

Science and Unification Thought from the Standpoint of Physics

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1. On the nature of knowledge

Modern human knowledge is divided into two main branches, theology and natural science, each of which in turn has undergone a process of differentiation into numerous smaller branches. The crisis situation of the world community today in the final analysis is conditioned by this very fragmentation of knowledge itself. Namely, people have no ubiquitous picture of the One World and no idea of what actions people the world over may undertake in unity -- for it is only by cooperating all together in unison that human beings can likewise perfect themselves as individuals. To achieve the unification of all the branches of knowledge, it is necessary first of all to answer the question "What is knowledge?" and to inquire as to how this is to be achieved within the respective realms of science and religion.

It must be presumed that people came to recognize the dual nature of the cosmos from the time that awareness as such first appeared. One half of the cosmos is obvious to us, presenting itself as visible nature, consisting of an endless variety of concrete realities. The second half is not accessible to sensory perception; people can only experience it via some sort of mysterious means. Thus the unification of the two halves of the cosmos in the human being is likewise an event of cognition. Each act of a human being constitutes the unification of two distinct images of concrete reality or the cosmos as a whole within one concrete human personage. One image is formed by means of the sensory organs, and the other is formed or created in the spiritual mind of the person. So long as these images are separate, a person has not yet attained knowledge; rather he only possesses various data, information or preliminary evidence, which he accepts on faith.

The two basic branches of human knowledge (scientific and religious) differ from one another in the means by which information relevant to each is obtained. In the realm of religion the primary source is spiritual information, which is revealed in its fullest capacity only by isolated individuals (prophets). Such information constitutes factual knowledge for them, since it is confirmed through sensory evidence -- the prophets hear voices from the spiritual half and can see discrete manifestations from there. But for the remainder of people such a sensory verification of spiritual information is not practicably available to their experience; they are obliged to rely on the prophets based on faith alone, and because of that, for the vast majority of people such information does not stand as genuine knowledge; hence the instability of "blind faith."

Scientific (experiential) knowledge of many different segments of reality is available to all people. It begins with sensory perception, with personal experience. In the course of his practical activities, each person accumulates disjointed images of reality, which he proceeds to unify in his mind, forming them together into certain ideas. If these ideas are found to be in agreement with the spiritual half (hereafter we will refer to this as the Unified Collection of Images), then this means that the person has unified the material and spiritual halves corresponding to a certain concrete reality, that is, he has attained knowledge of this reality. Beginning from the most elementary of these (for example, grasping sticks and stones in the hand), people gradually augmented the field of objects of cognition, unifying them in increasingly monolithic blocks of acting and knowing. And, up to our present day, these blocks constitute entire realms of nature and sectors of human activities, the study of which is the work of the various scientific disciplines.

Then how can we undertake the unification of all these greater and lesser blocks or branches of knowledge into the one body of unified knowledge? Obviously, in forging the way toward that unification, even going through the entire historical course of development of the cognition of the cosmos, it is necessary to pursue this quest along two paths or from two opposite ends. Now, one of these approaches has been presented as Unification Thought. The

spiritual vision of Dr. Moon stands as its foundation. Based on this spiritual vision, by means of collating his vision with the known scientific reality, taking into account information from various fields of science, Unification Thought came into being. For the purpose of interpreting revelations (namely, for the sake of rendering them in ordinary language for ordinary people), Unification Thought draws not only upon the entire reservoir of spiritual experience of humankind (in the form of religious teachings and the messages conveyed to us by the prophets) but also, it must be emphasized, much scientific information as well.

In terms of knowledge about nature, there is as yet no generalized, all-encompassing conception, i.e., no philosophy that has been constructed to this date, coming from the other end of this endeavor, on the basis of the consolidated sensory postulates. (Later on in this essay one version of such a philosophy will be presented in outline.) In order to create such a philosophy, it is necessary to analyze and isolate, in each of the various scientific disciplines (corresponding to human experience), the most characteristic elements, which would convey, contain or express the main features of all materially observable realities. In other words, in order to create a philosophy of unification upon the basis of sensory information (from human experience), it is necessary to distinguish in all observable natural realities (in objects, fields, forces, processes and phenomena) the primary elements or the fundamental building blocks out of which the said realities could be constructed or produced (so-called *yang-sung* type and *eum-sung* type in Dr. Moon's philosophy).

It seems obvious that a bona fide unification of all realities and the knowledge about them, and the unification of all people into one worldwide community, is possible only based on the unification of the efforts of both philosophies of unification (spiritual and material, or religious and scientific). Each one of them in isolation has obvious pluses and minuses (advantages and deficiencies). Unification Thought, constructed on the basis of the spiritual vision of Dr. Moon, has a clear perspective of the cosmos as a whole, but it has difficulty in penetrating into the details, which are accessible only through experiential investigation. But, without going into these details, many of the assertions pronounced in Dr. Moon's spiritual vision are incomprehensible to ordinary people. Again, they are consigned to simply believe them, but they are not able to pass them through the test of human experience and thus to convert them into stable and firm knowledge. And likewise, on the other hand, the philosophy of unification in the natural science realm, which begins from hypothetical postulates, is indeed able to penetrate all the details of observable realities. However, in the process of doing so, the question comes up: "How can all these details be united with each other?" Of course, many of the theorems, axioms and corollaries therein do give some measure of order and lawfulness, which has already been achieved in the separate scientific fields. However, since all these disciplines are still divided among one another, and practically speak different languages, then there is still needed an overall vision of the cosmos in order to unify them into one body of unified knowledge. Indeed, such a vision has always been offered by religion, and in our time it is clear that Dr. Moon's Unification Thought expresses such a vision in the greatest fullness. From here we derive the evident necessity for a cooperative movement toward the realization of unified knowledge, in which both philosophies of unification work together in a united manner. Without such a synthesis of the various pictures of reality into one philosophy of unified knowledge, it is impossible to achieve understanding either among the various religious confessions or among the different scientific disciplines, nor moreover between religion and science as a whole.

Following, we will briefly survey two contradictory views of the cosmos and attempt to show how they in fact complement one another and how they may support and assist one another toward achieving true knowledge which is understandable to ordinary people.

2. On the physical picture of the cosmos

The cosmos presents itself as One. Both natural scientists and religious thinkers would seem to be in agreement with this. However, all the same, both the one and the other actually "split" the cosmos in two. In the sciences, in general perspective, this splitting into

two is manifested in the main method of investigation itself -- the method of modeling: In conducting research, it is necessary in the very beginning to establish a model (be it a physical model, a mathematical equation, or an hypothesis), i.e., it is necessary to form a certain idea, and subsequently to attempt to measure reality according to this model (idea). In religion, the cosmos is likewise split into two halves: God the Creator and the world of His creation, in other words, likewise into God's Idea and its embodiment (the world of creation). Of course, the conception of the process by which God created is extremely nebulous: Some consider it the work of one single act, and others understand the creation of the cosmos by God as a creative process that began at a certain point in time and has continued right up to the present. Likewise, the "initial conditions" are unclear: either division into spiritual and material substances, or in the beginning there existed only one of them (the spiritual), which created material in all its diversity out of nothing.

Throughout history people have tried to combine the two pictures of the cosmos regarding the process of self-guided development of material, on the one hand, and the manifestation of the spiritual creative power of a God who created the material nature *ex nihilo*, on the other. None of these attempts has been greeted with success up to the present time. But if in the past such a dualistic understanding of the cosmos was acceptable, in light of the small number of people on the earth and their physical separation from each other, well, in our time humankind has become one worldwide community, and for the sake of our very survival it is of critical necessity to reach a "common denominator" -- otherwise we will annihilate one another.

In natural knowledge, such a "denominator" can unify the obvious contradictions, such as, on the one hand, the plainly evident divided nature of material (i.e., all realities consist of coagulations or fields); on the other hand, all natural objects, processes and phenomena in some mysterious manner are connected to one another, which is namely that which enables us to establish the universal lawfulness which indeed we observe. Likewise, by analogy, the task of such a "common denominator" in religion is to provide a clear understanding of the phenomenon of the interaction between the spirit and body in the human being.

None of the many attempts at unifying the spiritual and material realities on the basis of the picture of existence based on emanated *quanta* of spirit and material has met with success. Attempting to posit either one of these as absolute invariably has led to irreconcilable contradictions. If there were to exist only initially spiritual *quanta*, then they would be in the position of having created matter *ex nihilo*; likewise if we postulate purely material, indivisible primordial particles (the atoms of Democritus), then it remains incomprehensible why they move and, moreover, what leads them to unite or to adhere together. The proposal of simultaneous existence of *quanta* of both substances, the smallest of which would be the spiritual, basically ends up obliterating the difference between matter and spirit (pantheism).

We have been able to overcome the above contradiction by means of the following postulates:

The first postulate: Material ultimately is of a particle nature, i.e., in fact there exist the smallest primary particles, which cannot be further subdivided into finer constituent components. Numerous prominent thinkers of the past, from the most ancient times, have definitively concluded the inescapability of the existence of such "primary building blocks." "Among the various bodies, some of them are unified beings and others are those out of which combinations are formed. The latter are indivisible and unchangeable. In this manner, necessarily, at the very beginning there were only substances of indivisible corporeal nature" (Epicurus). "And there must necessarily exist simple substances, because namely there exist complex substances -- for the complex substance is none other than the collection or aggregate of simple substances" (Leibnitz). Let us call these smallest particles (substances) "pre-images," keeping in mind that all realities are to be constructed from them.

The second postulate: The pre-images possess a characteristic (attribute): Each of them consists of an individual "superforce of mutual attraction." The pre-images themselves, in a certain auxiliary hypothetical (imaginary) state, occupy positions separated from each

other by empty space, uniformly and equally filling all space. Each pre-image attracts its neighbors, but since they all possess the superforce, with its help they stand apart from one another and extend all the way out to infinity.

In this manner, we may construct a certain original hypothetical state of the universe, in which are reflected all the basic properties of the real world. In this primordial universe all material is represented by separate conglomerations (indivisible points of material), which nevertheless are united together between them by spirit, on account of the superforce of attraction.

The difference of this hypothetical cosmos from the real world is obvious: The first is in a state of static balance, while the second is in constant change, progressively moving toward equilibrium. In order to remove this difference, a third postulate is necessary, which would violate the initial hypothetical balance and convert the cosmos from the static initial state into a process: This would generate motion and initiate the unification of the pre-images with one another, i.e., toward the emergence of substantial, larger material agglomerates.

The third postulate: Two pre-images, seeking to move toward one another under the influence of the superforce of attraction, reach a meeting point and adhere together. The motion of their merging together is then transformed to rotational motion (the motion cannot simply disappear!). The third postulate transforms, as it were, the cosmos from the hypothetical to a real state. Now the pre-images, which had been merely points, have been transformed into a larger conglomerate -- the unity of two points, possessing a principally new characteristic -- motion in the form of rotation in a certain plane. The new conglomerates preserve both the original characteristics (attributes) of the pre-images -- the capability of mutual attraction, but they now have a new characteristic, namely an axis, which endows them with differences between one another (the pre-images were all absolutely identical and capable of uniting with any other in pairs). These new conglomerates are called "images." They stand as the "original" (and in fact they are eternal) real substance, from which the real world should emerge (if our postulate is correct) with all its features and phenomena, including the phenomenon of human beings. The development of this substance (the entirety of all images) will be directed by further hypothetical postulates, as well as by new characteristics which are to be acquired by these conglomerates in the form of various forms of motion. The superforce of attraction incessantly strives to augment the conglomerates, but certain motions that are attributed to them make the process of unification selective: Two conglomerates can form a larger unit only if their motions upon contact happen to be compatible. In the opposite case, they are not able to concatenate, but instead repel one another.

From the above we may deduce that the entire process of development of the cosmos can be viewed as an act of its creation by a hypothetical Beginning (the given postulates, or God), and at the same time as a process of self-directed development of an initial substance -- images which, under the action of the Beginning, at each stage are required to harmonize their mutual interaction with one another, taking into account all the various new types of motions acquired by these images or their conglomerates.

In the work of the author, the process of development of the initial substance is considered in overview, beginning from the formation of elementary particles (photons, electrons, protons, etc.), atoms and the celestial bodies, and eventually the emergence of life. Here we limit ourselves to the very first stage of this development -- the interaction of the initial images. As has already been remarked, this interaction may be of two types. If the images possess parallel (identical) axes, then, according to the postulates, they are able to unite together into larger conglomerates -- based on this type of interaction was formed the branch of the development of the cosmos in which all the material realities have come into existence. However, if the neighboring images have their axes at right angles, then, upon their mutual approach (on account of the superforce), they naturally reach a meeting point; however, because of the incompatibility of their motion, they repel one another on contact. But since the superforce is the primary attribute, while the motion that generates repulsion

is a secondary attribute, the interaction of the two (or more) images is transformed into an eternal vibratory or oscillating process.

Now there we have the second branch of original substance -- this is the formation of the oscillating structure of free images, which are able to unite with each other, at the same time continuing to inhabit all space in the sense of a hierarchical system of vibrating cells of different types, levels and sizes. Such a self-organizing medium is called the "Unified Collection of Images" (or "UCI"). As the result of this, space manifests as a structured substrate -- it is filled with modes consisting of free images, capable of organizing themselves into structures by means of separation into vibrating cells of different types, levels and sizes, all the way up to the dimension of the discrete cosmos (universe) itself.

The real process of development of the cosmos is an uninterrupted interaction of both halves of the cosmos (the UCI and the material conglomerates), striving as it were toward harmony in their interactions and toward a return to the original state of ideal balance. All throughout this process, guided by the Beginning, the Unified Collection of Images actively works to secure harmonious interaction of both realities and directs the development of both. Thus it is in a certain sense fitting to name the UCI the "spiritual half of the cosmos," or "God."

At the conclusion of this section we wish to emphasize the importance of the choice of the initial building blocks (the postulates). They must truly be simple "units," out of which any number can be assembled. By so doing, it is possible not only to simplify the understanding of the various sciences, which have already attained a considerable state of lawfulness, but also to clarify the role of mathematics in each field. As Pythagoras proposed, number is the basis of the universe. But any number supposes, first of all, the presence of a unit, of which it is composed; secondly, there must be force, which drives the units to unite together in certain combinations (i.e., to be aggregated as numbers). As Pythagoras already clarified, we can say that, in fact, the foundation of the cosmos is not numbers but units, which possess the irrational characteristic of mutual attraction. So out of such unitary pre-images, not only the cosmos can be constructed, but even simple mathematical models to describe the process of development of the cosmos. In this way, those paradoxical and unclarified questions which crop up in all the modern sciences clarify themselves. In physics, among such problems we would include, for example, the phenomenon of inertia -- why a body at rest cannot be instantaneously set in motion, nor a moving body instantly stopped. Mach, in his time, very wisely proposed that the inertia of any body is determined by its connection with all other bodies. Indeed that connection truly exists by virtue of the UCI. There are also many paradoxes in the world of subatomic particles: the nature of the Brownian motion, the "particle-wave duality," the model of the atom, and so on. All these questions are easily solved by invoking the complete ontology we have presented, by which, in our understanding, empty space does not exist but rather is occupied by the Unified Collection of Images, which determines the structure and behavior of all natural objects, their systems and processes of interaction. The UCI is truly the Cosmic Spirit and resembles God, who creates the entire multiplicity of interconnected mathematical and natural realities -- from primordial building blocks (out of simple units).

The complexity of the modern sciences is especially conditioned by the fact that they take as their bases not the true unitary units, which are shared in common among all realities, but rather certain combinations thereof, in the form of already established blocks or numbers. These combinations were more or less arbitrarily assembled in each field of science on the basis of experienced lawfulness and conceptions. Hence there emerges such a complexity and uniqueness between the various sciences, and the concomitant difficulties in understanding and communicating with one another. As an example, let us attempt to view modern mathematics through the prism, not of units (including zero), but through a certain number such as three. It is abundantly clear that by no means can all natural numbers be measured using three as the primordial element. If we were to attempt to do so, the relationships among numbers attain a very complex character.

In contemporary physics there have been many attempts at building a picture of the cosmos on the foundation of what amounts to, as it turns out, not actual, true primordial

building blocks, but rather already composite blocks, as if they stood as the "original" elements. Namely, physics uses photons, electrical charges, and other particles, which themselves are in fact composite constructs. Somehow such a picture resembles the analogical picture held by the ancient thinkers, when they took as the fundamental foundation of the cosmos air, water, fire, *apeiron*, and other "primordial elements." Among the contemporary constructs of the universe, of course, the "primordial building blocks" are finer, and closer to the real primordial particular existence; for this reason they have succeeded in creating a more detailed picture which is closer to the real truth. Nevertheless, they still remain complex, even more so than the models of the ancients, and likewise difficult to fit together. The Unified Picture of the Cosmos, simple and understandable to all people, can be created only on the basis of the real particles of existence, such as which in our scheme are called the hypothetical pre-images, which may be understood as imaginary numbers, an anti-world, or the Divine Origin.

3. Unification Thought

Unification Thought arose out of the need for the practical unification of different groups of people (different religions and disciplines of science), i.e., as the Unification Movement of human associations. However, since only ideas can unite people, therefore the Unification Movement became transformed into a philosophy -- on the plane of creating a new field of knowledge, capable of uniting religion and science within its breadth. The fact that the individual branches of knowledge taken separately have already reached the limits of their potential, and in their contemporary form are not in a condition to elevate the summit of the overall tree of knowledge any further, stands obvious to many thinkers. Here are two testimonials to this.

"The lights of revival which religions of every age cast upon the many souls who were groping in the darkness have faded with the onward flow of history. They have left only dim, sputtering wicks glimmering in the falling darkness" ("Exposition of the Divine Principle," p. 4).

"Science is a gold bar prepared by a charlatan alchemist. You wish to simplify it, to make it understandable to all the people. What that means is that you intend to mint a pile of false coins. When people begin to realize the real value of these coins, they will not appreciate you for it" (L.N. Tolstoy, conversation with A.M. Gorky).

We now live once again in such a time, when people are beginning to realize, as many already have, the "real value" of science, and likewise the same applies to the existing religious confessions. And the conclusion of this process of overcoming the modern crisis of society and the process of coming to realization will be only one -- it is impossible to unite religion and science. Herein lies the chief significance of Unification Thought. "Religion and science, setting out with the missions of dispelling the two aspects of human ignorance, have seemed in the course of their development to take positions that were contradictory and irreconcilable. However, for humankind to completely overcome the two aspects of ignorance and fully realize the goodness which the original mind desires, at some point in history there must emerge a new truth which can reconcile religion and science and resolve their problems in an integrated undertaking" ("Exposition of the Divine Principle," 1996, p. 6). It goes on, "This truth must be able to embrace all historical religions, ideologies and philosophies and bring complete unity among them" (ibid., p. 8).

Now let us see how this model of unified knowledge (new truth) is practically realized in the context of Unification Thought. "Unification Thought begins with God. Its fundamental postulate is that God has created humankind and the universe in God's own likeness." Therefore, "In order to solve actual problems, we must ask what kind of being God is; in other words, we must start with the attributes of God" ("Essentials of Unification Thought," 1992, p. 1).

From such statements we can clearly see the principal difference between Unification Thought and the physical (scientific) picture of the cosmos as described in the previous section. They present, as it were, approaches or views of the cosmos from two diametrically

opposite standpoints: from the most general (God) to the particular, and from the simplest particles of existence up to the unified picture of the cosmos, where God is supposed to abide and occupy the position corresponding to Him.

"Among God's attributes we find the characteristics of *Sung sang* and *Hyung sang*. God's *Sung sang* is the cause of the internal, invisible aspect of created beings, and God's *Hyung sang* is the cause of the external, visible aspect of created beings. In God, *Sung sang* and *Hyung sang* form a harmonized body in the relationship of subject and object. Forming a harmonized body means that *Sung sang* and *Hyung sang* are not separated, but exist as a union, since they are united" ("EUT," pp. 2-3).

It is difficult for the person of a European (Western) frame of mind to immediately understand these passages. In fact, they describe the attributes of God, but no one knows what God actually is and looks like. We may grope for His essence through His characteristics and attributes as they manifest in this real world. Obviously God can be described as the Unified Cosmos; then the attributes of God are the most universal characteristic properties of the Unified Cosmos which people can observe around them. Obviously the main characteristic (attribute) consists of the evident duality of the cosmos, that is, the presence of material "conglomerates" as well as some sort of "Something," which creates all these particles by some mysterious and invisible means, and unites and organizes their interactions. Well, in Unification Thought we obviously find these two properties of the Unified Cosmos, which are called the "attributes of God" and are known by the name *Sung sang* and *Hyung sang*.

In addition, these attributes together form a harmonious united body 1, in which *Sung sang* and *Hyung sang* are inseparable. How shall we understand this? As it turns out, two characteristics (attributes) form a united body. Instead, it would be more understandable to postulate from the beginning the existence of this "body 1" and next to ascribe to it certain characteristics (attributes).

Such a "body 1" is described in our picture of the cosmos as the "hypothetical pre-image," which indeed possesses two attributes: material nature (it is a physical point) and spiritual nature (superforce of attraction). The totality of such bodies is the potential Unified Cosmos, in terms of being its predecessor, when we look in retrospect from the final outcome back to the initial source and cause. We can indeed name the totality of these primordial particles as God, who Himself and out of Himself is able to create the universe and human beings by means of the progressive unification of pre-images (bodies 1). Furthermore, it is not just coincidental that in Unification Thought God is viewed as a mathematical being. This is possible for the very reason that in the body 1 *Sung sang* and *Hyung sang* are inseparable and form the original unit: *Hyung sang* is the material point (as substance), while *Sung sang* is its unique characteristic or attribute, i.e., the ability of the point to draw unto itself other analogous points. These original units are the pre-images out of which all the realities of the universe may be created, and the entire aggregate sum of them in all their organization can be described by orderly, lawful (mathematical) systems of numbers.

Likewise, another extremely important concept in Unification Thought is *Yang sung* (yang, or positive essentiality) and *Eum sung* (yin, or negative essentiality). This concept, like *Sung sang* and *Hyung sang*, is invoked to convey the meaning and essence of those characteristics (attributes) of the cosmos which were evidently revealed to Dr. Moon through his direct experiences of the spiritual half of the cosmos. In the spirit world are reflected in scrupulous accuracy and detail all the objects, processes and phenomena of the material world; what is needed is to correctly describe and express this cosmic correlation. Admittedly, it is very difficult to obtain a direct translation of the spiritual picture into the language of the physical sensory organs that is understandable to ordinary people. Indeed, this was the main difficulty of all the prophets. In order to achieve such a translation, it would be necessary to make a highly accurate assay and description of these pictures using a material medium, and express it in scientific language. Jesus Christ was highly skilled in doing such a thing by means of parables.

The work of "translating" spiritual pictures into the language of the senses will become possible in the fullest degree once the scientific and religious fields of knowledge

have been unified. That is, by comparing and collating the overall picture of the cosmos as revealed by the spiritually gifted with the whole of experiential and scientific knowledge accumulated by humankind. Again, here we seek to understand the fundamentals of Unification Thought (the spiritual revelations of Dr. Moon) on the basis of our physical description of the picture of the cosmos, as briefly outlined above.

"Why, then, do the attributes of *Yang* and *Yin* exist in addition to the attributes of *Sung sang* and *Hyung sang*? *Yang* and *Yin* exist in order to manifest change, harmony, and beauty in the creation. The higher a created being is, the more complex its shape is, assuming a convex and concave contour rather than a merely globular shape. The natural world displays many types of changes, such as the variety of seasons, the rhythmic change of day and night, and the alternation of mountains and valleys in a landscape. When such changes are harmonious, we experience beauty from them. Through change we can experience harmony in diversity, but none of that would be possible if beings had been created with only *Sung sang* and *Hyung sang*" ("EUT," p. 12).

The attributes of *Yang sung* and *Eum sung* are the overall characteristics of the real world; at the same time, *Sung sang* and *Hyung sang* are the divine attributes, i.e., the properties of the hypothetical initial state of the cosmos (the potential cosmos). We repeat that in our conception *Sung sang* and *Hyung sang* are the characteristics (attributes) of the pre-images: their material nature and the presence of the superforce of attraction. If there had always and at all points existed only these divine attributes, then all the pre-images, under the influence of the mutual attraction, would have agglomerated into one mass (collapsed into one lump, as it were).

All the manifold variety of the conglomerates (forms of unification) came about owing to the fact that at the initial stage of unification of the hypothetical primordial particles (pre-images) there emerged a new property -- motion (the foremost attribute of material) -- which began forthwith to determine the outcomes of the interactions between converging particles. In Unification Thought this interaction in all its complexity and variety is called "give-and-receive action." This is truly the most important, most characteristic, and we may say universal action, as a result of which come into being all the realities of the cosmos: from the very simplest particles to living organisms, and from atoms to galaxies. Such a ubiquitous, uniform process of the generation of all things according to one principle is truly nothing short of divine. And indeed it is achieved owing to the fact that God is not located somewhere outside of nature, but from the very beginning and eternally is present in the very minutest particles of existence -- in the pre-images, as it were supplying the constant energy of love, the superforce of attraction. And this is the very thing that enables all the various interactions of giving and receiving to be ordered and coordinated on all levels of relationships in both halves of the cosmos, and unceasingly leads us to seek harmony and accord between all facets of reality.

In our scheme, motion becomes the principal assistant to the superforce, a peculiar password, as it were, by means of which converging particles, as "newcomers" to one another, are able to unerringly recognize whom they are encountering -- whether "my own kind" or "alien." Depending on this, there arises either "giving" (repulsion) or "receiving" (unification as partners). The compatibility of the motions of the particles upon their contact enables them to unite together in larger aggregates; in so doing the cluster does not become merely a larger "globule" but rather a dynamic system of a higher order of complexity, in which particles emanated preserve their original motion (axes) and bond only in chains or clusters among one another (similar to spinning gears in a transmission box), thus forming a new dynamic system.

So, in our scheme, the attributes of *Yang sung* and *Eum sung* come up once again here and characterize those fundamental properties which the developing substances come to attain (or which emerged in the process of creation), owing to the divine attributes of *Sung sang* and *Hyung sang* already inherent in them (present as the superforce of attraction in the pre-images). In our picture of the cosmos, the attributes of *Yang sung* and *Eum sung*, which were appended, as it were, to the original attributes of *Sung sang* and *Hyung sang* (God or the hypothetical initial state of the cosmos), can be understood as different axial

orientations of the primordial real particles -- i.e., the "images." As already described, the orientations of two converging images may be of two kinds: identical or different, which from the very beginning led to the rise of the two branches of the developing initial (divine) substance: the spiritual (the type of the Unified Collection of Images) and the material (the type of the whole of real nature). Moreover, these two properties (two attributes) manifest in all processes of interaction as various types of physical phenomena: attraction and repulsion, unification and fragmentation, birth and death. And so, we must presume, they were likewise perceived and understood by Dr. Moon during the course of his spiritual quest of the cosmos, and he gave them the name of *Yang sung* and *Eum sung*.

In our picture of the cosmos they are likewise inseparably connected and manifest as the constant interaction between the UCI and the world of material realities. In this regard it must be emphasized that these two polarities (*Yang sung* and *Eum sang*) may stand simultaneously as both substances and as attributes of the real world, in that the physical distinction between them constitutes at the same time their duality. Likewise, as far as concerns *Sung sang* and *Hyung sang*, these divine attributes (as it were, properties of the potential cosmos), which are inseparable in each pre-image, although the primordial particles themselves in their multiplicity (in oneness), are in a state of separation one from another.

"The characterization of *Yang* and *Yin* as substances, however, is not in agreement with Unification Thought, which views *Yang* and *Yin* merely as attributes" ("EUT," p. 13). In principle this statement does not contradict our conception, as we have outlined above: The substance at the basis of all types of motions is one and the same -- it is namely the "images," although they possess differentially oriented axes, i.e., they possess different attributes. However, all real objects and processes, and likewise the cells of the UCI, consist not of unitary images but rather their united clusters and groupings, and it is these which form structural components on all levels (as if these themselves indeed were their elementary substances); these clusters may have various combined vectors of motion. We may also view these clusters or conglomerates of particles as substance (*Eum sung*) or, in view of their motions, as attribute (*Yang sung*).

It stands to reason that any given being must always have attributes (characteristics). And, upon deeper investigation of the spiritual revelations of Dr. Moon, this apparent contradiction (the description of *Yang sung* and *Eum sung* as solely attributes) ought to be resolved. (We should be reminded that "Essentials of Unification Thought" and "Exposition of Divine Principle" were written not by Dr. Moon himself; therefore in these books it is entirely possible that there may be ambiguities and inaccuracies in the presentation of his spiritual pictures.)

We have briefly examined only the very beginning of the theory laid out in Unification Thought, but even from this short review we can make two conclusions:

1. Unification Thought is based on an actual view of the unified cosmos as seen from its spiritual side by Dr. Moon, so that Unification Thought can form an opinion about both religious and scientific knowledge and merge these into one unified knowledge.
2. Unification Thought is not easily accessible to understanding by the general public, and this fact reduces its potential as a theoretical basis for the Unification Movement. Therefore, further research in the field of Unification Thought should focus on complementing and detailing its content in reference to scientific knowledge; this necessity is also recognized by Unification Thought itself.

Another quote from Unification Thought may serve as an illustration demonstrating the fruitfulness of such a complementation: "According to modern physics, all matter is composed of atoms; atoms are composed of elementary particles; and elementary particles are made of energy. In the viewpoint of Unification Thought, the essence of God's *Hyung sang* is a type of energy. That energy, however, is not the same as the physical energy in the created world. It is energy in a state before it is manifest as energy in the created world. The energy of God's *Hyung sang* can be called 'pre-energy,' or 'pre-matter,' in the sense that it can become matter. In any case, since the ultimate nature of matter is an object of study of science, we must rely on future developments in science for clarification" ("EUT," p. 7).

What is energy? Science cannot give a comprehensible answer to this question. For this reason, interpretation of *Hyung sang* as a kind of energy is difficult to understand. At the same time, from our point of view, a particular feature of this "type of energy," or pre-energy, is defined correctly in Unification Thought: Pre-energy precedes the energy of the created world. In our picture of the cosmos, pre-energy for all the motions, powers and actions is the superforce of primordial particles, or pre-images, providing the universal supply of potential energy, which is manifest (used) in all the natural processes and phenomena. However, we can come to such understanding of pre-energy only under the condition that spirit and matter, *Sung sang* and *Hyung sang*, unite in original hypothetical primordial particles, and this idea concurs with Unification Thought teaching and our physical picture of the cosmos. It follows from this, however, that energy is not a distinctive feature of *Hyung sang* only, but *Sung sang* also has potential energy of pre-images, unifying *Hyung sang* and *Sung sang* within themselves.

In our case, the bearer and source of energy in the real (created) world are images, possessing both potential energy (from the superforce) and kinetic energy of rotation (spin). In other words, energy of the created world is, so to speak, the result of the first act of creation. As a result of this act, images came into being; then these images gave birth not just to elementary particles, atoms, heavenly bodies, etc., all the way up to Homo sapiens, but also to the spiritual dimension of the cosmos -- the Unified Collection of Images, which we may call the first Son of God, His first fruit at the time that God's potential was finally manifest.

In conclusion, I would like to say a few words about the fundamental postulate of Unification Thought: "Unification Thought begins with God. Its fundamental postulate is that God has created humankind and the universe in God's own likeness" ("EUT," p. 1).

The words "in God's own likeness" we may understand in various ways. Many interpret this idea literally: If a human being is created in God's own likeness, it means that God also has human personality. Apparently, such an understanding is connected to the deification of Jesus Christ in Christianity, widespread especially among the simple folk.

However, we may interpret the word likeness in a wider sense. For example, there is a blueprint for a machine component, i.e., this component is manufactured in accordance with the particular blueprint. Although the blueprint of a component is an aggregate of lines on paper, and the component itself is a three-dimensional body, there should be a likeness between them, otherwise the product will be defective. We may replace the blueprint with an idea, and produce the component in accordance with this idea. In this case the component will be manufactured in the likeness of the idea.

In God's creation all the material phenomena, including human beings, have been created in accordance with the Unified Collection of Images, coming forward in the capacity of the universal idea, the first-born child in God's creation, God's first assistant and son. We may say that the universe, and living nature on Earth, which culminated in the creation of human beings, is the manifestation of potential possibilities of the Unified Collection of Images (of spirit or God), so to say, its material self-realization. Although according to our scheme, both sides (spiritual and physical) stimulate the process of development of the cosmos, the main role in this process belongs to the UCI, which in fact creates all the material phenomena in conformity with its own structure, i.e., "in its likeness."

In a human being this likeness attains its ultimate realization -- as the direct likeness. The peculiar feature of any human being is his ability to form his own soul, i.e., a collection of images, which can be literally similar to some of the cells of the UCI.

Every human being, in cognizing his portion of existence, strives to create (even unconsciously) an image of the corresponding UCI fragment. For this reason we say that each person has a divine spark in his soul. However, a person alone cannot become the perfect resemblance of God; only humankind as a whole can accomplish this task. Only the historical integral of all the people who once lived or are now living on the earth can consummate the creation of the Unified Picture of the Cosmos, i.e., such a collection of images, which has the potential to become the ultimate resemblance of UCI-Spirit-God, His dialectical counterpart. Thus, the purpose of the human race upon this earth is to acquire

knowledge about God, create a spiritual structure of the Unified Collection of Images, and understand the mechanism of their substantiation from the hypothetical (divine) origin. The unification of the UCI and the anti-UCI created by historic humankind will mark the consummation of one cosmic cycle and the beginning of the new cycle, analogous to the previous one. This is the mechanism of eternal existence of the cosmos and humankind, and creating such a mechanism is the fundamental task of humankind.

In order to perform a task of such cosmic scale, people should unite their efforts. On this basis we may understand the fundamental content of the progress in human history. It develops steadily in the direction of enlarging human societies in the process of historic development.

The acquisition of knowledge about the cosmos and creating the unified picture is a matter of common concern for all humans, so that modern humankind -- all peoples, nations and religions - must come to the fundamental realization that they are co-executors of this overall task, which is of vital necessity to everyone for the sake of attaining eternal existence. But this task can be accomplished only in the environment of peace and harmony on the planet Earth.

Conclusion

It is significant that the picture of the cosmos as presented in Unification Thought, and the physical picture compiled based on the scientific method, are generally similar to and supplementary to one another. Such a coincidence is very important: The same result, achieved by different people using different methods, serves as a proof of its objective reliability. Talking about these two pictures, we may say that the first one presents the view of the planet Earth from the cosmos, and the other one gives us a picture as it is seen through the eyes of numerous "earthbound" scientists (geologists, travelers, sailors). Looking from the orbit we can see the whole object, although many small details remain undetected and out of the realm of cognition. At the same time, many generations of scientists have labored hard upon the earth's surface exploring the various spheres and regions; yet they could not always unite the results of their research. We can receive unified knowledge about the unified cosmos only if we creatively combine the spiritual vision as revealed to certain prophets, and experimental scientific knowledge as obtained by humankind as a whole in the process of history.