negative idea on the other have resulted in a tendency to predicate the question of *Tawhid* on the matter of the moment on the one hand and on the unknown causes of events on the other. If the matter of the moment of the creation of life or of the universe is placed in doubt or if the unknown causes of events come in time to be known, then the ideas of *Tawhid* and theology in time come into doubt and discredit.

An example of the miraculous nature of the Noble Qur'an consists in the fact that no trace of this Jewish idea or of this negative idea is to be found in it, notwithstanding the fact that these two paralysing ailments are so pandemic in human intellectual history that none but the few who have drunk deeply from the Qur'an have escaped them.

This fact is confirmed by a close examination of the intellectual history of pre-Islamic philosophers as well as that of the *mutakallimin* of Islam and that of the European philosophers of the modern period as a body. The Qur'an is the sole teacher of *Tawhid* that introduces God to man within the extant and observable system, within the process of operative causes, effects, and norms of the creation, not by reference to its beginning, and through the clear and demonstrable, not by the negative means of resort to unknown causes.

I shall not go into the subject of *Tawhid* per se, rehearse the proofs for *Tawhid* that have appeared in books of *kalam* or of philosophy, or go over all that has been said or might be said on the subject. Nor shall I discuss the evolution of living beings, committing the same error others have committed in seeking to defend the bounds of *Tawhid* by denying and attempting to falsify the principles and laws of evolution, thus inciting those who take a materialistic approach to philosophical problems to leap into the fray and obliging them to treat even the more questionable aspects of evolutionary theory as definitive in order to attack the theory of the existence of the Creator.

This wrangling is pointless for two reasons. First, the principles of *Tawhid* and the principles of evolution in nature in all its forms, including the transpecific evolution of living organisms, do not negate and oppose but affirm and complement each other. The supposition that these two principles contradict each other is born of ignorance. Second, it is not for just anyone to hold forth on this subject. Only those scientists who have devoted their lives to research on this question and have approached it by the correct scientific method can more or less reasonably discuss what the flickering flame of science is able to reveal.

Transpecific evolution is a recognised scientific fact. The gradualistic model of evolution, which the ancient Greek philosophers advanced, which Lamarck and Darwin sought to demonstrate scientifically, and which prompted their fanatical followers earnestly to search for the ancestors of horses and human beings and their assumption that man is descended from the apes, has been displaced by the punctuation model of evolution.[20](#)

But consideration of this question is the task of biologists. Theists and materialists alike must await the results of scientific research to see whether it accords with their principles.

Accordingly, I shall treat directly neither *Tawhid* nor evolution, but the complement to these topics, the relation of *Tawhid* and evolution. I seek to see whether these two ideas are mutually exclusive or mutually supportive. For instance, if someone should be convinced of the principle of *Tawhid* through rational proofs, does this entail his rejecting the principle of the evolution and speculation of living beings? If he comes to believe in speciation, does this impair his belief in *Tawhid*?

And likewise, if someone has accepted the principle of transpecific evolution, if he is convinced that species of living beings derive from others in so the manner, does this entail his casting aside the key principle of *Tawhid* and turning into a materialist? My citations of the proofs of *Tawhid* or of the principles of evolution in this section are directed toward answering this question.

The idea of the contradiction between *Tawhid* and evolution, like the idea of the creation's being tied to a moment or that of negative theology by resort to the unknown has spread across the globe. Bizarre, even unbelievable, specimens of such thinking that can only sadden a Muslim thinker have appeared in the histories of European science and philosophy. Study of the modern history of biology and the sciences in general shows that this contradiction exists in the thought of almost all European scientists.

Thus, an ambiguity or distortion, which materialists have had no small part in creating, has come about.

We are obliged to study this intellectual current to see why, as modern thought has developed, a materialistic and antitheistic aspect has been imparted to the theory of evolution. Why have both parties to the conflict taken this aspect of the theory for granted? Why have *Tawhid*, theism, and acceptance of the principle of creation been thought synonymous with the theory of constancy of species? Is there really a logical contradiction between the idea of *Tawhid* and that of evolution, or has one or more particular causes led to the supposition that there is?

In studying the works of scientists in this field, I have always striven to discern the roots of their thinking from the tenor and phraseology of their writing and to apprehend just what has prompted them to approach a problem involving philosophical inference in a particular way. What assumptions have they taken for granted and based their subsequent views upon? The main reason for divergences in philosophical views is that each thinker tacitly begins from a set of assumptions. Each supposes that these assumptions are beyond question and to be taken for granted, not only in his own mind, but in others' minds. In fact, the assumptions are nothing but idiosyncrasy and fallacy.

What has led to this conception of a contradiction between the idea of *Tawhid* and that of evolution is the Jewish idea of creation and the negative theology at its root. If we study the history of science or biology or refer to the books of philosophy written, on the one hand, to defend the bounds of *Tawhid* and refute the theory of evolution or, on the other, to defend the school of materialism, we see the specter of that Jewish idea everywhere.

The idea of negative theology appears to be the source of the idea of the momentary character of creation. The idea of the momentary character of creation is the source of the idea of the contradiction between *Tawhid* and evolution.

From ancient times until comparatively recently, scholars have debated this point: Does the organism with all its members and organs exist in miniature yet fully formed from the beginning in the female ovum or the male spermatozoon, these organs thereafter to grow in proportion? Or is the matter that is the source of the members of the organism at first simple and uniform only later to be differentiated into various organs and members? In modern times, not in the middle ages, for about two hundred years, most scientists held to the former belief.

This is more or less the same split in opinion that once existed between Aristotle and Hippocrates, with their respective followers, concerning the germ. Hippocrates held that sperm collected from all the body, and so each portion of it gave rise to a member. Aristotle believed that germ is uniform.²¹ It is not clear from what Hippocrates has written whether he held that there was an actual homunculus in the germ. (His opponents said that such an unsound inference follows from his assertion.) Beginning in the seventeenth century, however, scientists formally held to preformation and preexistence.

One of the wonders of the creation is this appearance of the most diverse beings with all their various

members from a simple, uniform substance that is the same in appearance for all of them. One of the best testaments to the existence of a dominical guidance and a divine sovereignty is this very diversity and this structure within which beings progress from uniformity to diversity and from simplicity to complexity. It is said in the Noble Qur'an,

“It is He who forms you in the womb as He pleases” (3.6).

As Sa'di says: “He gives the germ a Peri's form/Who's painted images on the water?”[22](#)

Many seventeenth century scientists contributed to this theory of preformation without having any scientific proof or analytical evidence. They claimed that, from the first creation of the human species, all individuals have been created with all their organs and members whole and entire, if minute. They were present in the seed of the first human being and have been transmitted from generation to generation³ growing into visible form with each generation. Pierre Rousseau says:

William Harvey affirmed in 1651 that every creature arose from an egg, and, dissecting the does of Windsor Park at regular intervals, he discovered the embryonic calves at the various stages of their development. Some years later, in 1672, the Dutchman Regnier de Graaf (1641–1673), sacrificing in the same way a series of rabbits, believed he had laid his hands on the secret of the eggs of mammals. And in 1689, Malpighi, studying eggs not yet sat on by hens, declared he had seen the forms of chicks there. This was the point of departure for the extraordinary theory of *preformation*.

Seeing that the as yet unfertilised egg contains a complete being all ready to develop, that being, that embryo, must itself contain eggs that in their turn contain each a complete being, and these too must contain other eggs containing other complete beings, and so on.

“Consequently,” added Swammerdam, “the body of Eve contained, nested one within another, all the eggs and all the germs of future humanity.”

But a voice was raised in contradiction—that of Leeuwenhoek, who, in 1679, had just discovered *spermatozoids*: “This is all wrong,” he wrote. “It is not the egg that contains the preformed being, but the spermatozoid.”

“The proof,” exulted Fr. de Plantades, secretary of the Academy of Sciences of Montpellier, “is that I have seen, under the microscope, a spermatozoid open, and a tiny but fully formed man emerge from it!”

Was this believed? The biologists (*sic*) placed their faith in this audacious tall tale and went on gravely discussing whether the germs of humanity had been lodged in the ovaries of Eve or the spermatozoids of Adam.[23](#)

Rousseau recounts the opposition of a couple of scientists to the theory of preformation and continues: “Yet, the theory of preformation, commended by such grand savants as Haller and Charles Bonnet,

continued to rally the near-unanimous support of men of science. Even Cuvier [the great biologist of the second half of the eighteenth and first half of the nineteenth centuries] was a Johnny-come-lately partisan!" [24](#)

Pierre Rousseau offers no explanation as to why so many scientists held to this senseless theory. I believe that this hypothesis was intended to account for the fact of the creation; these scientists sought by this means to demonstrate that every living being is the creature of God. That they hypothesised that every human being and even animal came into existence completely formed, if minute, on the first day its most remote ancestors came into being shows the influence of the Jewish idea.

How vast is the difference between this way of thinking and that way which, when it seeks to express God's creatorship, says it is God who gradually formed and shaped a shapeless, characterless, simple, and uniform substance in the womb.

"It is He Who forms you in the wombs as He pleases" (3:6).

Usually, when the subject of the origin of life, the nature and character of its appearance on earth, is approached by works of biology, works of so-called philosophy, or even textbooks, various hypotheses are offered, none of which has any scientific corroboration. One of these is called the creation hypothesis. It holds that all species of beings were created whole and entire, with no antecedents. This interpretation therefore implies that, if any of the other hypotheses are valid, there is no creation. What has led to this position, which holds that, if the appearance of living things was instantaneous and without antecedents, then creation is demonstrated, but if this was not the case, creation is refuted?

A chapter of *Farziyaha-yi Takamul* ("Hypotheses of Evolution"), beginning on page 9, is devoted to the subject of the origin of life. After an introduction, the author says, "We shall now note the hypotheses that are worthy of mention and that have had widespread acceptance for some time." [25](#)

He then notes several hypotheses, such as that the first living organism came to earth by chance from another planet, spontaneous generation, and that of entities arising through volcanism or lightning. The first hypothesis he names he calls the creation hypothesis. He suggests implicitly that, if living organisms were spontaneously generated from inanimate matter, then no creation is involved. If the ultimate origin of living organisms is some other planet, then the living beings found on earth have not been created. One can only say that the living beings on earth are God's creatures if none of the previously-mentioned conditions hold, if living beings first appeared out of stillness and with no antecedents. In the small mind of the author of this book, creation can have no other meaning than this.

As the history of biology shows, Cuvier, who had a tremendous influence on his contemporaries' scientific thought, rejected gradual transformation of living beings. Seeing that the fossil record shows that animals had not maintained the same structure through various periods, Cuvier proposed and defended the hypothesis of a series of geological revolutions and catastrophes. He proposed that, in consequence of these catastrophes, the species living in one geological era had become extinct, and

God had created newer (and, of course, more perfect) species to replace them on the earth.[26](#)

There is an article in the Azar 1338 [November 1959] issue of *Sukhan* that consists of the recorded remarks of Mahmud Bihzad, a scholar from Tehran, at a meeting commemorating the centenary of the publication of *On the Origin of Species*. He says:

“Cuvier in comparing fossils of extinct faunas noted their gradual development with the passage of geological eras. He also perceived that the animals of any given era are comparable to those of previous eras in their structural organisation, but since he believed in the constancy of species and their periodic mass extinction, he sought to explain his observations through the hypothesis of “the plan of creation.” Cuvier maintained in this hypothesis that a general plan exists for the creation of living beings, and that this plan is consulted on the occasion of each renewed creation: the reason for the basic resemblance among the faunas of different eras is the existence of such a plan”[27](#)

Elsewhere, too, whenever reference is made to Cuvier's theory on the partitioning of the organisms of one era from those of another, it is called the theory of successive creations. One would have to ask Cuvier himself, or at least his followers, what led him to suppose that we can speak of creation only in the event of the absence of genetic relation among organisms. Why should creation otherwise be meaningless?

Pierre Rousseau writes:

When the Darwinists had resolved – they thought! – the problem of the origin of man and animals, they no longer sensed any limit to the all-power of their science, so they merrily attacked another question, one which the German naturalist Emile du Bois Reymond (1818–1896), successor to Jean Muller, had classed, in a famous discourse given in 1880 at the Academy of Sciences of Berlin, among the seven enigmas of the universe: the question of the origin of life. There was a very perplexing point here, for if one were to reject the creationism of the Bible and of Cuvier, if one were to deny that only divine intervention could make living matter appear from nothing, one was as good as admitting that living matter had been created all by itself. In other words, one was as good as shaking hands with spontaneous generation, which Pasteur had condemned justly in the name of experimental science.

We must confess that, since that epoch [the time of the materialists' hypothesis on the origins of life, which was discredited by Rousseau's time], not much progress has been made on the problem. It always consists in finding by what means many hundreds or many thousands of atoms of carbon, hydrogen, nitrogen, and oxygen were able to agglutinate to form a molecule of living matter...

The probability of the appearance of a single cell rests on a phenomenon of pure chance, a chance so prodigious that it approaches a miracle.

Is one thus obliged to have recourse to divine creation? “No,” responded the French de Monlivaault in 1821, and “No,” responded the German Richter in 1865, followed by Lord Kelvin and Helmholtz. Since

positive science admits neither creation nor generation, it remains for us to suppose that the earth has been inoculated like a petri dish. “Good God, inoculated by what germs?” “Well, by bacteria come from other worlds and sailing across interstellar space.”[28](#)

Rousseau, who claims conversance with all the world's scientific knowledge from ancient times to the present age, believes that positive science accepts neither creation nor spontaneous generation. He is right to believe this because his conception of the meaning of the creation is unsupported by science. His conception, and that of all scientists who think along the same lines, is, according to firm and indubitable philosophical demonstrations, impossible and absurd; such a thing never has occurred and never can occur. That conception of the creation rests on wild, haphazard surmise. God's creation does not take place except through specific and definite norms, whether or not they are known to us.

You may suppose that Pierre Rousseau and others speak for science, propounding and explaining what science has shown them, and that my objections amount to objections to the progress of science. What I have sought to show in these examples is that the hypotheses so expressed do not rest on concrete observations and objective experiments. The trend of scientific experiment can be otherwise explained and interpreted, but the particular conception scientists have of the creation and the particular sort of philosophy that holds sway over their minds have resulted in the above-named questions being addressed as they have throughout the history of science. Despite what the title of his book suggests, what Rousseau addresses is not just the history of science and of empirical observation, but a hybrid history of science and European philosophy.

The most tragicomic aspects of this situation pertain not to the history of the modern sciences, but to that of philosophical thought in Europe. European scientists conceive of the creation in terms of a form of the Jewish conception and of God in terms of the negative theology I have discussed in “The Qur'an and Life.” That is, they seek for God amid their ignorance.

By now you should be able to guess why the materialist school so flourished in Europe. The faulty logic on questions of divinity that has held sway over scientists at large was doomed and bound to fail and disappear from the very beginning. As I study the history of science in recent centuries and note the peculiar coloration given pure science simply by scientists' special turn of philosophical thought, I grow saddened and discouraged.

I wish scientists could become acquainted with the fine calibre of philosophical thought that has evolved in the lap of the Noble Qur'an over the last fourteen centuries and the limpid water of science would not remain polluted by that Jewish way of thinking.

I am especially saddened to see those youths newly introduced to science and lacking the power of analysis who, reading works of modern philosophy, works on the history of science, or even textbooks, assimilate a conception of scientific progress adulterated by that way of thinking. They are persuaded that scientific observation discredited the hypothesis of the creation and of the existence of God years

ago. They think that the hypothesis of a creation and a Creator lives on only in the darkness of inherited beliefs and that not a trace of it remains to be seen in the clear light of science.

Perhaps what has led scientists to adopt this mode of thought is not what I have termed the Jewish way of thinking, but reverence for the contents of the Book of Genesis. Doubtless, its contents have had a profound effect, but at the most, the Book of Genesis has propounded the character of the creation in a special manner. It has not suggested that, if organisms have come into being in any other way, creation has no meaning. Basically, the Book of Genesis cannot impart a particular conception of or way of thinking about the meaning of the creation. The history of scientific thought on this question indicates that scientists, theists and materialists alike, have been unable to consider the creation from any other standpoint than the one I have described.

Even after rejecting the conception of the creation given in the Book of Genesis, scientists continued to regard the meaning of the creation as before. Therefore, some other cause is at work. I believe that cause is a pandemic way of thinking characteristic of the Jews and stemming from Jewish scholastic theology, not from the Book of Genesis. They lack the correct, clear, and logical way of thinking characteristic of those raised with study of the Noble Qur'an.

After noting Cuvier's theory of catastrophism, Bihzad says:

It is not unamusing to note that Louis Agassiz (another student of Cuvier and opponent of evolution), in order to accommodate the evolution of faunas observed in the fossil record to the theory of the constancy of species, arrived at a bizarre theory that is in a class of its own and, if closely examined, sheer unbelief. Agassiz proposed that the cause for the development of faunas from era to era, or otherwise their gradual evolution, resulted from the evolution that has taken place in the thought of the Creator Most High from the first era of time to the present.²⁹

This quotation shows how deeply rooted this Jewish idea has become, not as a principle of religious observance, but as a philosophical assumption, so deeply that it is easier and more acceptable for one scientist to conceive of evolution occurring in the mind of God than, gradually, in the creation. Is the theory of catastrophism also found in the Book of Genesis? Does the Book of Genesis say that God's knowledge gradually has evolved?

¹. For an explanation of this point, see *Usul-i Falsafa*, vol.2.

². For a more extensive treatment of this topic and of the historical development of questions of being, see *Usul-i Falsafa*, vol.3.

³. Concerning the history of the entelechy concept in biology, from Aristotle to Hans Driesch, see Arthur Koestler, *Janus* (New York, 1979), pp.222–226. Trans.

⁴. A. Cressy Morrisson, *Man Does Not Stand Alone* (New York, 1944) p. 35.

⁵. For discussion of vitalist currents in modern biology and for further references, see Koestler, *Janus*, p.224–226; Arthur Koestler, *The Ghost in the Machine* (New York, 1976) pp.196–221; Karl R. Popper and John C. Eccles, *The Self and Its Brain* (Berlin, 1981) pp.28–29, 68; C.H. Waddington, *The Nature of Life* (London, 1963), pp.115–122; Richard Grossinger, *Planet Medicine: From Stone Age Shamanism to Post-Industrial Healing* (New York, 1980) pp.116–123; and Rupert

Sheldrake, *A New Science of Life: The Hypothesis of Formative Causation* (Los Angeles, 1981), pp.43–52. Ludwig von Bertalanffy perceptively analyses and criticizes vitalistic theories in his *Problems of Life* (New York, 1960). Most present-day biologists, although they may not advocate a substantive reality of the vital force, hold that biological phenomena cannot be fully analysed in physicochemical terms. This rejection of explanatory reductionism is embodied in the ideas of holism and organicism and reflected in systems theory. Especially interesting work along these lines is reflected in Erich Jantsch, *The Evolutionary Vision: Towards a Unifying Paradigm of Physical, Biological, and Socio-cultural Evolution* (Boulder, Colo., 1981). See also the various writings of Gregory Bateson. In *The Growth of Biological Thought* (Cambridge, Mass., 1982) p.52, the eminent biologist Ernst Mayr suggests that vitalism per se is a dead issue among biologists but notes that it has many defenders among physicists and philosophers.

Some modern physicists who appear to advance vitalistic ideals are Werner Heisenberg (see his *Physics and Philosophy: The Revolution in Modern Science* [New York, 1962], pp.102–106), David Bohm, (*Wholeness and Implicate Order* [London, 1981] pp.193–196), and J.A. Wheeler (with C.M. Patton, “Is Physics Legislated by Cosmogony?” in Ronald Duncan and Miranda Weston-Smith, *The Encyclopaedia of Ignorance* [Oxford, 1977] pp.19–35). Trans.

[6.](#) This belief is preserved to this day among the behaviorists. For an extensive refutation, see Donald B. Griffin, *The Question of Animal Awareness: Evolutionary Continuity of Mental Experience* (New York: 1981).

The Qur’an ascribes rational being to animals in 24:45–46, verses whose significance Mahmud Taleghani discusses in *Society and Economics in Islam* (Berkeley, 1982), pp.166–167. Trans.

[7.](#) Mahmud Bihzad, *Darwinism*, 5th ed., p.99.

[8.](#) See Kazimzada Iranshahr, *Tadavi-yi Ruhi* (“spiritual healing”).

[9.](#) Oswald Kulpe, *Introduction to Philosophy: A Handbook for Students of Psychology, Logic, Ethics, Aesthetics, and General Philosophy* (London 1901), p.122. [Gregory Bateson has stressed how inapplicable such physical concepts such as energy and force are to mental phenomena. See especially his *Steps to an Ecology of Mind* (New York, 1972, paperback edition), pp.448–465, 478–487, and *Mind and Nature: A Necessary Unity* (New York, 1979), pp.217–223. Trans.]

[10.](#) Morrison, *Man Does Not Stand Alone*, pp.34–35.

[11.](#) Readers can refer to the various works that have been written on suggestion and its effects, among which I recommend especially Iranshahr, *Tadavi-yi Ruhi*. [A balanced and comprehensive treatment of these areas in English is Grossinger, *Planet Medicine*. Trans.]

[12.](#) See Pierre Rousseau, *Histoire de la science* (Paris, 1945), pp.687–681.

[13.](#) This is surely a paraphrase of part of the concluding passage to Charles Darwin, *On the Origin of Species*, 1st ed. (London, 1859), p.490: “There is a grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one.” Trans.

[14.](#) Morrison, *Man Does Not Stand Alone*, pp.39–40.

[15.](#) *Ibid.*, p.96.

[16.](#) The second-person objects here are all plural. Also, the context is of an address to peoples and communities. Trans.

[17.](#) Note Chuang Tzu’s dictum: “In the world everyone knows enough to pursue what he does not know, but no one knows enough to pursue what he already knows.” (*The Complete Works of Chuang Tzu* [New York, 1968] p.113). Trans.

[18.](#) The context suggests that the author means to include monotheists at large here and in similar references in these articles. Trans.

[19.](#) See *Usul-i Falsafa*, vol.3, p.220.

[20.](#) The punctuational model was first clearly formulated by Ernst Mayr in 1954 and has been given its best theoretical elaboration to date in Steven M. Stanley, *Macroevolution: Pattern and Process* (San Francisco, 1979). It does not radically alter the scientific picture of human origins. It proposes that major evolutionary change occurs relatively rapidly, in small, isolated populations.

It is also possible that the author’s term *takamul-i daf’i* translates the theory of saltationism, advocated by Richard Goldschmidt in *The Material Basis of Evolution* (New Haven, 1940). It held that a new species could arise in a single generation, as a bird from a dinosaur’s egg. Trans.

[21.](#) See Mulla Sadra, *Asfar*, vol.4, and Avicenna, the *Tab’iyat of ash-Shifa’*.

[22.](#) Exact place of occurrence not found. Trans.

[23.](#) Rousseau, Histoire de la science, pp.371–372.

[24.](#) Ibid.

[25.](#) Unknown. Trans.

[26.](#) For a view that Cuvier’s thinking was chiefly influenced by the Platonic doctrine of essentialism, see Ernst Mayr, The Growth of Biological Thought (Cambridge, Mass., 1982), especially pp.363–367. Trans.

[27.](#) Mahmud Bihzad, “Darvin va Nazariya-yi Takamul” (“Darwin and the Theory of Evolution”), Sukhan, vol.10 number 9 (Azar, 1338), p.947. Trans.

[28.](#) Rousseau, Histoire de la science, pp. 678–679.

[29.](#) Bihzad, “Darvin va Nazariya-yi Takamul,” p.947. Trans.

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