

Cosmic Design and Unification Epistemology:

What Is It That Makes Science Possible?

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I Mystery of Comprehensibility

“The most incomprehensible thing about the universe is that it is comprehensible.” This paradoxical dictum of Albert Einstein is well-known and often cited, for instance, as a motto for book chapters (e.g. Paul Davies’ *The Mind of God*, Wiker & Witt’ s *A Meaningful World*) without, however, particularly going into the full implication of this mystery. Einstein himself was apparently unaware why it should be so.

The aim of this essay is to explicate this profound mystery by referring to Unification Thought and turn around to the question what science is at all.

Much the same feeling is expressed by the famous physicist Eugene Wigner in his essay “The Unreasonable Effectiveness of Mathematics in the Natural Sciences”:

The enormous usefulness of mathematics in the natural sciences is something bordering on the mysterious. ...There is no rational explanation for it. ...The miracle of the appropriateness of the language of mathematics for the formulation of the laws of physics is a wonderful gift which we neither understand nor deserve.¹

In their co-authored book *A Meaningful World* intelligent design proponents Benjamin Wiker and Jonathan Witt also refer to this remarkable fact as follows:

We may now ask a crucial but frequently overlooked question: What *right* have we to expect that our human capacity for mathematical abstraction and our human appreciation of elegance would yield any knowledge of nature? If, after all, the universe itself were randomly produced and did not have us in mind, and if our own reasoning capacities and love of beauty were likewise randomly produced, could we reasonably expect mathematics to be an effective tool for us in “working out the meaning of the data”?²

Whatever the answer might be, such a question at least points to important problems that are not even raised within the materialistic or Darwinian framework of science. Materialistic science will not even admit the legitimacy of the sense of wonder before the world: true, there are unsolved questions, but it is both unscientific and unworthy of science to regard the universe as mysterious, as something to be revered as surpassing us. It thus disdains to ask questions most crucial to scientific inquiry.

Arrogance goes hand in hand with shallowness in science as is typically shown in Darwinism, which claims that the whole mystery of life can be understood solely in terms of natural selection acting on random mutations. T. S. Eliot's poem *Four Quartets* has the phrase “superficial notions of evolution” apparently meaning Darwinian evolution. ‘Superficial’ is a better word than, say, ‘erroneous’ because Darwinian evolution *may* be right as far as we simply look at the surface of the event, just as a nobly self-sacrificial human act can be described purely mechanistically, that is, scientifically, without committing any error.

Wigner's phrase “a wonderful gift which we neither understand nor deserve” is worth attention as a true scientist's humility which nevertheless leads us to higher levels of science.

We are so naturalized to the intellectual milieu of scientific materialism that we tend to think of our universe as essentially a lifeless thing where the life-holding earth emerged only as an odd meaningless exception, a picture encouraged through such influential materialists as Carl Sagan and physicist Steven Weinberg. We also tend to think that our reasoning capacities and sense of beauty are the products of Darwinian evolution, and that, therefore, these are our property acquired by our own

efforts. If that were truth, our mathematical ability would be useful only for our survival, for practical use. Even if we developed highly sophisticated abstract systems of mathematics, they would belong to the world of human subjectivity: we could not expect them to apply to the outer unseen world, as happened to Einstein.

This is a mystery that cannot be solved if we keep ourselves within the framework of materialism, the world of visible matter and blind forces. This alone is enough evidence that scientific materialism must fail in front of the most important issues of science. We therefore are compelled to introduce into science something outside of matter—some element of mind.

Yet, the instant we insist we take account of the work of the invisible, the Mind outside of our own, we are attacked for introducing into science a ghostly element, religion, deity—or introducing the easy God-of-the-gaps, *deus ex machina*. But this is an utterly wrong charge resulting from the perverted world view of the materialist. In fact, in scientific inquiry a cosmic coherence should be sought before local (or specific) coherences, though usually scientists are concerned only with the latter. The consistency of the whole scheme should be prior to, and the basis for, the partial consistency.

Those who charge us with postulating such an airy entity as the cosmic mind, and thus endangering science, should take another look on the world. To make my point clear, I might refer them to the concept ‘space-time’ beginning at a certain point which every scientist after Einstein accepts as valid. This compound concept entails envisaging the universe as a Becoming, not a Being. Our universe is no longer considered a steady-state-universe where time flows independently and not necessarily in one direction as is implied in Laplace’s idea. However much the materialist wishes to interpret it as lifeless matter, and life as merely its contingent extension, our universe cannot but be interpreted as living and growing, that is, evolving like an unfolding flower, preparing itself, realizing itself, actualizing its potentials over time.

This vision of the universe as an Organism seems to me inevitable even before we take into account the much discussed fact of cosmic fine-tuning for life or the so-called anthropic principle. The following is a passage from Teilhard de Chardin’s *Phenomenon of Man* which was written around 1940, before cosmic fine-tuning or

anthropic principle was not yet talked about.

Whatever the quantitative disproportion of the masses they involve, inorganic and organic chemistry are only and can only be two inseparable facets of one and the same telluric [=earth's] operation. And the second, no less than the first, must be regarded as already under way in the infancy of the earth. We are back at the refrain that runs all the way through this book. *In the world, nothing could ever burst forth as final across the different thresholds successively traversed by evolution (however critical they may be) which has not already existed in an obscure and primordial way.* If the organic had not existed on earth from the first moment at which it was possible, it would never have begun later.³ (Emphasis original)

This is an organismic or rather embryonic view of the universe, the end or later phases already always present in the earlier phases. This is not a materialistic view of the universe as a causal concatenation, each prior event causing the immediate next. Our universe remains unintelligible until we take some such dynamic view of it—as an Organism, a Becoming, a Life–Mind growing, with an end in view. Teilhard de Chardin's conclusion is that the universe was more and more vitalized and finally humanized *through* our thought activity.

A merely teleological or predeterminate view of it is not adequate to characterize it, because such a view can be a temporally reversed form of mechanistic evolution. The universe as space–time must be a living thing and it has become most highly living through us—through our intelligence, our morality, our sense of beauty. Thus, the idea of the human being as an microcosm or personalization of the universe is both metaphor and reality. We are the universe, inhabited by the universe. We are the vehicle for the universe to realize itself, contrary to Richard Dawkins' s preposterous notion that we are the vehicle for genes to survive and thrive.

Such an idea, however much it may seem unrealistic and unscientific to the materialistically conditioned mentality, must be the foundation of our thinking. The universe, which began at a definite past time point, began as the simplest chemical elements and compounds, then passing through the phases of simpler, then more complex life, is now getting more and more internalized, personalized, spiritualized, through the human being, a being definitely discreet from lower beings through its

psychic capabilities, not bodily structure.

Without such a vision of the universe, which seems to me common to de Chardin and Unification Thought, it would be impossible to solve the problem raised by Einstein and Wigner alike. That is to say, our universe would remain unintelligible as a whole, though it may be intelligible in parts.

Most certainly, the materialistic scientist will scorn such an idea, but he should know that it is on this foundation that the scientist works and science itself is made possible. He is an integral part of this organic-intelligent universe: he is in no way able to separate himself from it.

Before going into Unification Thought which is a guide to us in such a fundamental problem, let me refer to so-called "intelligent design" movement (ID hereafter) which I think can be a bridge between the prevailing materialist science and Unification Thought.

It seems to me ID can be interpreted as constituting two stages of argument. The first stage is the effort to convince the scientific community that in the make-up of nature there is at work the factor "design" along with "necessity" (natural laws) and "chance," and that this "design" can be detected empirically through traditional scientific method. This part of ID is centered on such terms as "irreducible complexity" or "specified complexity." It questions the adequacy of naturalism (most typically Darwinism) as a scientific method. A transcendental designing agent is entailed from this empirical fact, though not proved or identified.

The second stage goes a step further, and proposes a total reinterpretation of nature. ID at this stage takes into account the cosmological fact of cosmic fine-tuning and the amazing fitness to us of our environmental conditions (such as water, light, fire, temperature and other planetary conditionings). Once the designedness of the universe is accepted as beyond doubt, a total change of paradigm is required. The whole universe must be looked at from quite another point of view than we have taken. Even natural laws have to be considered as designed for us. Science should start with the assumption that the whole universe is designed.

Not only was it an amazement to find (to be compelled to consider) that the universe

is constructed for us to live. There was more to it. As Guillermo Gonzalez and Jay Richards have pointed out in their *Privileged Planet*, our planet has turned out to be the sole privileged place in the universe for cosmological as well as physical discoveries.⁴ That is, there is no other place in the universe that provides such an ideal observatory as well as laboratory for scientific studies. We are given the optimal condition for science.

If this latter is to be considered as part of the cosmic design, science itself must be considered as something prepared and intended for us to pursue. It follows, then, that we are doubly the target of the cosmic evolution. All the *effort* of this universe is concentrated on us human beings, making such personification inevitable. This is also the position taken by Unification Thought. It says that the image of the human being was in God's mind first of all and that the whole creation is a backward process to realize it. It is remarkable that such is the conclusion supported by cosmological studies, as well.

Again, Teilhard de Chardin hinted, as far back as 1940, that the study of the universe is the study of the human being where the "stuff of the universe" is concentrated.

Man is...an object of study of unique value to science for two reasons. (1) He represents, individually and socially, the most synthesized state under which the stuff of the universe is available to us. (2) Correlatively, he is at present the most mobile point of the stuff in course of transformation. For these two reasons, to decipher man is essentially to try to find out how the world was made and how it ought to go on making itself.⁵

II *Unification Epistemology*

Now remember what Einstein said. He said: "The most incomprehensible thing about the universe is that it is comprehensible." Eugene Wigner, also, in much the same vein said: "The enormous effectiveness of mathematics in the natural sciences is something bordering on the mysterious." Now it should be known that the solution to such a mystery doesn't lie in the way of science itself. It is to be sought in the very structure of the whole universe as a great Intention, a Purposefulness. It is to be sought in the very condition in which both scientific activities and scientific

reasoning are made available *specifically* for us humans by the cosmic (or divine) design.

The mystery or incomprehensibility raised by these magnates in science is a question that has no logical answer, just as the question why the universe is so exquisitely fine-tuned and conditioned for humans has no logical answer. The so-called anthropic principle is an amazing fact just ‘given’ to us, not for scientific inquiry but for interpretative freedom. So some people *will* find in it no occasion for awe or amazement because, as they argue, our world cannot be otherwise than it is—how else can we expect to be here? (‘weak’ anthropic principle). Or for some people such a mystery simply does not exist, because if they admit it they will have to concede there is something outside the boundary of materialistic science—a great danger to their despotism. Or such a nuisance must be explained away by a clever expedient such as the “multiverse” hypothesis—which to George Gilder is “one of the silliest scientific stratagems in the history of the world.”

The truth is, there is no other question more worth asking, more significant. The most proper and fundamental question to be asked should be: How is it possible at all for us to perceive the outer world and, then, by reasoning understand its meaning, and ultimately guess its cosmic meaning? If our mind and the outer world were unrelated, created on different principles, as imagined in Cartesian philosophy, or if our mind were a *tabula rasa* and entirely dependent on our experience after birth, how could our reasoning and the higher creative discoveries in science be made possible? Or if our mind only evolved in Darwinian fashion to adapt itself to the outer world, how could such higher reasoning be possible? It should be natural, then, to assume that there is something in common, an *a priori* correspondence, between our inner selves and the objective world. And this is an assumption, too, required by our vision of the universe as an Organic whole.

Then Unification epistemology comes to our rescue to support such a vision. After being presented a brief history of the Western epistemology, we read such sentences:

From an atheistic position, the necessary relationship between human beings and nature cannot be established. Even in the theory of the natural generation of the universe, human beings and nature are no more than accidental beings to

each other. Only when the significance of God's creation of human beings and all things has been clarified, can the necessary relationship between human beings and all things become clear.

From the perspective of Unification Thought, human beings and all things are beings created in the relationship of subject and object. That is to say, the human being is the lord of dominion, or the subject of dominion over all things, and all things are objects of joy, beauty, and dominion for human beings. Subject and object are in an inseparable relationship. This might be compared to the relationship between the motor and the working parts in a machine. The working parts are meaningless without a motor, and vice versa. The two components are designed to form a necessary relationship of subject and object.⁶

As the integration of the universe (microcosm), the human being possesses, in miniature, all the structures, elements, qualities, and so on, that all things possess. Therefore, the human being is equipped with the same attributes as all things.⁷

It is not true that the forms of thought are, as Kant maintained, unrelated to existence; also, it is not at all the case that the forms of existence of the external world reflect, or give rise to, the forms of thought, as is stated in Marxism. Human beings, themselves, from the very beginning, are equipped with forms of thought, which correspond to the forms of existence appearing in the external world. For example, because human beings are themselves beings with temporal and spatial natures from the very beginning, they possess the forms of thought of time and space, and because they are themselves beings with subjectivity and objectivity, they possess the forms of thought of subject and object.⁸

Whether we are religious or anti-religious, whether we like it or dislike it, we must accept it as a "given," just as we accept the fact of cosmic fine-tuning as a "given," Unification Thought is interpreted as teaching us that we are constructed this way, no one can alter it. We become sure of its authority when we find the present problem further explained in critical comparison with Kantian epistemology (which we have hardly outgrown), and especially find it embedded in the large framework of this thought, that is, in terms of *sungsang* (性相) and *hyungsang* (形状), subject (主体) and object (对象), give-and-receive action (授受作用), etc., and we feel most assured when we find its own epistemology identified as the theory of

“collation”(照合論).

Also, Kant asserted that an object of cognition is established through the combination of the form [*a priori* forms of thought (categories)] of the subject and the content coming from the object. From the perspective of Unification Thought, the subject (person) as well as the object (all things) have both content and form. What the subject possesses is not what Kant called “*a priori* forms” alone; rather, they are previously existing prototypes, which have both content and form and, therefore, include the forms mentioned by Kant. Also, what comes from the object is not a chaotic manifold of sense, but rather sense-content organized by the forms of existence.

Furthermore, the subject (person) and object (all things) are in a correlative relationship and bear resemblance to each other. Therefore, cognition is not carried out through mere synthesis of the object [here rather read *not carried out merely through the subject constructing the object*—Watanabe]; rather, cognition is carried out as the “content and form” (the prototype) of the subject, and the “content and form” of the object are collated through the give-and-receive action between them, with a judgment being made.

Critique of Kantian Agnosticism

Kant held that only natural, scientific knowledge in the phenomenal world is true, and he considered the world of things-in-themselves (the noumenal reality) unrecognizable. Consequently, he entirely separated the phenomenal reality from the noumenal reality. This led to the separation between pure reason and practical reason, and between science and religion. From the perspective of Unification Thought, the thing-in-itself is the *sungsang* of a thing, while the sense content is its *hyungsang*. *Sungsang* and *hyungsang* are united in all things, and since *sungsang* is expressed through *hyungsang*, we can know the *sungsang* of a thing through its *hyungsang*.⁹

This sounds quite natural and convincing—convincing without proof like geometrical axioms. The effect of reading such extracts from Unification Thought is to give us enlightenment as to how we have been under a serious deception. How easy it all really is! We have been so securely conditioned to materialism we were somehow under the impression that we humans are unrelated, even hostile, to nature. When we are told we are designed to fit nature “from the very beginning,” the difficulties we needlessly created in our misconceived anthropocentrism melt away. Not that

science itself becomes easier, but that the very foundation that makes science possible is suddenly illuminated. Those who oppose design ignore this foundation.

III *Universe as a Work of Art*

It is getting more and more difficult for scientists to disregard Unification Thought—Unification epistemology, Unification theory of creation, Unification ontology, all included organically. Science is supposed to be looking for greater unification, but upon the materialistic foundation of science no real unifying theory is possible, and no ultimate understanding of nature is possible. The long-unquestioned materialistic foundation of science has recently come to be questioned and thought in need of reconstruction. For, otherwise, sciences have nowhere to go. Except for die-hard materialists, no one sensible enough will argue that old religion is coming back under the guise of science.

As the fact of cosmic design becomes more and more undeniable, and the amazing fact of anthropic principle becomes unevadable — however strategically it is interpreted as mere chance or nonsense—and as the fact of our privileged conditions for scientific discoveries is more generally accepted, the paradigm shift from a lifeless to a living universe will become inevitable, and Unification Thought will be required for theoretical foundation.

As I said earlier, envisioning the universe as space-time is envisioning the universe as an Organism. Teilhard de Chardin's vision of the universe as an evolutionary process toward hominization (humanization) is both static and dynamic — static because the end is implicitly present in the beginning as if pictured in space, and dynamic because it requires time for actualization. Evolution can no more be described as a mere Darwinian mechanical process than the growth of a living thing (most notably an embryo) can be described as a simply linear cause-and-effect process. The final perfected picture must be present at every stage of the development.

Or to use my own formula for cosmic structure, “Seeing precedes the eye” or “Mind precedes matter.” This ‘precedes’ is said in regard to both time and spatial structure (i.e., ontological precedence). So space and time as an integrated concept is characteristic of an Organic whole which is the cosmic structure.

The cosmic structure also resembles a work of art (music, drama, poetry). Both are hierarchically structured spatio-temporally as a coherent whole. (By ‘hierarchically’ I mean ‘ordered from the most basic building units up to the finished work.’) Both are actualized through time, but the whole picture is ever present or felt all through the stages of the work taking its shape, finally making its intended content clear. Wiker and Witt’s *A Meaningful World* depicts such a spatio-temporal picture as follows:

Nor is the rose that the lover gives his beloved some late perturbation of matter resulting from “a chain of accidents reaching back to the first three minutes.” Instead, the layers of complexity that make the rose possible include the original fine-tuning of the physical constants that allowed for the formation of galaxies and the many elements; the formation of our own solar system with its life-giving store of minerals; and the fine-tuning (cosmic and local) that allows for carbon, oxygen, water, carbon dioxide and other life-essential elements and compounds to mingle (allowing, but not by themselves causing, the extraordinary integration of the biosphere). Finally, there is the biochemical form of the rose itself, which allows it to function as a living unity, and of the human, uniquely equipped among the animals to appreciate both its depths and its surface beauty. Steven Weinberg’s “first three minutes” are not pointless; they point to and culminate in the rose and in the scientist, the poet and the lover who hold it dear.¹⁰

IV *What Is Man, that Science Is Possible at All ?*

The fundamental problem that faces us now is the problem of cosmic coherence, not local coherence with which scientists are usually concerned. The question ‘What is science?’ is ultimately the question ‘What is man?’ The Psalms 8: 4 says, “What is man, that Thou art mindful of him?” We adapt this to say “What is man, that science is possible at all?”

The idea that the universe, since its beginning at a definite past time, has labored all through cosmic history to produce man—the same idea seen in what Teilhard de Chardin called the culmination in “hominization” (ultimately leading to the “omega

point ”), and now emerging in scientific–philosophical reconsideration — finds its ultimate grounds in Unification Thought. Excepting radical materialists, no sensible man will say that cosmic coherence could be sought where no human being exists. It is through and in the human being that the ultimate meaning of the cosmos will be manifested and completed. This is not to be confused with the so-called anthropocentrism which is based on the materialist idea of human origin.

What, then, is man’s ability to comprehend the universe? Mathematical and linguistic competence which enables us to formulate abstract concepts in order to grasp the universe—where does it arise? Whence the logos in the first place? By no means is it anything we invented to conquer the universe. Nor are our mathematical and linguistic abilities something we acquired for ourselves in the process of the struggle for existence. It must be something bestowed on us.

Criticizing his colleagues who will boast of their mathematical ability and despise religious people, University of Utah mathematician James Keener says:

No mathematician has anything at all to do with being intelligent. She could just as well have been born without mathematical insight or could have been born into circumstances in which her brilliance went unnoticed or unappreciated. No mathematician has control over his ideas or determines when or if he will have a brilliant insight or inspiration. No mathematician determines how long she will live or what disease she will die from. Life is an incredible mystery, but so is rationality and consciousness and creativity and emotion. All of these have been bestowed upon us through no effort or merit of our own. All can be taken from us just as readily as they were given. Why, then, in light of these undeniable realities, do we insist of taking credit for what we have not done? Why do we claim that we have no need for the bestower of these great gifts when our needs are obvious and our dependence is total? We, who are so skilled at recognizing giftedness, cannot recognize that it is the giver of the gift who deserves the credit and not the recipient.¹¹

This humility may be taken to be a mark of religious people, and indeed it is. But this need not necessarily be a religious attitude; it is rather a fair description of the facts of human reality. Our mathematical and linguistic abilities, which are the ability of abstraction and constructing quite a new, higher level of existence unknown to

animals, must be interpreted as given to us—even though higher levels of it are given to a selected few—when we were *created*, not as an evolutionary extension of animal speech. Of all animals we alone know the world of logos (or the Logos).

Once we accept Unification Thought, it seems to us quite natural to assume that the same principle (or logos) that was used for constructing the universe (macrocosm) was used to construct the human brain (microcosm), so that our reasoning faculties *might* —it does not occur easily—succeed in clarifying the cosmological as well as subatomic structures. What was mystery or incomprehensibility to Einstein and Wigner no longer impresses us likewise.

Today we are in a turmoil of scientific and philosophical dogmatisms and perversions. This seems to be symptomatic of the time of revolutionary change in paradigm. It seems to me that the best working principle dividing scientists and thinkers is arrogance versus humbleness. This may sound strange because intellectuals naturally have a wide range of temperaments, but I mean arrogance and humbleness at a deeper level, more cultural than personal. The arrogant party is the one to recede, because arrogance such as is represented by Darwinists' chooses to enclose itself in a prison of its own making. Humbleness, on the other hand, can make itself 'nothing' and listen to whatever nature will speak to it. Nature opens herself to the humble, and closes herself to the arrogant. As scientific attitude, humbleness will naturally be the winner.

Einstein's attitude is typically of humbleness:

My religion consists of a humble admiration of the *illimitable superior spirit who reveals himself* in the slight details we are able to perceive with our frail and feeble minds. That deeply emotional conviction of the presence of a *superior reasoning power*, which is revealed in the incomprehensible universe, forms my idea of God.¹²

In contrast, I will show an example of narrow, bleak, cramped, stereotype atheist view of the world. It is shown in the famous physicist Steven Weinberg's 2008 speech at Harvard University. I quote it to show how respected scientists can be so self-contained and narrow-minded and yet, because of their renown, are often treated as if representing the most pioneering thought today.

[T]he worldview of science is rather chilling. Not only do we not find any point of life laid out for us in nature, no objective basis for our moral principles, no correspondence between what we think is the moral law and the laws of nature, of the sort imagined by philosophers from Anaximander and Plato to Emerson. We even learn that the emotions that we most treasure, our love for our wives and husbands and children, are made possible by chemical processes in our brains that are what they are as a result of natural selection acting on chance mutations over millions of years. And yet we must not sink into nihilism or stifle our emotions. At our best we live on a knife-edge, between wishful thinking on the one hand and, on the other, despair.¹³

This is the manner of thought at the opposite end of ours, the very idea we have been arguing against. We argue against it, not because we don't like it but because it is an unwarranted false idea. If we have outgrown, as Weinberg never has, the mechanical idea of cosmic evolution as too unrealistic, we have no choice but to accept the idea of it developed in space-time as an Organism. Then, obviously, man is the culmination of that Organism, and man's logos-based activities, such as science, mathematics, arts, social systems, morality or philosophy, have to be considered as pre-existent in the cosmic Logos.

If, as Weinberg says, there is "no objective basis for our moral principles," we shall have to likewise say there is no objective basis for our mathematics, the very tool for Weinberg.

Also for our artistic activities, no less than for "our moral principles," there is bound to be "objective basis," for, only if what Plato called "Idea of Beauty" or "Beauty Itself" is postulated as really existing, can the activities of artists become possible and intelligible. Artists never aim at subjective beauty.

Regarding 'arrogance versus humility' and "the miracle of appropriateness of the language of mathematics for the formulation of the laws of physics," there is something to be said as a warning. Note that Wigner at the same time says: "only a fraction of all mathematical concepts is used in physics."

Citing these words, the authors of *A Meaningful World* also warn that it does not

mean “ every aesthetically pleasing formal mathematical system is useful for physicists and chemists, or that every seemingly successful empirical application of mathematics stands the test of time.”¹⁴

Ever since Einstein who is supposed to have solved the riddles of the universe only with pencil and paper, every scientist has vied with him relying too heavily on mathematics and even “ reifying ” it, just as since Newton every discipline of learning yearned after the Newtonian formulation. In a recent interview writer George Gilder says as follows which is worth listening:

In my next book, which is called *Analogy*, I argue that what happened with Albert Einstein was that scientists stopped being engineers and began being theologians. They stopped being masters of the crucial equipment with which they conducted their experiments, tested their hypotheses and restricted their propositions to demonstrable phenomena, and they began reifying math. ‘ Multiple parallel universes, ’ for example, is just a reification of a model of electron paths — invented by Richard Feynman — which proved to be a very successful tool for mapping the path of a single electron. The assumption that all the electron paths actually existed and each one generated a universe of its own and transcended to infinite numbers of universes is just delusional materialism. It is a desperate tactic to avoid facing the implications of the incredible complexity and particularity of the world in which we live and our own minds. The effort to reduce consciousness to pure material phenomena is a total failure, but still, it doesn’ t stop. In other words, the key thing that makes us human and makes science possible and makes the theoretician viable, he denies.¹⁵

Notes

- (1) Cited in Benjamin Wiker & Jonathan Witt, *A Meaningful World: How the Arts and Sciences Reveal the Genius of Nature* (InterVarsity Press, 2006), p.100. Wigner, *Symmetries and Reflections: Scientific Essays of Eugene P. Wigner* (Woodbridge, Conn.: Ox Bow Press, 1979), pp.222, 237.
- (2) *Ibid.*, pp.99-100.
- (3) Teilhard de Chardin (tr. Bernard Wall), *The Phenomenon of Man* (Perennial, 2002) p.71. Originally published in French as *Le Phénomène Humain*, 1955; 1st published in English 1959.

- (4) Guillermo Gonzalez & Jay W. Richards, *The Privileged Planet: How Our Place in the Cosmos Is Designed for Discoveries* (Regnery, 2004)
- (5) Teilhard de Chardin, pp.281-82.
- (6) *New Essentials of Unification Thought: Head-Wing Thought* (Tokyo: Kogensha, Unification Thought Institute, 2006) p.401.
- (7) Ibid., p.404.
- (8) Ibid., p.412.
- (9) Ibid., pp.433-34.
- (10) Benjamin Wiker & Jonathan Witt, p.243.
- (11) Paul M. Anderson ed., *Professors Who Believe: The Spiritual Journeys of Christian Faculty* (InterVarsity Press, 1998) p.92.
- (12) The source of these words is ascribed to the 1955 *New York Times* obituary of Einstein.
- (13) Steven Weinberg's 2008 Phi Beta Kappa Oration at Harvard University.
- (14) Wiker & Witt, p.103.
- (15) "One on One: Faith in Hierarchy": An interview with George Gilder, *The Jerusalem Post*, June 20, 2007.