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A New Idea from Unification Thought to the Hard-Problem of Consciousness

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Abstract

The purpose of this paper is to indicate a new direction of study concerning the mind-brain problem and the formation of consciousness from the Unification Thought. To conclude, it is impossible to explain the formation of consciousness only through the physiological processes, and the hard problem of consciousness can be solved only if we accept the spiritual entity (spirit self) which has the ability to form images, a linguistic ability, the ability of reasoning, a sense of self, and so on.

Key words: Consciousness, Mind-brain problem, Spirit and matter, Spiritual entity, Unification Thought

^{*} Akifumi Otani, beloved author, passed away prior to the publication of this article. He was a pivotal figure in Unification Thought Institute-Japan. The spirit of his work continues.

1. Preface

Today, science is still mired with a plethora of difficult problems to solve. One of them is the mind-brain problem, namely, the question of whether the mind derives from the brain or whether it is something that transcends the brain, and whether the mind can exist without the body. There is also the problem of what consciousness is, which is closely related to the question of how cognition occurs.

Richard Restak, a former president of the American Neuropsychiatric Association, said, "But so far we have no overarching, completely satisfactory theory that explains how the brain 'works' or the exact relationship of mind to brain." Michio Kaku, an authority on superstring theory, also said, "Although the nature of consciousness has been debated for centuries, there has been little resolution." As yet, there is no final answer.

The purpose of this paper is to indicate a new direction of study. From the perspective of Unification Thought, we will examine some modern scientific viewpoints.

2. Relationship between the Mind and the Brain

With regard to the question of how to explain the relationship between the mind and brain, there are four views:

- ① Idealism, which says that what really exists, is God or the cosmic spirit. That the human mind is a part of it, and that material beings are merely secondary.
- ② Materialism, which says that what really exists is only the material brain and that the mind is a product or a function of the brain.

¹⁾ Richard Restak, The Big Questions (London: Quercus Editions Ltd, 2012), 8.

Michio Kaku, The Future of the Mind: The Scientific Quest to Understand, Enhance, and Empower the Mind (Penguin Books, 2014), 42.

- 3 Dualism, which states that the mind and the brain are different entities which can be separated.
- 4 Monism, which says that the mind and the brain are one and cannot be separated.

Among those views, idealism is mostly neglected by modern scientists. I will now introduce various views presented by scientists up to today and then present the view of Unification Thought.

1) Descartes

A case can be made that René Descartes (1596-1650) was the one who originally introduced the mind-brain problem to modern science. In order to explore the mind, Descartes tried to use a scientific method in the same way that he tried to explore matter. In other words, he dealt with the existence of the mind as an obviously observable fact, not as a revealed doctrine. However, today, as neurologist Eliezar J. Sternberg says, the belief in the dualism represented by Descartes is a cause for derision in the science world.

As for Descartes' version, he and his dualistic beliefs have now become a stomping ground of scientific ridicule. Whenever there is discussion of the science of consciousness, there is a mention of Descartes' silly, mistaken idea. Neuroscientists assert that the separation of mind and body implies that there is some kind of nonphysical, conscious "spirit" or "soul" that controls the bodies of human beings, a concept mockingly referred to by philosopher Gilbert Ryle as the "ghost in the machine.". . . For some people, dualism solves the problem. In my view, however, the growth of the field of neuroscience shows that dualism is not a strong position to take. It is a problematic concept without scientific evidence to support it.3)

³⁾ Eliezar J. Sternberg, My Brain Made Me Do It (New York: Prometheus Books, 2010), 48-49.

Descartes said that spirit is a substance which has no material element and whose essence is thought. He also said that matter is substance, with no spiritual element and whose essence is extension. In other words, he was a dualist separating mind from body, positing that the mind is merely the mind and that the brain is merely the brain. He thought that the pineal gland inside the brain was the point of contact between the mind and the body.

2) Psychoanalysts

It was Sigmund Freud (1856-1939) who delved into the human mind. He created his theory of psychoanalysis solely by analyzing mental processes without reference to any particular process of the brain. According to Freud, the mind consists of the following three layers:

- ① Unconscious (Id or Es)
- ② Ego
- ③ Superego

Id, the unconscious, is the core of the mind where animal, instinctive impulse exists. It is a huge deposit of sexual energy called *libido*. Ego, which confronts *id*, also controls its energy. It is the same thing as reason or good sense. Superego plays the role of a moral judge. It is the same thing as conscience.

Carl Jung (1875-1961), a disciple of Freud, expanded the concept of Freud's *libido* (sexual energy) to include not only sexual energy but also, more widely, spiritual energy. According to him, the mind has a common collective unconscious that comes from all the past experiences of human beings. He insisted that the latent natures and hidden fears and desires of human beings are all derived from a collective unconscious. In contrast to Freud who was an atheist, he recognized God as the primary cause of the human mind.

Behaviorism

In contrast to Freud, Ivan Pavlov (1849-1936) of Russia took interest only in the external manifestations of brain function. He conducted research into digestion in dogs and discovered conditioned reflexes. Using materialistic terms, he speculated on the process of excitement and restraint taking place inside the brain of a dog. He concluded that all behavior is the combination of conditioned reflexes, thus rejecting a role for consciousness. He thought that science should be based on objective measurable material things, thus positioning himself in the materialistic world-view.

The psychology of behaviorism followed the tradition of Pavlov. John Watson (1878-1958) and his disciples found, in conditioned reflexes, a method of excluding souls from psychology, and named it "behaviorism." They asserted that it is impossible to do scientific research into the mind itself, that only behavior can be studied scientifically, and that, if we observe behavior in detail, we can learn everything about the mind.

B. F. Skinner (1904-90), a noted behaviorist, developed a new field by splitting the study of behavior into many small elements and then re-composing them systematically. He asserted, "It is not necessary to produce a copy of the brain, which is called the mind. I do not neglect consciousness, but I merely deal with what is regarded as the existence of human consciousness in a different manner... Behaviorism stresses what has happened to a human being in his or her lifetime."4)

4) Reductionists

These days, reductionist materialism explains the mind in a materialist way by reducing the mind to the brain. Gerald M. Edelman, who was awarded the Nobel Prize in 1972, maintains that the mind is derived from the neurons. He sides with Darwinism, saying,

⁴⁾ Nigel Calder, The Mind of Man (Japanese Version) (Tokyo: Misuzu-Shobo, 1973), 421.

"It is only through interactions with the world that appropriate [nervous] response patterns are selected." He strongly denied the existence of any spiritual being transcending the brain saying; "we have no programmer, no homunculus in the head."

He rejects the idea that in the brain there is a dwarf, the homunculus, who deals with information. Materialists mock the homunculus to deny the existence of a spirit by saying that, if a homunculus is required, it leads to the necessity of the existence of another homunculus that deals with information the previous homunculus has received.

5) Sperry

Roger Sperry (1913-94) opposes both materialism and reductionism. According to Sperry, consciousness is something that transcends the totality of physical phenomena of the brain and influences its function. However, he denied the possibility that consciousness exists apart from the process of the brain. In other words, he did not recognize the existence of the soul. He said as follows:

In calling myself a mentalist, I hold subjective mental phenomena to be primary, causally potent realities as they are experienced subjectively, different from, more than, and not reducible to their physiochemical elements. As the same time, I define this position and the brain-mind theory on which it is based as monistic and see it as a major deterrent to dualism.⁷⁾

Sperry is in an ambiguous midway position. On the one hand, his position has been used to support the arguments of dualism; on the other hand, his position has been used to support the philosophy that the mind and the brain are identical. Sperry's position has been called "monism by a mentalist."

⁵⁾ Gerald M. Edelman, Bright Air, Brilliant Fire (New York: Basic Books Inc., 1992), 226.

⁶⁾ Gerald M. Edelman, Bright Air, Brilliant Fire, 226,

⁷⁾ John C. Eccles, How the Self Controls Its Brain (New York: Springer-Verlag Heiderberg, 1994), 49.

6) Penfield

Wilder Penfield (1891-1976), a world authority on brain surgery, had a strong material monistic belief when he was young that the study of the brain would clarify all the mysteries of the spiritual world. He painted on a garden stone in his home an illustration of the brain with the epigram: "nous is the brain," nous meaning the mind or the spirit.

However, no matter how hard he studied, he could not find in the brain the answer to the question of self-consciousness. As a result, in his later days, he gravitated towards dualism, discarding monism, and came to think that the brain is not the pivot of consciousness. Accordingly, he added a big question mark to his epigram between nous and the brain.8)

In his book *The Mystery of the Mind*, he said, "The brain is a computer; the mind is a programmer." Just as a computer becomes useful when it is given a program and operated by somebody outside itself, it is the mind that gives the program instructions to the brain. According to Penfield, the mind and the brain are connected but separate beings. Finally, in his search for the question of "what is the mind?" he could not help accepting the existence of spiritual energy and the existence of the soul.

7) Eccles

John C. Eccles (1903-97) insisted clearly that the mind and the brain are different entities, and advocated the position of dualism. He said,

We are a combination of two things or entities: our brains on the one hand; and our conscious selves on the other. The self is central to the totality of our conscious experiences as persons through our whole waking life.9)

⁸⁾ Quoted from Takashi Tachibana, Near Death Experiences (in Japanese) (Tokyo: Bungei-Shunju Publishing Co., 2000), vol.2, 473-474.

⁹⁾ John C. Eccles and Daniel N. Robinson, The Wonder of Being Human (New York: The Free Press, 1984), 33.

At the end of his life's long fight against materialism, he challenged materialism in his last book, *How the Self Controls Its Brain*. He wrote,

A most important program for this book is to challenge and negate materialism and to reinstate the spiritual self as the controller of the brain.¹⁰⁾

Eccles did research on how the mind and the brain interact, and asserted "mental events act by a quantum probability field to alter the probability of emission of vesicles from presynaptic vesicular grids." Pre-synapse refers to the end of an axon fiber that release neurotransmitters to cross the synapse—a gap—to a postsynaptic receptor on the dendrite of another neuron, as illustrated in figure 1.

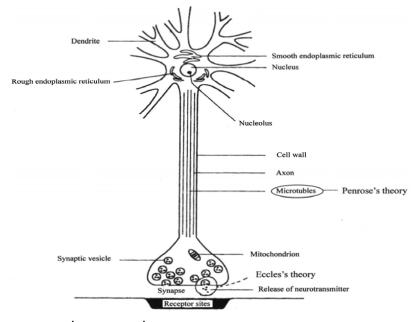


Fig. 1. Eccles' and Penrose's Views about the Interaction between Mind and Brain

¹⁰⁾ John C. Eccles, How the Self Controls Its Brain (Berlin: Springer, 1994) Preface x.

¹¹⁾ John C. Eccles, How the Self Controls Its Brain, 69.

8) Penrose

Roger Penrose (1931-), a mathematical physicist, tries to explain the human mind by using his knowledge of quantum theory and cosmology. He says, "The unity of a single mind can arise in this description only if there is some form of quantum coherence extending across an appreciable part of the entire brain."12) In other words, he tries to explain how spirit comes from matter by means of the quantum theory.

He also maintains that microtubules within the neuron are where consciousness is produced by saying, "Microtubules seem to be a good candidate for the structures within which this large-scale quantum coherent activity might take place."13) Microtubules are small tubes made of proteins that run inside the axon. The microtubules referred to by Penrose are also illustrated in figure 1.

According to him, electrons and photons can flow inside these tubes. If there is a photon field inside these microtubules, there is a possibility for non-local quantum mechanics to occur. This quantum effect gives rise to human consciousness.

Penrose thinks that the human mind can be explained only by some laws of physics, which have not been discovered yet, whereby quantum dynamics and the theory of relativity can be united.

9) The mind-brain relationship from the perspective of Unification Thought

Descartes took the position of dualism, which completely separated the mind from the brain. Freud and Jung analyzed the mind without considering its relationship with the brain. Pavlov understood the mind as being conditioned reflexes of the brain.

¹²⁾ Roger Penrose, The Large, the Small and the Human Mind (Cambridge: Cambridge University Press, 1997),

¹³⁾ Roger Penrose, The Large, the Small and the Human Mind, 133.

Behaviorists also observed the external behaviors only and neglected the existence of the mind.

Among the modern-day cerebral physiologists, the majority view is that the mind arises from the interaction of neurons of the brain. Penrose, who also took a position that the mind arises from the brain, tried to explain the mind physically using quantum theory, rather than biologically.

Sperry recognized the existence of the mind as something that transcends the physical phenomena of the brain but denied the existence of a spiritual being separate from the brain. Sperry believes in monism; that spirit and matter are the two aspects of the same being.

In contrast, Penfield and Eccles recognize the existence of the mind different from matter, and also the existence of souls and of God behind the mind.

Unification Thought takes the view that mental activities such as cognition, thinking, feelings, volition, etc. are produced through the give-and-receive action between the mind and the brain. The mind is the unity of the spirit mind with the physical mind. The physical mind refers to the instinctive mind, which seeks sex, food, clothes, and shelter. It is directly related to the physical self. On the other hand, the spirit mind responds to love and goes after truth, goodness, and beauty. The spirit mind belongs to the spirit self and it is related to the spirit world and God.

The above-mentioned views of the mind-body problem by various philosophers, psychologists, and scientists are summarized in figure 2. The Unification Thought view of the mind-body problem is similar to that of Penfield and Eccles. However, the Unification Thought view is not dualism as in the case of Penfield and Eccles, but it is Unitism as explained later.

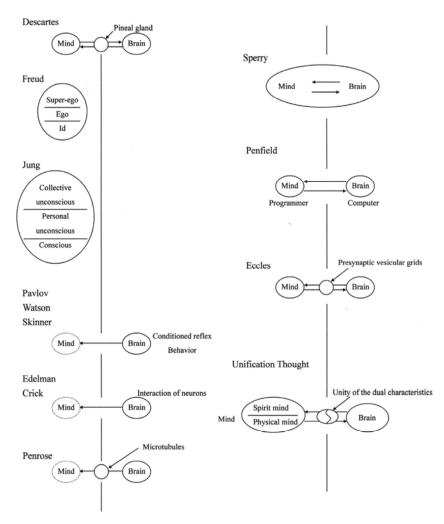


Fig. 2. Viewpoints about the Relationship between Mind and Brain

3. How Does Consciousness Come into Being?

According to the position of modern neurosciences, such questions as what is consciousness and how it came into being are unsolved riddles.

How does the brain, with its physical, material processes, give rise to a seemingly immaterial, private mental life (at the core of which seems to be the "I," the subjectivity)? This is the so-called hard problem of consciousness. Anil Ananthaswamy says, "neuroscience doesn't have an answer so far."¹⁴⁾ Sally Satel and Scott O. Lilienfeld also agree, "This 'hard problem,' as philosophers call it, is one of the most daunting puzzles in all of scientific inquiry."¹⁵⁾

Francis Crick, who, together with James Watson, discovered the molecular structure of DNA, says as follows:

The explanation of consciousness is one of the major unsolved problems of modern science. Indeed, the overwhelming question in neurobiology today is the relation between the mind and the brain. In the past, the mind (or soul) was regarded as something separate from the brain but interacting with it in some way. But most neuroscientists now believe that all aspects of the mind, including its most puzzling attribute, consciousness or awareness, are likely to be explainable in a more materialistic way as the behavior of large sets of interacting neurons.¹⁶

As such, it is the view of the majority of today's neuroscientists that consciousness can be explained as the interactions of neural networks. Many contemporary neurologists explain the generation of consciousness by the word "emergence." Eliezar J. Sternberg explains emergent properties as follows:

¹⁴⁾ Anil Ananthaswamy, The Man Who Wasn't There (New York: Dutton, 2015), 21.

¹⁵⁾ Sally Satel and Scott O. Lilienfeld, Brainwashed (New York: Basic Books, 2013), xviii,

¹⁶⁾ Rita Carter, Mapping the Mind, 204.

I think that the answer lies in a special case of what's called emergence, or emergent properties, the idea that a system can be more than the sum of its parts. We gave several examples of this phenomenon earlier, such as the saltiness of sodium chloride and the greasiness of oil. These are emergent properties because they are completely different from the properties of each substance's constituent parts. Similarly, consciousness depends on the workings of the brain, though it has a very different set of features. So perhaps consciousness is an emergent property of the interactions of neurons in the brain just as saltiness is of the interaction of sodium and chloride. . . We, however, would like to say that consciousness emerges from neuronal interactions with a new set of properties and without being determined.¹⁷)

Let's consider this question from the perspective of Unification Thought. There are no objections to the view that consciousness comes into being as a result of the interaction between neurons. According to Unification Thought, all forces come into being as a result of give-and-receive action between the reciprocal elements of subject and object. Any give-and-receive action is centered on a purpose, while the original, causal force is working at a deeper level. Through the give-and-receive action, that original, causal force manifests itself as actual forces in various ways. The original force-generating give-and-receive actions is a global entity since it is working universally throughout the cosmos.

For example, God's love is given to all humans universally. The love of God manifests itself in the family as parental love; as children's love through give-and-receive action between parents and children; as sibling's love through give-and-receive action among brothers and sisters; and as conjugal love through give-and-receive action between husband and wife.

Likewise, there exists underlying the universe the original force called the Universal Prime Force, which manifests itself as the four fundamental forces: Gravity,

¹⁷⁾ Eliezar J. Sternberg, My Brain Made Me Do It, 188.

Electromagnetism, the Strong and the Weak nuclear forces. The four forces came into being through four kinds of mutual interactions. Through interactions among particles having mass, gravity came into being; through interactions among charged particles, electromagnetic force came into being; through interactions among quarks, strong force (nuclear force) came into being; and through interactions between quarks and leptons (electron, neutrino), weak force (the force affecting the beta decay) came into being. In other words, the four forces are originally one but manifest themselves as the four forces through different kinds of interactions.

It is usually explained that life activity is realized through the interactions between cells, and between molecules. Unification Thought, however, explains that this activity is realized through various give-and-receive actions centered on the underlying life field, or the cosmic life.

It is Harold Saxton Burr(1889-1973), a former professor of medical science at Yale University, USA, who claimed to have discovered the existence of the life field. It is explained as follows:

The life field, the invisible field of electric force, enables every living being to grow according to its design. All living beings whether fungi, plants, or animals, are born and formed according to this eternal blueprint. They constantly receive various messages coming from far away places in the universe. The waves they effect instantly cover the entire earth.18)

The same thing can be applied to the problem of the consciousness. It is usually explained that mental action occurs through the interaction of neurons alone. According to Unification Thought, however, the field of consciousness, or the cosmic consciousness, is working behind the interactions.

¹⁸⁾ Harold S. Burr, Blueprint for Immortality (Japanese Version) (Tokyo: Nihon-Kyobun-sha, 1988), An explanation by the publisher at the cover of the book.

Within a TV set or a radio, various elements are connected to form a circuit. Yet, neither sounds nor pictures can appear through the action of the circuit alone. There must exist electric waves coming from broadcasting stations. Those electric waves are received by the TV set or radio and manifest themselves as sounds and pictures through interactions among various elements within the circuit. Life and consciousness also appear through the same principle. Life activity and mental activity appear when the cosmic life or the cosmic consciousness is working from behind.

It must be pointed out, however, that not only give-and-receive actions among neurons within the physical brain but also give-and-receive actions in the dimension of spirit (spirit self) must be involved in the mental activity. It is because the functions of intellect, emotion, and will are active and spiritual.

What comes into being through interaction among neurons without the involvement of spiritual beings (spirit self) is merely functions on the level of animal instinct. In other words, in order for the mind's intellect, emotion, and will to function, give-and-receive action within the spirit self is needed. Within the spiritual brain, there must be interactions among spiritual elements (to be called spiritual neurons).

Both the physical self and the spirit self of a human being have the dual characteristics of *sungsang* and *hyungsang*. Accordingly, the physical self and the spirit self have the active *sungsang* element of the physical mind and the spirit mind respectively. In a human being, the physical mind and the spirit mind are united as the human mind. Therefore, underlying physical and spiritual neuron interaction, the active mind that integrates and controls those interactions are at work. The above-mentioned explanation by the Unification Thought view is summarized in figure 3.

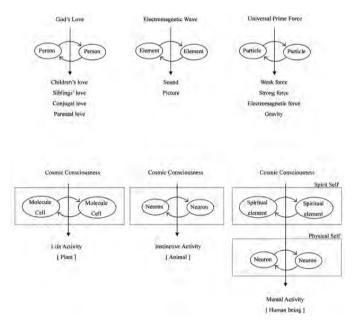


Fig. 3. The Activity of Love, Force, Life, and Consciousness through the Give-and-Receive Action

Here, the cosmic consciousness refers to the consciousness working everywhere in the universe. It is derived from the mind of God (the Original *Sungsang*). The origin and driving force of the human consciousness is the cosmic consciousness. It is the same as saying that God's love is the origin of human love.

The human consciousness differs in each person with the wiring of neurons within the brain of the physical body, and that of the brain of the spirit self. The physical body's brain constantly changes in the lifetime of the body and ceases its function at the end of the physical life. The brain of the spirit self, however, grows during the lifetime of the physical body and continues existing eternally after the physical death. It is because of the existence of the spirit self that a man or woman maintains his or her unchanging personality while alive physically and even after the physical death.

In his text on creative evolution, Henri Bergson (1859-1941), a philosopher, says that the evolution of living beings is guided by "élan vital (vital impetus)," which he refers to as "supra-consciousness." He even attaches the name of God to the vital impetus. Alfred N. Whitehead (1861-1947), who advocated process theology, says that: "the Universe is made up of myriad pulses of experience that embody material aspects as well as psychological aspects as feeling and value." They were talking about the cosmic consciousness.

In his book *The Planetary Mind*, Arne A. Wyller, an astronomer and philosopher, writes about the consciousness covering the earth by saying that "humanity and all other life forms in the past and present lie embedded in an invisible Planetary Mind Field that pervades the entire Earth."²⁰)

While Wyller insisted on the existence of the consciousness covering the earth, Unification Thought thinks that the cosmic consciousness fills the entire universe including the earth. Furthermore, in order for our mind or consciousness to come into being, the existence of souls (spirit self) is a prerequisite. Eccles and Penfield clearly insisted on this point.

Eccles says, "Reference should be made to the discussion on the creation of the psyche by infusion into the developing embryo. *This divinely created psyche should be central to all considerations of immortality and of self-recognition.*"21)

Penfield also says in *The Mystery of the Mind*, "From my standpoint as a medical doctor, I would like to give an opinion of mine. It is related to all the attempts to explore the human nature, based on the theory that the mind is an independent existence. This view may be regarded as one that affirms the immortality of souls."22)

¹⁹⁾ Arne A. Wyller, The Planetary Mind (Aspen, Colorado: MacMurray & Beck, Inc., 1996), 187.

²⁰⁾ Arne A. Wyller, The Planetary Mind, 6.

²¹⁾ John C. Eccles and Daniel N. Robinson, The Wonder of Being Human, 176.

Wilder Penfield, The Mystery of the Mind (Japanese Version) (Tokyo: Hosei University Press, 1987), 145-146.

Today materialistic neuroscientists hate the spiritual being, referring to it as a horrible homunculus, an ugly Penfield's homunculus, or the infamous little person inside the brain. However, it is a dogmatic attitude emotionally prejudiced. Until today, the existence of the spirit world has been an obvious reality for those who have spiritual ability but it has not been a reality understandable for everybody. From now on, however, science will give clear answers to the existence of the spirit world in such a way that everybody can understand.

The materialist scientists say that, if the homunculus is hypothesized, it becomes necessary for "the homunculus of the homunculus" which deals with the information received by the homunculus. That argument is faulty just like the argument that, if God who created the universe exists, there must be God who had created that God. The universe is a being within time and space, but God is the being beyond time and space. Therefore, we need not propose such being as the cause of God.

The same thing can be said about consciousness. The mind transcends time and space, and there cannot be something like the mind of mind. The brain itself has no consciousness, but the mind of the spirit self, namely spirit mind, does. Consciousness has intellectual, emotional, and volitional functions, which operate on their own. In other words, there is no need for "intellect of intellect," "emotion of emotion," and "will of will," which make the functions of intellect, emotion, and will operate.

The fact that the human mind is individualistic cannot be understood, either, without recognizing the spirit self of a human being. Susan A. Greenfield, a British professor of pharmacology says that: "By looking at a single human brain it is educated guesswork at best to determine whether the person was male or female. It would, however, be completely impossible to tell whether this particular man or woman had been kind or possessed a sense of humor." The individual personality of each human being is derived

²³⁾ Susan A. Greenfield, The Human Brain (New York: Brockman Inc., 1997), 121.

not from the brain but from the mind of spirit self of the person.

4. How Can Spirit and Matter Interact?

How can the mind and the brain, namely spirit and matter, interact with one another? With regard to this question, I am going to briefly explain various views by philosophers and scientists since Descartes, and then present the Unification Thought view.

1) Descartes

Descartes regarded spirit and matter as totally heterogeneous, and thus was a dualist. He thought that the pineal gland inside the brain was the point of contact between the mind and the body. However, the pineal gland itself is material. Therefore, he gives no answer to the question of how spirit and matter can make interaction.

2) Bergson

Like Spinoza, Bergson believed that spirit and matter manifest two aspects of a being. If so, however, their interaction cannot help becoming mechanical. Being so, it becomes difficult to explain the autonomous, controlling action of spirit. Furthermore, when the physical self dies, soul (spirit self) also disappears. Accordingly, immortality of souls and the existence of the spiritual world are both denied.

3) David Bohm

David Bohm, a British theoretical physicist, probed into the world of consciousness his differing specialty notwithstanding, and developed a unique view of mind and matter. He thought that mind and matter are ultimately fused. He says,

If the immanence is pursued more and more deeply in matter, I believe we may eventually reach the stream, which we also experience as mind, so that mind and matter fuse (italics added).24)

Furthermore, Bohm says of the ultimate actuality, "So we are led to propose further that the more comprehensive, deeper and more inward actuality is neither mind nor body but rather a yet higher dimensional actuality, which is their common ground and which is of a nature beyond."25) It can be said that the ultimate actuality is God. Thus, Bohm regards God as the common ground of mind and body, while transcending them.

4) Eccles

John C. Eccles maintained that the mind and the brain are different beings, but that the mind and the brain interact at presynaptic vesicular grids, which are very tiny organizations of the synapse, without infringing upon the conservation laws of physics.

Furthermore, Eccles discusses elemental (or unitary) mental events called the psychon and also the *dendron*, the basic receptive units of the cerebral cortex each of which has about 200 neurons in its region. According to him, interaction between mind and body can be considered on the basis of the unitary interaction of a psychon with its dendron.

5) Photon mediation theory

Arne A. Wyller thinks that the photon may act as a mediator between the mind field and the matter field. In other words, it is the photon that enables spirit and matter to interact. He explains as follows:

²⁴⁾ Ken Wilber, ed., The Holographic Paradigm and Other Paradoxes (Boston: Shambhala, 1985), 193.

²⁵⁾ Arne A. Wyller, The Planetary Mind, 209.

Within our modern scientific framework, it appears feasible to explore the possibility that the light particle—the photon that holds these atoms together and travels endlessly between them-serves a twofold purpose in the Universe. In the physicist's material Universe, it acts as matter "glue" on the atomic level, but in another sense it may well act as a mediator between the Mind Field and the matter fields. Or perhaps it is the Mind Field. If so, then the photon has a Janus face: Facing the material world it is matter glue, whereas facing the world of intelligence it takes on the characteristics of mind glue or of mind itself.²⁶)

Former Brookhaven Laboratory scientist Tom Stonier also makes a daring suggestion in Information and the Internal Structure of the Universe that a photon is made up of two components: an energy component and an information component.²⁷⁾ According to him, since a photon has two aspects of spirit and matter, they can have interaction with the photon as the mediator.

6) Unification Thought View

According to Unification Thought, spirit and matter are different entities, but they are one in their ultimate origin. In other words, Unification Thought regards God, the origin of the universe, as the Being harmonizing the dual characteristics of mental element and material element. This view is neither dualist nor monist. It is called *Unitism* or the Theory of Oneness in which dual characteristics are united.

In the world of phenomena, the mind and the brain, or spirit and matter, are different entities. However, if they are traced back to their origin, there is no longer the boundary between spirit and matter. Both are united as one. This implies that spirit and matter have common elements although they are different. Accordingly, the spiritual action is conveyed to body, which is material, and also the material action is conveyed to spirit.

²⁶⁾ Arne A. Wyller, The Planetary Mind, 219.

²⁷⁾ Arne A. Wyller, The Planetary Mind, 225.

David Bohm's view that spirit and matter, which are different, are united at their origin is similar to the view of Unification Thought. According to Unification Thought, however, spirit and matter are not completely fused as in David Bohm. God is the being with dual characteristics. Namely, God is the one being with dual characteristics of Original *Sungsang* and Original *Hyungsang*, which is the source of spirit and matter respectively.

In God, spirit and matter are the dual characteristics of the one being. In the phenomenal world, a spiritual being and a material being are different entities. The spiritual being, which is derived from God, has the dual characteristics of *Sungsang* and *Hyungsang* (namely, spiritual element and material element). So has the material being, which is also derived from God. The difference between them is that, in the spiritual being, the *sungsang* element is much stronger than the *hyungsang* element, and that in the material element, the *hyungsang* element is much stronger than the *sungsang* element. Therefore, the mind, which is the spiritual being, and the brain, which is the material being, have common elements between them, so they can engage in the mutual interaction between them.

Modern physics has clarified that, in the microscopic world, wave nature and particle nature are united, and we cannot say that an elementary particle is a particle or a wave: it appears as a particle in one case, and as a wave in another. But in the macroscopic world, a corporeal being and a wave are different phenomena. A similar argument can be given to the relation of spirit and matter: they are different in the phenomenal world but they are united in the causal world.

It can be said that the attempts by Eccles, Arne Wyller, and Stonier to explore interaction between spirit and matter are in the right direction. I foresee that the question of interaction between spirit and matter will be further clarified from that point of view in the future.

5. How Is Cognition Made?

1) Problems with past theories of cognition

What is cognition? How is it accomplished? In order to enrich their life of food, clothes, and shelter by seeking values of truth, beauty, and goodness, human beings observe and understand the world, whereby they obtain knowledge about the world. To understand and obtain knowledge is cognition.

Cognition is created by an interaction between a human subject and the object to be cognized. The objects are all things, created works, individuals, family, society, etc. Does the origin of cognition lie in the subject or in the object? That is the question of the origin of cognition.

With regards to the origin of cognition, two opposing schools arose, namely, empiricism and rationalism. Empiricism asserted that cognition happens through sensation, saying that cognition happens when sensory organs perceive objects in the outside world. When a person is born, his or her mind is like a sheet of blank paper. Through experiences, ideas are formed in the mind. That is the position of empiricism. Cognition is as a mirror reflecting the scenery outside. Empiricism was developed in Britain by Locke, Berkeley, Hume, and others in the 17-18th centuries.

In contrast, Descartes, Spinoza, Leibniz, and others asserted that correct cognition cannot be made through sensation alone, that it originates in the function of reason and the innate ideas which humans have from their birth. That is the position of rationalism developed in the European Continent.

Thus, there arose a conflict between empiricists, who regarded the object as the origin of cognition, and rationalists who regarded the subject human being as the origin. Gradually, both became extreme. In other words, British empiricism came to regard only experienced facts as certain, denying metaphysics, and even doubting the certainty of natural sciences. In this fashion, it fell into skepticism. On the other hand, Continental rationalism came to neglect experiences and think that all cognition happened through reason. In this fashion, it fell into dogmatism.

It was Kant who synthesized those two opposing positions, establishing a new one. According to Kant, *a priori* forms of cognition exist within the subject of cognition. The object of cognition, which is established when the sensory contents come from the object, is fragmentary. It is put in order and synthesized by the *a priori* forms of cognition within the subject. Thus, the object can be cognized only within the framework of the forms of cognition within the subject. Accordingly, the representation formed by the subject's mind is not the thing-in-itself. The object itself can never be cognized. In that way, Kant fell into agnosticism.

Thus, according to Kant's position, it is impossible to cognize the object itself. It is also impossible to explain changing and developing phenomena. It was Marxist epistemology based on materialist dialectic that criticized and presented a counterproposal to Kant's epistemology that had fallen into agnosticism and had lost the ability to change and develop.

Both Marxism and Kant dealt with the object and the subject of cognition in a unified way. Unlike Kant, however, who thought that the subject has the forms of cognition independently of the object, Marxism maintains that the forms of cognition are what the forms of existence of the objective reality are reflected as they are on the consciousness of the subject.

According to Marxism, cognition happens first when the objective reality is reflected onto the consciousness of the subject. That is the sensory cognition. Next, a rational stage of cognition takes place when the subject makes judgment and reasoning. Then, cognition proceeds to the stage of verification through practice. Cognition and practice are repeated endlessly. With each cycle, knowledge approaches the absolute truth. Thus, Marxism rejected Kant's agnosticism.

In Marxism, however, the human subject and the object are in the relationship of conflict and struggle. How is it possible for us to understand and cognize an object under the relationship of conflict and struggle? Also, Marxism says that cognition happens when the external world is reflected on the consciousness. However, cognition cannot be accomplished through a physical process like reflection: A mirror that is made of glass can reflect an object but cannot perceive it.

The consciousness, which cognizes an object, has interest in the object and perceives its reflected image. How, then, is it possible for the consciousness, which is itself supposed to be a product of the brain, to have interest in the object and perceive it? Also, how can the consciousness make logical thoughts, such as abstractions, judgments, inferences, and so on? Furthermore, how can it give instructions to experiment or investigate an object? Those questions cannot be answered by materialism. In order to answer the unsolved problems of past epistemologies, a new epistemology based on Unification Thought is presented below.

2) Existence of Prototype

If there is no relationship between a human subject and an object as in Kant's epistemology, correct cognition cannot be made. If subject and object are in a relationship of conflict and struggle as in Marxism, correct cognition cannot be made, either. In order for correct cognition to be made, a proper relationship between a human subject and an object is necessary. They must resemble each other and form a correlative base. In other words, there must be similarity and commonness between subject and object with respect to structure and elements. It is the same as saying that we cannot communicate with one another if our languages are different.

This means that, when the human subject cognizes an object, the subject must have the idea which is related to the object. The idea or image about an object within the mind of the human subject is called the "prototype."

In ancient days Socrates maintained that such a thing as a prototype existed within the human subject. He taught, "All ideas pre-exist within the brain. Otherwise, when ideas enter from outside, we will not be able to recognize them."

Idea in Plato also corresponds to the prototype. According to Plato, we perceive beauty in the objective world through the *Idea* of beauty, and we feel it is beautiful.

Nicholas of Cusa (Nicolaus Cusanus, 1401-64) thought that God created the world through the prototypes within His mind and that human beings recognize the world through prototypes within their mind. Those philosophers' views are in accordance with that of Unification Thought which claims the existence of prototypes in the subject of cognition.

Rationalist philosophers of the Continent since Descartes also claimed that human beings have innate ideas (namely prototypes) and, based on them, cognize objects through the function of reason. Rationalism, however, came to think that cognition is made through reason and innate ideas, independently of the objective world. Thus, it fell into dogmatism.

In Unification Thought, however, the prototype resembles and corresponds to the objective world because human beings were created by God to resemble Him and all things were created to resemble human beings. In other words, a person is a microcosm and an encapsulation of all things. Accordingly, ideas and images corresponding to the objective world exist within our mind as the prototypes. With regard to the question as to how the prototypes corresponding to the objective world (all things) exist within our mind, I will explain in the next section dealing with the "origin of the prototype."

Modern science is now revealing that prototypes exist within the brain. For example, Derek Bickerton, a linguist, says as follows:

In the case of mature members of our own species, it is pretty clear that we react to

our perceptions of particular objects and events by trying to map them onto some pre-existing concept that has a linguistic representation. In other words, our moment-to-moment functioning in the world relies, unconsciously but quite implicitly and completely, on our having the equivalent of a map of reality, which includes all the things that, at least for us as a species, are in it. This map enables us to orient ourselves rapidly to the fluctuations of the environment and to prepare appropriate responses to them.²⁸⁾

Origin of Prototypes

Then, how is a prototype formed within our mind? As to the origin of prototypes, there are four as follows:

- ① What corresponds to the human body?
- ② What comes from the natural world (the world of all things)?
- ③ What is obtained from culture through learning?
- 4) God's revelation and inspiration from the spirit world.

From the standpoint of Unification Thought, the cosmic consciousness coming from God's Sungsang is working in the universe. When the cosmic consciousness enters cells and tissues of living beings, it becomes the "protoconsciousness." The protoconsciousness perceives the structure, constituents, qualities, etc., of the cells and tissues. The content perceived by protoconsciousness is the "protoimage." The forms of interaction between cells are reflected on the protoconsciousness as the "image of form." The protoimage and the image of form together constitute the "prototype" that human beings have innately. The human body is the integration or encapsulation of all things and has all structures, elements, and natures of all things compacted within it. Therefore, the prototype, which is in correspondence with the human body, is also in correspondence with the natural world (all things).

²⁸⁾ Derek Bickerton, Language and Species (Chicago: The University of Chicago Press, 1990), 29.

Antonio R. Damasio, a representative neuroscientist in the contemporary age, also argues that the human body gives knowledge (namely "prototype") to our mind. He says that: "the body provides a basic topic for brain representations" and that, "the soul breathes through the body." By understanding those things, he says, it may become possible to solve the question of "how is it that we are conscious of the world around us?"

Damasio explains that, when we recognize the situation of the outside world and deal with it, we do it in the following way:

This book is also about a third and related topic: that the body, as represented in the brain, may constitute the indispensable frame of reference for the neural processes that we experience as the mind; that our very organism rather than some absolute external reality is used as the ground reference for the constructions we make of the world around us and for the construction of the ever-present sense of subjectivity that is part and parcel of our experiences; that our most refined thoughts and best actions, our greatest joys and deepest sorrows, use the body as a yardstick.²⁹)

What the brain must do to operate in this fashion is *come into the world with* considerable "innate knowledge" about how to regulate itself and the rest of the body. As the brain incorporates dispositional representations of interactions with entities and scenes relevant or innate regulation, it increases the chances of including entities and scenes that may or may not be directly relevant to survival. And as this happens, our growing sense of whatever the world outside may be, is apprehended as a modification in the neutral space in which body and brain interact.... The mind is embodied in the full sense of the term, not just embrained (italics added).³⁰⁾

That the cosmic consciousness enters cells and tissues, and senses their structure,

²⁹⁾ Antonio R. Damasio, Descartes' Error (New York: Avon Books, 1994), Introduction xvi.

³⁰⁾ Antonio R. Damasio, Descartes' Error, 117-118.

constituents, qualities, etc., can be thought as follows: When the cosmic consciousness enters into a cell and becomes the protoconsciousness, it reads the genetic code of the DNA of the cell. Then, the protoconsciousness makes the cells and tissues act according to the instruction of that code. That the protoconsciousness reads the code of the DNA means that it decodes God's Word (Logos), namely God's blueprint.

Thus, our mind receives unconsciously the concepts and ideas coming from God's Word (Logos), namely God's blueprint. Since the human body is the encapsulation of all things, decoding the blueprint of the human body leads our mind to understand the blueprint or the standard of all things (the natural world). Thus, innate prototypes or innate knowledge that we have since our birth originates from the human body in that way.

The network of neurons formed naturally when we are born, bear such innate prototypes. As Harry Chugani, a pediatric neurologist, says, "Before birth, it appears that genes predominantly direct how the brain establishes basic wiring patterns." Thus, the prototype that corresponds to the blueprint of the human body is formed naturally within the mind of infants.

In the case of infants, right after birth, the innate prototypes are still imperfect because their physical bodies and brain are immature. Accordingly, their cognition is vague. As the infants grow, however, the prototypes gradually grow according to the growth of the physical body, and their cognition becomes clearer.

On the basis of these innate prototypes, acquired prototypes are formed. For instance, we obtain knowledge about all things by observing the natural world and having interaction with it. Thus, acquired prototypes are formed. The same thing can be said when we obtain new knowledge by learning in the family, school, and community.

According to Damasio, innate knowledge (innate prototype) is based on dispositional

³¹⁾ Nicholas Wade, ed., The Science Times Book of the Brain (New York: The Lyons Press, 1998), 153.

representations in hypothalamus, brain stem, and limbic system; acquired knowledge (acquired prototype) is based on dispositional representations in higher-order cortices and throughout many gray-matter nuclei beneath the level of the cortex. He says, "Some of those dispositional representations contain records for the imaginable knowledge that we can recall and which is used for movement, reason, planning, creativity; and some contain records of rules and strategies with which we operate on those images. The acquisition of new knowledge is achieved by continuous modification of such dispositional representations." 32)

There are also other prototypes such as revelations from God and inspirations from the spirit world. It is well known that there are examples in which some scientists made their discovery and some artists made their creation on the basis of those revelations and inspirations.

Swiss psychiatrist and psychologist Carl Jung postulated the existence of a collective unconsciousness. He thought that in this collective unconsciousness resided certain fundamental ideas, patterns of thoughts and images, which he called "archetypes." He added, "Individuals receive messages from that inner world through dreams and intuitive flashes." In his later years, he became convinced that "in this collective unconsciousness resided a God and that this God needed human collaboration to be fulfilled."33)

Arne A. Wyller postulated the existence of a field of consciousness surrounding the earth and called it the Planetary Mind Field. According to him, humankind receives messages from it. He says as follows:

[The Planetary Mind Field] must hope that as it sends "waves of ideas" out to billions of individual channels, a very few individuals will be open to receiving the ideas. Humans will then be inspired to make intuitive leaps that fertilize their cultural fields.³⁴⁾

³²⁾ Antonio R. Damasio, Descartes' Error, 105.

³³⁾ Arne A. Wyller, The Planetary Mind, 234.

³⁴⁾ Arne A. Wyller, The Planetary Mind, 237.

"The messages from the collective unconsciousness" (Jung) and "the wave of ideas from the Planetary Mind Field'(Wyller) can be understood as corresponding to revelations from God and inspirations from the spirit world.

In his process theology Whitehead grasps God, the Creator, as "the repository of eternal forms (that is, the Information Field)" or as "the cosmic repository of ideas," which can be regarded today's version of Plato's Idea. Plato's Idea and Whitehead's "cosmic repository of ideas" indicate that we are given prototypes from God or from the spirit world.

4) Prototypes of the higher nerve center

The protoimage and the image of relation, which are formed within the protoconsciousness in the cells and tissues, are called "the terminal protoimage" and "the terminal image of relation."

As the terminal protoimages go up through the nerve path, they are selected or associated and united at each level of the central nervous system, becoming the central protoimage at the cerebral cortex. Likewise, the terminal image of relation also becomes the central image of relation at the cerebral cortex. That is the form of thinking; that is, this central image constitutes the form of the prototype which works as the form of thinking. The central protoimages and the central images of relation (forms of thinking) together constitute a priori prototypes in cognition. Antonio and Hanna Damasio's view as follows endorses the above-mentioned explanation:

In their view, binding takes place in a hierarchy of anatomical sites called convergence zones. Streams of information are combined in lower-level zones and passed to higher and higher zones depending on the complexity of the task.35)

³⁵⁾ Nicholas Wade, ed., The Science Times Book of the Brain, 223.

In lower-level zones of the central nervous system, there are images of content and the images of relation that correspond to each level, and the cognition and response are taking place in each level.

5) Active nature of consciousness

In the sensory stage of cognition, the content and the form of an object are reflected on the sensory centers, forming an image (representation). This is the sensory content and sensory form and is called the "sensory image." At this stage, the sensory content and sensory form are only fragmentary images, which have not yet become a unified object of cognition.

Next is the understanding stage of cognition. First, due to the work of the "spiritual apperception," the prototype corresponding to the sensory image of cognition is drawn from the repository of prototypes (namely, the repository of memories). Then, the spiritual apperception compares the prototype and the sensory image, whereby cognition is made.

According to Unification Thought, a human being is a dual being of spirit self and physical self. The mind of the spirit self is called the spirit mind; the mind of the physical self is called the physical mind (or instinct). The human mind is the union of the spirit mind and the physical mind. Its functional part is called the spiritual apperception. The spiritual apperception is the unity of intellect, emotion, and will. It has an active function such as interest (attention), integration, etc. The spiritual apperception might be called consciousness. Accordingly, cognition is made when the consciousness has interest in the object, integrates the fragmentary images into a unified sensory image, draws out a corresponding prototype from the memories, and compares the two elements. Thus, cognition is impossible without the active function of the consciousness.

The fact that consciousness does various active works such as having interest (attention), integration (binding) of information, sustaining and drawing of memories,

comparison of ideas (images), etc., remains a great riddle in the field of neuroscience. Nicholas Wade, a science writer of *The New York Times*, mentions the binding problem as follows:

An emerging feature of knowledge about the brain is that incoming information is separated into many different strands. For instance, faces, letters and colors are processed in different areas of the cortex, the thin sheet of nerve cells that makes up the outer surface of the brain. Even for faces, special attributes like identity, expression, and sex are represented in different parts of the cortex. An outstanding problem for brain scientists is to explain how these separately processed attributes are brought together.³⁶⁾

V. S. Ramachandran, a neuroscientist, and Sandra Blakeslee, a science writer of *The* New York Times, also say as follows:

If I toss a red ball at you, several far-flung visual areas in your brain are activated simultaneously, but what you see is a single unified picture of the ball. Does this unification come about because there is some later place in the brain where all this information is put together—what the philosopher Dan Dennett pejoratively calls a "Cartesian theatre"? Or are there connections between these areas so that their simultaneous activation leads directly to a sort of synchronized firing pattern that in turn creates perceptual unity? This question, the so-called binding problem, is one of the many unsolved riddles in neuroscience.³⁷⁾

With regards to the sustenance of memory, Susan Greenfield says as follows:

But common to all these memory processes is perhaps the most mysterious issue of all: We know that some people can remember what happened to them ninety years ago, but by then every molecule in their body will have been turned over many times. If long-term changes mediating memories are occurring continuously in the brain, how are they sustained? Irrespective of brain region, how do neurons register more or less permanent

³⁶⁾ Nicholas Wade, ed., The Science Times Book of the Brain, 108-109.

³⁷⁾ V. S. Ramachandran and Sandra Blakeslee, Phantoms in the Brain (London: Oliver Sacks, 1998), 80-81.

change as a result of experience?38)

Also, with regards to interest (attention) in cognition, Nicholas Wade reports as follows, citing an example of the development of the brain of an infant:

Furthermore, new studies are showing that spoken language has an astonishing impact on an infant's brain development. In fact, some researchers say the number of words an infant hears each day is the single most important predictor of later intelligence, school success and social competence. There is one catch—the words have to come from an attentive, engaged human being. As far as anyone has been able to determine, radio and television do not work.³⁹)

Hajime Matsumoto, a Japanese neurologist, says that it is emotion and love that activate the brain. In other words, "Generally, emotion is regarded as the lower dimensional function of the mind, but in reality, it is emotion that serves as gasoline that makes the engine, the brain, work most." 40)

As shown above, I have quoted some of the views of the scientists and researchers with regard to the active works of consciousness such as integration of information, sustenance of memories, necessity of having interest, activation of the brain through love, etc. Such active natures of consciousness are an ultimate question, and difficult to answer. Susan Greenfield also says as follows:

Consciousness brings the mind alive; it is the ultimate puzzle to the neuroscientist. It is your most private place. This ultimate puzzle, the subjective experience of consciousness, is perhaps a good place for any purely scientific survey, namely one of objective facts, to cease.⁴¹⁾

³⁸⁾ Susan A. Greenfield, The Human Brain, 137.

³⁹⁾ Nicholas Wade, ed., The Science Times Book of the Brain, 152.

⁴⁰⁾ Gen Matsumoto, Love Activates the Brain (in Japanese) (Tokyo: Iwanami Shoten, 1996), 75,

⁴¹⁾ Susan A. Greenfield, The Human Brain, 149.

This question of the active nature of consciousness cannot be answered no matter how many researches may be done on the wiring of neurons in the brain. In order to answer this question, we must think about the existence and function of the spirit self that transcends the brain and affects the neurons in the brain.

In other words, it is the function of the mind (spiritual apperception) that integrates information coming from various regions of the brain. Speaking of the sustenance of memories, memories are stored within inner hyungsang, the objective part of the mind. Therefore, even if the brain, which is material, has changed, memories are preserved because the spirit self itself is eternal. Having interest is also the function of the mind. Love is the core of the mind. Accordingly, the power of the mind, which affects the brain, becomes strong when it is centered on love: Love activates the brain.

6) The problem of qualia

In the mind-brain problem, what is regarded as another major challenge is the "problem of qualia." Qualia are defined as "the raw feel of sensations" (Ramachandran and Blakeslee), "the collection of personal or subjective experiences, feelings, and sensations that accompany awareness" (Edelman), or "the feelings of our sensation" (Kenichiro Mogi), etc. How this so-called qualia comes into being through the interaction of neurons is a difficult question. Ramachandran and Blakeslee say:

Philosophers call this conundrum the riddle of qualia or subjective sensation. How can the flux of ions and electrical currents in little specks of jelly—the neurons in my brain —generate the whole subjective world of sensations like red, warmth, cold or pain? By what magic is matter transmuted into the invisible fabric of feelings and sensations? This problem is so puzzling that not everyone agrees it is even a problem.⁴²⁾

Referring to the "hard problem of consciousness" raised by David Chalmers, a

⁴²⁾ V. S. Ramachandran and Sandra Blakeslee, Phantoms in the Brain, 229.

philosopher, Nicholas Wade says as follows:

The hard problem is this: What is the nature of subjective experience? Why do we have vividly felt experiences of the world? Why is there someone home inside our heads? Thus far, nothing in physics or chemistry or biology can explain these subjective feelings. Dr. Chalmers said, "What really happens when you see the deep red of a sunset or hear the haunting sound of a distant oboe, feel the agony of intense pain, the sparkle of happiness or meditative quality of a moment lost in thought?" he asked. "It is these phenomena, often called qualia, that pose the deep mystery of consciousness." 43)

Attempts are being made to explain the problem of qualia materialistically from the cluster or the pattern of firing of neurons. But they will prove to be totally fruitless.

In order to solve this problem of qualia, we should think that the prototype within our mind has not only images but also qualia. Since a prototype has the dual characteristics of *sungsang* and *hyungsang*, it has not only information and images which are *hyungsang*, but also qualia, which is *sungsang*. Therefore, for example, when we see a flower, we not only recognize the image of the flower but also at the same time we experience the feelings accompanied by the beauty of the flower. Unification Thought view of cognition is illustrated in figure 4.

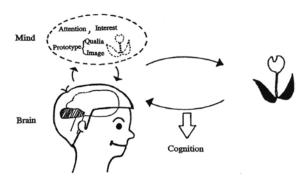


Fig. 4. Unification View of Cognition with Prototype Containing Qualia

⁴³⁾ Nicholas Wade, ed., The Science Times Book of the Brain, 240.

7) Souls and God

As shown above, there are many unsolved riddles in neuroscience such as the binding problem, the problem of sustaining and drawing of memories, the problem of qualia, the problem of the activation of the brain by consciousness and by love. In addition, there is a question of what the existence of "self" that watches the world and myself is. Ramachandran and Blakeslee have this to say about 'self':

When I think about "myself," it seems to be something that unites all my diverse sensory impressions and memories (unity), claims to be "in charge" of my life, makes choices (has free will), and seems to endure as a single entity in space and time.⁴⁴⁾

James Trefil, a physicist, also discusses the existence of "I" with regards to the problem of consciousness as follows:

As outlined above, I believe that the most central fact about my existence is I perceive that there is an "I" that observes the world from someplace inside my head. It makes no difference how many details you tell me about the working of my brain and the firing of my neurons. Until you have explained how I come to that central conclusion about my own existence, you have not solved the problem of consciousness. You certainly won't solve the problem by denying that consciousness exists. For me, reading Dennett's book was a little like reading a detailed discussion on the workings of a transmission, only to be told that there is no such thing as a car.45)

Most scientists try to explain the "problem of consciousness" materialistically with the interaction of neurons. However, no one has been successful in making a clear answer to this problem with the interaction of neurons.

According to the currently trendy field of the "science of complexity," consciousness

⁴⁴⁾ V. S. Ramachandran and Sandra Blakeslee, Phantoms in the Brain, 246,

⁴⁵⁾ James Trefil, Are We Unique? (New York: John Wiley & Sons Inc., 1997), 184.

is the same as the "emergent property of complexity." Steen Rasmussen, a Danish physicist associated with the Santa Fe Institute, headquarters of the field of complexity, suggested that "consciousness might be an 'emergent'—that is, unpredictable, irreducible, and holistic —property of the brain's complex behavior, just as superconductivity is an emergent property of certain ceramic compounds at relatively high temperatures."⁴⁶⁾ What he means is that an emergent phenomenon like a mind is to some extent independent of the process of the brain that created it and can even exert a control over it. Hence, we have free will.

No one, however, has been able to show what "emergence" really means. The "science of complexity" fundamentally maintains that spirit is derived from matter.

Then how should this problem of consciousness be solved? Fundamental limitations exist in the attempt to solve the problem from the materialist position. The problem of consciousness cannot be properly solved from the materialist position only. It will be eventually solved when we go into another new dimension, namely the spirit world.

According to Unification Thought, a human being has not only the physical self but also the spirit self. The spirit mind, which is the mind of the spirit self, does the works such as integration of information, sustaining and drawing of memories, pursuit of truth, beauty, and goodness through the function of intellect, emotion, and will, and so on. Since animals do not have spirit selves, those phenomena are not seen in animals. They have only an instinctive mind or instinctive consciousness.

It is the spirit self that sustains human consciousness. Furthermore, there is the existence of God behind it. Accordingly, the problem of consciousness will be finally solved only after science comes to pay attention to the existence of the spirit world and God. The statement by Eccles exactly accords with this position. He says as follows:

Since materialist solutions fail to account for our experienced uniqueness, I am

⁴⁶⁾ John Horgan, The Undiscovered Mind (New York: Brockman Inc., 1999). 232.

constrained to attribute the uniqueness of the Self or Soul to a supernatural spiritual creation. To give the explanation in theological terms: each Soul is a new Divine creation that is implanted into the growing fetus at some time between conception and birth. It is the certainty of the inner core of unique individuality that necessitates the 'Divine creation'. I submit that no other explanation is tenable; neither the genetic uniqueness with its fantastically impossible lottery, nor the environmental differentiations which do not determine one's uniqueness, but merely modify it. This conclusion is of inestimable theological significance. It strongly reinforces our belief in the human Soul and in its miraculous origin in a Divine creation. There is recognition not only of the Transcendent God, the Creator of the Cosmos, the God in which Einstein believed, but also of the loving God to whom we owe our being.47)

Penfield also says, "Scientists now can believe in the existence of souls without hesitation," and concludes as follows:

Here is a tremendous challenge to us humankind. It is an enormous task no less great than the challenge to the universe. When Albert Einstein found an answer to a scientific question, he said, "The mysteries of this world exist in that they can be understood!" I have no doubt that the day will come when the mysteries of the mind will no longer be mysteries.48)

6. The Limits of Damasio's Physiological Explanation of Consciousness

1) Damasio's theory on the Making of Consciousness

In The Feeling of What Happens: Body, Emotion and the Making of Consciousness (2000), which became a worldwide bestseller in the field of neuroscience, Antonio

⁴⁷⁾ John C. Eccles, Evolution of the Brain: Greation of the Self (London: Routledge, 1989), 237.

⁴⁸⁾ Wilder Penfield, The Mystery of the Mind (Japanese Version), 149.

Damasio discusses physiologically and evolutionarily the process where emotion produces feeling, and then the process of the formation of consciousness, which finally results in conscience.

Assuming that all the proper structures are in place, the processes reviewed above allow an organism to undergo an emotion, exhibit it, and image it, that is, feel the emotion. But nothing in the above review indicates how the organism could know that it was feeling the emotion it was undergoing. For an organism to know that it has a feeling, it is necessary to add the process of consciousness in the aftermath of the processes of emotion and feeling. In the chapters ahead, I give you my idea of what consciousness is and of how it may work so that we can "feel" a feeling.⁴⁹⁾

According to Damasio, starting from the image of emotion in the organisms (body), pre-conscious "proto-self," "core self" with "core consciousness," "autobiographic self" with "extended consciousness" develop, and finally reaches the "conscience," the peak of consciousness.

That is, he maintains that consciousness progresses (evolves) in the order: non-conscious nerve signal of an organism \rightarrow pre-conscious "proto-self" \rightarrow "core self" with "core consciousness" \rightarrow "autobiographic self" with "extended consciousness" \rightarrow "conscience."

Concerning the proto-self, he says, "it is an interconnected and temporarily coherent collection of neural patterns which represent the state of the organism, moment by moment, at multiple levels of the brain. We are not conscious of the proto-self." ⁵⁰⁾ It is a preconscious biological precedent.

Then, "core consciousness" and "core self" arise. Damasio explains as follows:

Antonio R, Damasio, The Feeling of What Happens: Body, Emotion and the Making of Consciousness (Vintage, 2000), 80-81.

⁵⁰⁾ Antonio R. Damasio, The Feeling of What Happens, 174.

We begin with a first trick. The trick consists of constructing an account of what happens within the organism when the organism interacts with an object, . . . We become conscious, then, when our organisms internally construct and internally exhibit a specific kind of wordless knowledge-that our organism has been changed by an object-and when such knowledge occurs along with the salient internal exhibit of an object.51)

The core consciousness is the pulsatile consciousness, and the player is the core self. The core self is in the nonverbal account, and language has not been produced yet.

The core consciousness includes an inner sense based on images. With the contribution of language and as experience accrues, however, autobiographical memory grows and the autobiographical self can be deployed. Concerning the autobiographical self, he says,

The autobiographical self is based on autobiographical memory which is constituted by implicit memories of multiple instances of individual experience of the past and of the anticipated future. The invariant aspects of an individual's biography form the basis for autobiographical memory. Autobiographical memory grows continuously. 52)

Extended consciousness in the autobiographical self includes the ability to hold memories and the ability to reactivate them, and it gradually builds up memories of the "objects" of the organism's biography, of life experience. He says language is a major contributor in extended consciousness:

Language is a major contributor to the high-level form of consciousness which we are using at this very moment, and which I call extended consciousness. Because of this, it does require a major effort to imagine what lies behind language, but the effort must be made.53)

⁵¹⁾ Antonio R. Damasio, The Feeling of What Happens, 168-69.

⁵²⁾ Antonio R. Damasio, The Feeling of What Happens, 174,

⁵³⁾ Antonio R. Damasio, The Feeling of What Happens, 108.

The pinnacle of consciousness is "conscience." He explains as follows:

Among this remarkable collection of abilities allowed by extended consciousness, two in particular deserve to be highlighted: first, the ability to rise above the dictates of advantage and disadvantage imposed by survival-related dispositions and, second, the critical detection of discords that leads to a search for truth and a desire to build norms and ideals for behavior and for the analyses of facts. These two abilities are not only my best candidates for the pinnacle of human distinctiveness, but they are also those which permit the truly human function that is so perfectly captured by the single word *conscience*, I do not place consciousness, either in its core or extended levels, at the pinnacle of human qualities. Consciousness is necessary, but not sufficient, to reach the current pinnacle.⁵⁴⁾

2) Damasio's Theory Viewed from Unification Thought

In the epistemology of Unification Thought, or Unification Epistemology, an image of the mind in a subject, which becomes a standard (measure) of judgment in recognition, is called a "prototype." A "prototype" is a "compound prototype" which consists of "a priori prototypes" (original prototypes) which precede experience, and "empirical prototypes" acquired through experience. The "compound prototype" which consists of "a priori prototypes" and "empirical prototypes" is shown in figure 5.

The pre-conscious proto-self as referred to by Damasio corresponds to the protoconsciousness in Unification Epistemology, and it is the consciousness that has a priori prototypes which consist of images and the images of the relation of cells, tissue, organs of one's body.

⁵⁴⁾ Antonio R. Damasio, The Feeling of What Happens., 230.

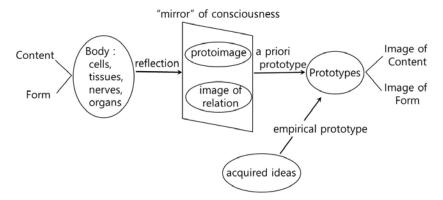


Fig. 5. The Complex Prototype Consisting of A Priori Prototypes and Empirical **Prototypes**

Damasio explains that core consciousness arises inside an organism (body) when an organism interacts with an object. He explains it as follows:

We begin with a first trick. The trick consists of constructing an account of what happens within the organism when the organism interacts with an object.55)

In conclusion, in its normal and optimal operation, core consciousness is the process of achieving a neural and mental pattern which brings together, in about the same instant, the pattern for the object, the pattern for the organism, and the pattern for the relationship between the two.56)

The fundamental mechanism of core consciousness is the creation of mapped accounts of ongoing relationships between organism and objects.57)

Damasio's view about the formation of core consciousness is shown in figure 6.

⁵⁵⁾ Antonio R. Damasio, The Feeling of What Happens, 168.

⁵⁶⁾ Antonio R. Damasio, The Feeling of What Happens, 194.

⁵⁷⁾ Antonio R. Damasio, The Feeling of What Happens, 197.

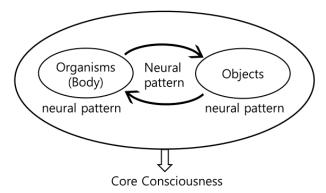


Fig. 6. Damasio's Idea Concerning the Formation of Core Consciousness

Core consciousness, pulse of consciousness, as explained by Damasio corresponds to the sensory stage of cognition in Unification Epistemology, and it consists of a set of fragmentary images.

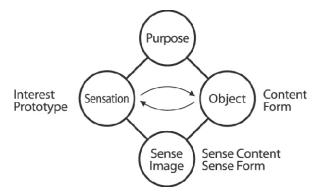


Fig. 7. Sensory Stage Cognition Seen from Unification Epistemology

Damasio explains that consciousness arises from a structure (mechanism) in which an organism interacts with an object. However, it is unreasonable for consciousness to appear from a structure (mechanism). Eliezar Sternberg, a neurologist, also raises a question: how can a mechanism produce consciousness?

We see no consciousness or moral agent in the brain, only the mechanics of an intricate, organic computer, run by the binary circuitry of neuronal networks. How is it that such a mechanism gives rise to the boundless, indetermined consciousness we have described? 58)

As the neurobiologist Robert Doty argued in 1998, the puzzle of how patterns of neuronal activity become transformed into subjective awareness, "remains the cardinal mystery of human existence."59)

From the standpoint of Unification Epistemology, consciousness is not produced from the structure of an interaction, but rather the consciousness (mind) of the subject is at work through such an interaction.

The original prototypes (proto-images and images of relation) with which people are born are imperfect in the case of a new-born baby because the cells, tissues, organs, nerves, sense organs, brain and so on, of the infant are not well developed yet; therefore, the infant's cognition cannot but be vague. However, as the infant's body develops and grows, the prototypes become clearer.

Furthermore, new ideas acquired through experience are added one by one. In this way, the prototype grows in quality and in quantity. Damasio's autobiographical memories correspond to the developed prototype in Unification Epistemology.

The increase of autobiographical memories through the history of nature and the history of each individual corresponds to the development of prototypes, and it can be said that Damasio's autobiographic self and extended consciousness correspond to the understanding stage of cognition and the rational stage of cognition in Unification Epistemology. The understanding stage of cognition is accomplished through the collation

⁵⁸⁾ Eliezar J. Sternberg, My Brain Made Me Do It (New York: Prometheus Books, 2010), 48-49, 184.

⁵⁹⁾ Jeffrey M. Schwartz and Sharon Begley, The Mind & The Brain (New York: Regan Books, 2002), 28.

between the prototype and the image (sense image) which comes from an object. (See figure 8.)

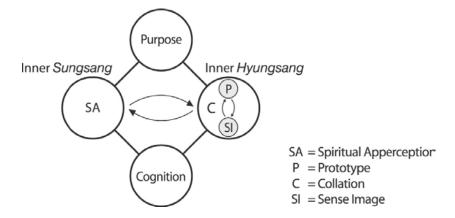


Fig. 8. Understanding Stage Cognition Seen from Unification Epistemology

And the rational stage of cognition is accomplished by the operation of ideas (concepts), thereby, new knowledge (an idea, a concept) is produced.

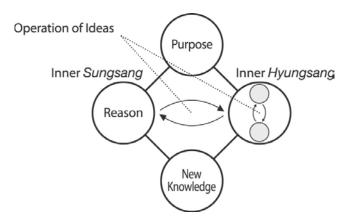


Fig. 9. Rational Stage Cognition Seen from Unification Epistemology

3) Beyond Damasio's Theory

In the process of the development of consciousness, Damasio consistently disregarded the spiritual participation and insisted on the physiological materialism. However, as seen in the following quotations, he shows implicitly that what is spiritual is working in the process of the development of consciousness.

Damasio says that the answer which explains what is happening reaches a brain from somewhere, and that knowing is generously offered free of charge.

The proto-self is a reference rather than a storehouse of knowledge or an intelligent perceiver. It participates in the process of knowing, waiting patiently for a most generous brain to explain what is happening by answering questions that were never posed: Who does? Who knows? When the answer first arrives, the sense of self emerges, and to us now, creatures endowed with rich knowledge and an autobiographical self, millions of years after the first instances of primordial storytelling ever occurred, it does appear as if the question was posed, and that the self is a knower who knows.

No questions asked then. There is no need to interrogate the core self about the situation and the core self does not interpret anything. Knowing is generously offered free of charge. 60)

Damasio says that consciousness emerges from somewhere when brains acquire the power, the simple power of telling a story without words.

Consciousness begins when brains acquire the power, the simple power I must add, of telling a story without words, the story that there is life ticking away in an organism, and that the states of the living organism, within body bounds, are continuously being altered by encounters with objects or events in its environment, or, for that matter, by thoughts and by internal adjustments of the life process. Consciousness emerges when this primordial story—the story of an object causally changing the state of the body—can be told using

⁶⁰⁾ Antonio R. Damasio, The Feeling of What Happens: Body, Emotion and the Making of Consciousness, 191-92.

the universal nonverbal vocabulary of body signals.⁶¹⁾

Damasio says that images arise from neural patterns (neural maps), but he cannot explain how images emerge from neural patterns.

There is no mystery regarding the question of where images come from Images come from the activity of brains and those brains are part of living organisms that interact with physical, biological, and social environments. Accordingly, images arise from neural patterns, or neural maps, formed in populations of nerve cells, or neurons, that constitute circuits, or networks. There is a mystery, however, regarding *how* images emerge from neural patterns. How a neural pattern *becomes* an image is a problem that neurobiology has not yet resolved.⁶²)

Damasio says that language is the supreme gift.

Given our supreme language gift, most of the ingredients of consciousness, from objects to inferences, can be translated into language, and for us, at this point in the history of nature and the history of each individual, the basic process of consciousness is relentlessly translated by language, covered by it, if you will.⁶³)(italics added)

Damasio says that organisms (bodies) are endowed with a substantial memory capacity and reasoning ability, and a critical gift called language.

Autobiographical selves occur only in organisms endowed with a substantial memory capacity and reasoning ability, but do not require language. . . . You and I possess both, of course, thanks to an even more ample endowment of memory, reasoning ability, and that critical gift called language. Over evolutionary time as well as individual time, our autobiographical selves have permitted us to know about progressively more complex aspects of the organism's physical and social environment and the organism's place and

⁶¹⁾ Antonio R. Damasio, 30-31.

⁶²⁾ Antonio R. Damasio, 322.

⁶³⁾ Antonio R. Damasio, 108.

potential range of action in a complicated universe.⁶⁴)(italics added)

Damasio says that the core you is only born as the story is told, within the story itself.

The story contained in the images of core consciousness is not told by some clever homunculus. Nor is the story really told by you as a self because the core you is only born as the story is told, within the story itself. You exist as a mental being when primordial stories are being told, and only then; as long as primordial stories are being told, and only then. You are the music while the music lasts. 65)

As seen in the above quotations, Damasio's theory admits implicitly the spiritual participation appearing from somewhere. And he has not answered about the following problems at all.

- 1) How do images emerge from neural patterns?
- ② How was language brought about?
- ③ How was the ability to keep memory and reasoning formed?
- 4 How were you born?

Furthermore, Damasio admitted that it is almost impossible to solve the problem of consciousness through neuroscience, and admits:

The book is about my idea of what consciousness is, in mental terms, and about how consciousness can be constructed in the human brain. I do not claim to have solved the problem of consciousness, and at the current stage in the history of cognitive science and neuroscience, notwithstanding several new and substantial contributions, I regard the thought

⁶⁴⁾ Antonio R. Damasio, 198.

⁶⁵⁾ Antonio R. Damasio, 191.

of solving *the* consciousness problem with some skepticism. I simply hope that the ideas presented here help with the eventual elucidation of the problem of self from a biological perspective. ⁶⁶

To conclude, it is impossible to explain the formation of consciousness only through the physiological processes, and the hard problem of consciousness can be solved only if we accept the spiritual entity (spirit self) which has an ability to form images, the linguistic ability, ability of reasoning, the sense of self, and so on.

⁶⁶⁾ Antonio R. damasio, 11-12.

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God, the Logos and Evolution:

The Development of the Universe and of Life is a Progressive Expression of the Logos

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Contents

- 1. Nature of Matter
- 2. Systemic Hierarchy
- 3. The Logos and Creation
- 4. Chemistry
- 5. What is Life
- 6. Human Origin

Abstract

While most religious philosophies have God directly involved in creating the Universe, Unification Thought locates all of God's creative effort in the creation of the Logos (the Word of God, Natural Law). The Logos guided the evolution of the universe up to the Origin of Man. This was (symbolically) God's 95% responsibility. The remaining 5% to complete the Purpose of Creation was Human Responsibility.

Key words: Logos. Wavefunction, Creation, Evolution, Human Origin

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The influence of abstract laws on substantial matter was mysterious in classical science, and gave rise to Nobel Laureate Eugene Wigner famous essay on "The Unreasonable Effectiveness of Mathematics in the Natural Sciences." Another puzzle was the important concept of free will—if laws ruled, where was the possibility of free choice.

Quantum science indirectly solves both conundrums with its much more sophisticated understanding of the nature of matter.

1. Nature of Matter

Classical science was—and still is in high-school classes—simple materialism; matter moving about under the influence of forces in the external world of the senses. The discovery that matter was composed of atoms, atoms were composed of electrons and protons, and that matter and energy were so similar that they could be interconverted, altered the view of what matter was, but not that it was all external stuff.

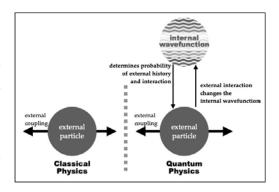
Quantum science utterly shattered this simple view of existence, so much so that even after ~100 years of acquaintance with the revolution, you still encounter bemusement expressed in phrases such as "The quantum world is mind-bogglingly weird." Even one of the quantum luminaries, Nobel laureate Richard P. Feynman, admitted to being uncomfortable with the innovation in the title of his brilliant 1985 book, *QED: The Strange Theory of Light and Matter*²) written for the layman.

We will only need to discuss one of the major changes here, proved by endless experiments: that matter has an intangible *internal* wavefunction along with the tangible *external* particle-aspect to matter.

Eugene Wigner, Communications in Pure and Applied Mathematics, vol. 13, No. I (New York: John Wiley & Sons. 1960).

Richard Feynman, QED: The Strange Theory of Light and Matter (N.J. Princeton: Princeton University Press, 1985).

The internal wavefunction is abstract and can only be fully described by *complex* numbers—numbers with size and rotation—while the external particle can be described with the familiar *real* numbers—those with size only—used in classical physics.



It is the presence and behavior of this internal wavefunction that is so strange and weird to the classically-trained mind. In this new science, these internal and external aspects have an intimate relationship:

- A. The wavefunction generates the probability of how the particle will change its state and externally interact with others.
- B. The external interactions generate change in, and development of, the internal wavefunction.

For *Unification Thought*, this is not strange or weird as its basic concept of matter is that all things have an internal *inherent directive nature* expressed in an *external form*.

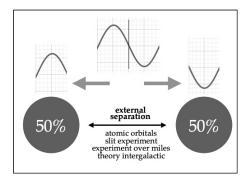
1) The Wavefunction

It is important to note that quantum probability created by the wavefunction is quite different from classical probability. Thermodynamic classical concepts such as temperature and pressure are calculated probabilistically as it is impossible to follow individually the trillion trillion atoms in even a small amount of matter. Probability is used here to deal with ignorance.

Quantum probability is quite different. Its extreme power is often expressed in Gell-Mann's totalitarian principle: "Everything not forbidden is compulsory." It underlies the exclusion principle that structures the periodic table of the elements. It can support the weight of a star in a white dwarf.

What must be the strangest addition to the scientific canon and our view of reality by wavefunction probability—Einstein called it "spooky"—is the phenomenon of entanglement.

The subjectivity of the internal over the external is so powerful that it is indifferent to the spatial separation that is so significant externally. If, for instance, the wavefunction separates into two lobes, each of which generates a 50% probability that the external particle will be found there,



the particle will quantum jump back-and-fore between the two lobes. It will spend 50% of the time in each lobe and zero time anywhere else. This quantum jumping is utterly indifferent to the separation of the two lobes.

Established examples of this "spooky" action at a distance are the nanometer separation between lobes in an atomic orbital; the centimeter separation in slit experiments, over 4 kilometers separation under the city of Vienna; and a record quantum teleportation over 144 kilometers between two of the Canary Islands.³⁾

Impressive as a technical feat, theory states that interstellar and intergalactic distances are just as equally ignored. The field of entanglement is in its infancy, rather like electricity when Volta made frog muscles twitch. But the coming Age of Entanglement has the

³⁾ X.-S. Ma, A. Zeilinger et al, "Quantum teleportation over 143 kilometers...," Nature 489 (2012). 269-273.

potential to be just as revolutionary.⁴⁾

Note that this is not a phenomenon restricted to simple things like photons or electrons. For a while, the record was with buckyballs—a ball of 60 carbon atoms—but the new record is the massive molecule $C_{284}H_{190}F_{320}N_4S_{12}$. While not yet bacteria-sized—let alone human-sized—it is a good beginning.

If this sounds like teleportation from science fiction or the "Beam me up, Scotty" of the *Star Trek* franchise; it is. The universe is filled with entangled pairs that have been separating for millions of years. These non-local connections that are bombarding the Earth can be thought of as God's preparation for a way for humanity to expand beyond the Earth. One challenge is *decoherence*; any interaction will alter the wavefunction and destroy the non-local connection. Two things avoid this: Outer space is so empty that particles can cross billions of miles without interacting; and the Moon has no atmosphere, so entangled particles arrive there in pristine condition. I examine this topic further in another essay.6)

2) Action of Natural Law

In classical physics, natural law (whatever it was; its nature was rarely discussed by scientists) was considered to act directly upon tangible, external matter. Actually, this was an unspoken assumption as there was no other place for it to work.

In the new quantum view of reality, the Natural Law (as called by scientists), the Logos (as called by Unification Thought), works solely on the internal, intangible wavefunction.

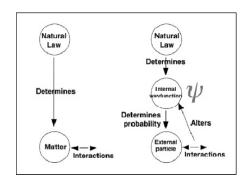
Natural Law determines the shape of the wavefunction when the system is not interacting,

⁴⁾ Louisa Gilder, The Age of Entanglement: When Quantum Physics was Reborn (NY: Alfred Knopf, 2008)

⁵⁾ S. Eibenberger et al, Phys. Chem. Chem. Phys., 2013, 15, 14696-14700.

Richard L. Lewis, "Dual Characteristics and Interstellar Travel," Unification Science (Asan: Sun Moon University Press, 2019), 211-240.

and what change occurs there when interactions occur. For example, natural law determines the shape of the atomic orbitals (the chemist's name for the atomic wavefunction). This law is accurately described by Schrodinger's Equation where the orbital is symbolized by the Greek letter psi (\$\P\$). For example,



it is impossible for two electrons to be in the same state. Not just a small probability, not even an infinitesimal one, but totally zero in the way that (+1) + (-1) = 0. It is this that underlies the Pauli Exclusion Principle that only allows two electrons of opposite spin to share an orbital. Additional ones have to be in higher orbitals.

3) Interaction

There are four basic interactions known to physics. One of these, gravity, is unique in that it involves the bending of spacetime.⁷⁾ The other three fundamental interactions—the weak nuclear force, the electromagnetic force, and the strong nuclear force—along with the other interactions studied in science, all involve the external coupling of systems with subsystems from their composite structure.

This is not so obvious for something like an electron which, in common parlance, is labeled a *fundamental particle* without an internal structure. That this is incorrect involves yet another non-classical aspect of the new science.

In classical science, existence, space, time, etc. were all considered to be smooth and continuous. Not so in modern science, rather they all come in 'pixels' (called quanta) that are so small that we cannot resolve them with our senses. Like the pixels on a

⁷⁾ A. Zee, Einstein Gravity in a Nutshell (Princeton University Press, 2013).

computer screen, our sense of sight blends RGB pixels into smooth continuous white and a palette of a million colors.

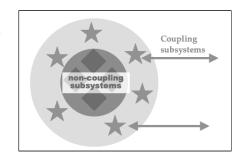
To commemorate this epochal discovery, a pixel of existence is called Planck's Constant; of space a Planck Length; of time a Planck Time; etc. Every photon, from low energy radio waves to high energy gamma rays has exactly one pixel of existence,

the energy, E, and time-period, T, of each photon are reciprocals that multiply to unity (in Planck units).

$$1/6E \times 6/1T = 1000/1E \times 1/1000T = 1$$

Spacetime, however, can twist into entities that exist for so brief a moment that they do not amount to a pixel of existence. These are *virtual*, not *real*, entities and the electron is surrounded by such virtual photons. Half of these are lineally polarized—and collectively called the *electric field*—while others are circularly polarized—the *magnetic field*—surrounding the electron. While they are not really *real*, the attempt to push together the N-poles of two strong magnets is a personal experience of a halo of virtual photons that refuse to share their space.

Surrounded by this halo, the electron is actually a composite system, and it can couple with virtual photons from its structure. In the same way, atoms can couple with some of their electrons, molecules with some of their atoms, cells with molecules, etc. Systems usually



only couple with some of their subsystems—the variable subsystems—but not with others—the constant subsystems. Atoms, for instance, couple with electrons and virtual photons, but never with protons and neutrons.

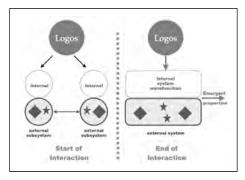
2. Systemic Hierarchy

1) System wavefunction

Systems are composed of interacting subsystems coupling with their subsystems. This interaction alters the internal aspect of the subsystems which blend together, as governed by the Logos, into the internal aspect of the systems. For example, the internal aspect

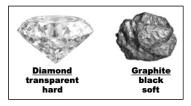
of an atom—the atomic wavefunction—is the lawful blending together of the wavefunctions of the atomic nucleus and all the electrons.

When subsystems interact and blend their wavefunctions lawfully, the resultant systems inherit from the Logos a set of *emergent properties*



that are absent in the subsystems. Neither an electron nor a proton exhibit chemical valence; when they unite, however, the property of chemical valence is inherited from the Logos. An example is carbon atoms which can interact in two different ways as

subsystems and their atomic wavefunctions blend in two different lawful ways to inherit two quite different sets of emergent properties from the Logos: one opaque black and greasy graphite, the other transparent adamantine diamond. Same



stuff, different wavefunction.

While the concept of emergent property was one in classical science, there was no explanation of just where this novelty arose from.

2) Emergent Properties

At every level of Creation, systems come together externally in a situation where they can interact under the influence of the Logos. This can take a variable time period. Then the systems can interact by coupling with their subsystems, becoming interacting subsystems in a higher system.

This higher system has emergent properties that are inherited from the Logos and not possessed by the subsystems. These properties can be simple, such as chemical valence and hydrogen bonding by atoms and molecules; more sophisticated such as manipulation of analog form by proteins and digital information by nucleic acids; or very sophisticated such as life in cells and mind in the animal brain.

Interacting subsystems	System	Emergent Properties
electrons & nuclei	atoms	Chemical valence
Carbon, oxygen etc. atoms	monomer molecules	Chemical activity
Amino acid monomers	Proteins	Manipulation of molecules
Nucleotide monomers	Nucleic acids	Manipulation of digital information
Proteins, nucleic acids, etc	Cells	Life
Glia & neuronal cells, etc.	Brain	Human mind

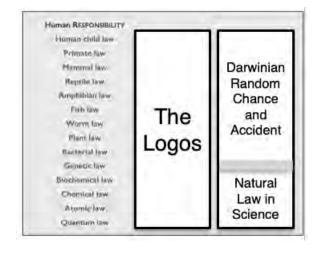
3. The Logos and Creation

In Unification Thought, all of God's creative effort went into the design of The Logos

and the emergent properties that would be revealed in the hierarchy of created systems. The Logos is a sophisticated expansion of the concept of 'natural law.'

Current science only recognizes Law as acting at the very simplest levels of sophistication on up to simple biochemistry. The higher levels are assigned to contingency.

If science had a dogma it would be: The Universe is fundamentally ruled by Natural Law.



While most people assume that scientists view natural law as working at all levels in the hierarchy of science, this is currently not true in the life sciences where Darwinian random change, natural selection and contingency—not natural law—are thought to govern evolutionary advance.

God expressed all the levels of His nature into the Logos, except for the highest level. This level is the individual "I Am, I am Love, I am the Creator" that can only be freely expressed and cannot be preprogrammed by Law. True creativity, freely given love and development of an individual personality must be developed by the self, not by an external coercion.

God created the Logos then set it in action.

1) The Big Bang

The Logos generated the Planck-sized speck of False Vacuum⁸⁾ the Planck Moment that marked the Origin of the Universe. This concept was introduced into science in the 1980s by Alan Guth et al and currently is a topic of intense debate. This speck inflated exponentially, doubling every Planck Moment, exploded as the Hot Big Bang and collapsed into regular spacetime which has continued to expand to this day. This topic is explored in more detail in another essay.9)

Even though science is exploring the dozens of states that appeared, evolved and disappeared¹⁰⁾ during this birth of the universe, it was essentially complete after three minutes. This natal universe was filled with hot plasma with 100,000,000,000 gamma-ray photons for each nucleon of matter. The Biblical "Let there be Light" got it correct to the billionth decimal place!

2) Elementary Entities

While most of the energy of the Big Bang was in the photons, a tiny fraction was in the twisted spacetime that we call electrons, protons, and helium nuclei (protons and neutrons) that also emerged from the maelstrom of the First Three Minutes. 11)

Modern science has discovered that the external stuff of the universe comes in two basic varieties with properties inherited from the next level of the Logos:

1. The quanta of matter, called fermions. Examples are the familiar electrons and the elusive quarks confined as triplets in protons and neutrons. 2. The quanta of force,

⁸⁾ https://ned.ipac.caltech.edu/level5/Guth/Guth3.html.

⁹⁾ Richard L. Lewis, "Bent and Twisted Spacetime," Unification Science (Asan: Sun Moon University Press, 2019), 19.

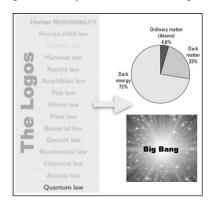
¹⁰⁾ Harald Fritzsch, The Creation of Matter: The Universe from Beginning to End (NY: Basic Books, 1984).

¹¹⁾ Steven Weinberg, The First Three Minutes: A Modern View of the Origin of the Universe (NYC: Basic Books, 1977).

called bosons. The familiar photons of radio, light and X-rays are bosons that couple

the electromagnetic force, as are the less familiar bosons of the Weak and Strong nuclear forces. Both types are important to the structure and functioning of material systems. I discuss them in detail in another essay.¹²)

It was only recently that it was discovered that this was not all that emerged from the Big Bang. First came the shock of finding



that the universe had much more Dark Matter in it than the regular matter studied by science. This Dark Matter is indifferent to photons—hence its name—but reveals itself by its gravitational effects as it clumps about galaxies. Just what it is and how it is structured is a mystery that is currently under investigation.

An even greater shock was the discovery that all this gravitationally-normal matter was a minor component; that the major component was Dark Energy that was not gravitationally-normal and thus slowing the universe's expansion, but was anti-gravitational and pushing the universe to accelerate its expansion! Dark Energy is an even bigger mystery than Dark Matter (they have similar names solely because they cannot be seen). Science is humbled (or should be) by the realization that it only comprehends 5% of the universe, the rest being a known-unknown.

Dark matter seems to play a role given the Logos in assembling the galaxies; but the role of Dark Energy is unknown. I speculate on the role of Dark Energy in God's creation in *UT Two Realms* available on request to RICHARDLLL@MAC.COM

Richard L. Lewis, "Bent and Twisted Spacetime." Unification Science (Asan: Sun Moon University Press, 2019), 23-34.

4. Chemistry

The intense gamma-rays, at a temperature of many thousands of degrees, dominated the universe for the next 300,000 years, smashing the bits of matter around and preventing them from interacting. The entire universe was like our Sun, a hot plasma of light and elementary entities.

The expansion of the universe, however, cooled off the global temperature and about 300,000 years ABB (After the Big Bang) it dropped to where first helium nuclei—2 protons, 2 neutrons—and hydrogen nuclei—a single proton—could stably interact with electrons to form the first atoms. These atoms have a well-characterized set of emergent properties from the Logos: helium delights kids by making balloons float and hydrogen atoms are important for water and as couplers in biochemical interactions.

The intense gamma rays of creation were stretched by the expansion into X-ray then UV then visible then IR and finally into the Cosmic Microwave Background Radiation (CMBR) that pervades the entire universe. While this relic "light of creation" is uniform to 1 part in 10,000, the slight variations, are being currently explored as clues to the early history of the universe.

1) Periodic Table of Elements

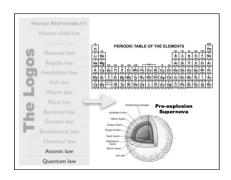
Once the light of creation had faded from view, the universe was utterly dark, until the cool hydrogen and helium atoms gravitationally condensed—with the possible assistance of Dark Matter)—into the very massive 1st generation of stars.

These stars, called *blue giants* are over 25-100 times as massive as our sun and are over 10,000 times as bright. They have much more hydrogen than our Sun, but they consume it thousands of times faster. Massive stars have lifetimes measured in millions, not billions, of years.

All stars in their youth convert hydrogen into helium, a process governed by the Weak nuclear force. Every second, our Sun converts 600 million tons of hydrogen into 596 million tons of helium—the Sun radiating away 4 million tons of energy each second!

When the hydrogen in any star is almost all used up—this will take billions of years for the Sun—the size of the star contracts and the temperature at the center rises and helium burning now takes center stage. Just how this happened was a mystery for decades, as helium is so stable that two helium-4s will not unite at all into beryllium-8, it does not exist. (Beryllium-9, however, does fine)

It took the atheist Fred Hoyle to formulate the simple logic: "I am here; I am made of carbon and oxygen; the universe started with none of it; therefore, there must be a way for helium to unite." Based on this anthropic logic, he worked out what was necessary for this and came up in the 1940s with what he called the *triple coincidence*.



1st coincidence: Hoyle assumed that although Be-8 is unstable, there must be an excited state in the Be-8 wavefunction such that was semi-stable for long enough for another He-4 to hit it and form carbon-12. He calculated what this would have to be.

2nd coincidence: The C-12 that resulted must also have an excited state that was semi-stable to contain all the energy of impact. He calculated what this would have to be. This can shed the energy and become the C-12 so central to Hoyle's life.

3rd coincidence: Finally, there must <u>not</u> be an excited state that would allow the C-12 to absorb another He-4 and become O-16—resulting in lots of oxygen, no carbon. He calculated what the state could not be.

Every one of these calculated predictions were proved correct by later experiments. In *Unification Thought*, of course, these are not coincidences, but an emergent property placed in the Logos by the Creator God. If Unification Thought had been around in the 1940s, a theist, not an atheist, could have predicted such a necessary emergent property of helium.

Helium fusion produces far less energy that hydrogen, and relatively rapidly the relic and 'ash' helium is used up, and the star contracts again and the internal temperature rises until some carbon is forced to become oxygen, then oxygen to fuse into silicon and finally, silicon into iron.

Each step provides less energy and lasts a shorter time resulting in an elderly star with an onion structure of various layers, as illustrated. 13)

Iron, however, is the last step as it takes an input of energy to synthesis higher elements. Energy production—which has been holding up the weight of the star—ceases in the core and the star starts to collapse. The resultant explosion is called a *supernova*, and it can outshine a galaxy of 100 billion stars for a week or so, and so is visible across billions of lightyears. In this gigantic explosion there is energy enough to force the creation of gold, platinum, and uranium and a host of other elements beyond iron. For no good reason, astronomers call all these new additions, metals. (These days, the proportions are 74% H, 25% He, 1% metals)

All the carbon, oxygen, silicon, iron and the rest of the elements, are scattered into the void to metallize the pristine hydrogen & helium ready to condense into the 2nd generation of stars. All of this sequence and emergent properties were preplanned in the Logos. Nine billion years after the Big Bang, a 3rd generation star coalesced out of the clouds of metallized gas, the star we call the Sun.

¹³⁾ http://astronomy.swin.edu.au/cosmos/c/core-collapse.

2) Molecules

Atoms do interact together to form molecules in outer space—e.g. astronomers report finding vast, tenuous clouds of alcohol between the stars.¹⁴⁾ As our Sun condensed, however, about 1% remained in orbit and fell together into a set of orbiting planets—most ending up in the distant gas giants, such as Jupiter.

Closer to the Sun, however, the hydrogen and helium blew away and the much smaller terrestrial planets solidified with the Earth in the *Goldilocks Zone* that is not too hot (Venus), not too cold (Mars), but just right for liquid water to persist. The plentiful iron sank to the core to generate a protective magnetic shroud about the earth, the plentiful silicon floated above as the mantle, and above that the water-bearing surface crust.

This proto-earth had an apocalyptic collision with a Mars-sized planetoid which splashed off crust and mantle stuff that gravitated together as the orbiting Moon.¹⁵⁾ While the Moon is usually admired for its beauty, it has emerged that the Moon is an essential ingredient for creating the Logos-directed Earth-Moon system as the incubator of life.¹⁶⁾

This Hadean eon in the Earth's history eventually settled down to a stable planet with a water ocean and a nitrogen & carbon dioxide atmosphere. The simple water molecule—one oxygen and two hydrogens—has an astonishing array of at least 20 emergent properties derived from the Logos that make it the most significant molecule on Earth.¹⁷⁾ While materialistic



¹⁴⁾ https://www.sciencealert.com/cosmic-cloud-contains-enough-alcohol-to-keep-the-world-world-drinking-for-a-billion-years.

¹⁵⁾ https://blogs.scientificamerican.com/observations/a-new-theory-of-how-the-moon-formed/

¹⁶⁾ Neil Comins, What if the Moon didn't Exist (NY: HarperCollins, 1993)

scientists can list and marvel at these emergent properties, they have no explanation for where they come from.

3) Macromolecules

The next level of system sophistication and emergent properties departs from simple chemistry and enters the realm of biochemistry. Simple molecules link together as monomers of polymers and macromolecules.

Polymers are simple, repetitive structures of a single monomer, such as the common plastic polyethylene. Macromolecules are similar but there are more than one monomer in the linkages. While life is not an emergent property of macromolecules, all living systems are composed of two key macromolecules: proteins and nucleic acids.

Proteins are made of monomers of the universal set of 20 amino acids linearly connected together by peptide links. The amino acids are faintly akin to the Bezier curves used in computer typography to generate characters and complex shapes. The wavefunction of each amino acid contributes a snippet to the final internal wavefunction and external shape of the folded chain, the active protein.

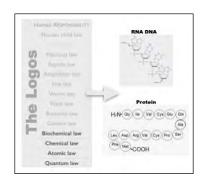
Each active protein has a specific set of Logos-derived emergent properties, such as a step in 'burning' sugar or an element in a cytoskeleton or a waterproof skin or a spider web, etc.

Nucleic Acids are made of monomers of the universal set of 4 nucleotide bases. Contrary to common perceptions, the most important is RNA, with DNA being a later, rather inert, and more 'waterproof' version of it. DNA is for long-term storage, while RNA is the manipulator and transporter of digital information. DNA comes in one variety, the iconic double helix, while RNA comes in dozens of different varieties—it seems a new one is uncovered every month or so—all with different roles to play. In computer

¹⁷⁾ http://www.intelligentdesigntheory.info/unique_properties_of_water.htm.

terms, the DNA is akin to the passive hard drive, while RNA is akin to the active CPU.

The computer uses a set of 1s-complement mathematical states, 0 & 1, that can have a wide variety of external forms—pits on a metal disk, magnetic poles, electric voltage, radio waves, sound waves, etc. The nucleic acids use two sets of complementary digital states, 00 & 11



and 01 & 10, that are externally expressed as the chemical monomers Guanine & Cytosine (G & C) and Adenine & Uracil/Thymine¹⁸⁾ (A & U/T).

The link between stored digital information and expressed analog form was first uncovered in bacteria, where almost 100% of the linear information was translated into a linear chain of amino acids via codons of the universal Triplet Code used by all life. This is similar to the early 8-bit computer word-processors where almost all the digital store was 100% the ASCII code bytes for individual letters.

Modern 64-bit computers still use this ASCII code, but the byte is embedded in higher-level information about font, size, color, orientation etc. These extras are all stripped away when saving as Plain Text. This is similar to sophisticated life where the *exons* of Triplet Code codons are outnumbered by the non-translated *introns* containing higher levels of information used by the RNA CPU. The mRNA message that leaves the nucleus for translation into protein is Plain Text where all the introns have been removed.

To summarize: **Proteins** are master manipulators of analog form while **Nucleic Acids** are master manipulators of digital information. Every one of these emergent properties is derived from the Logos.

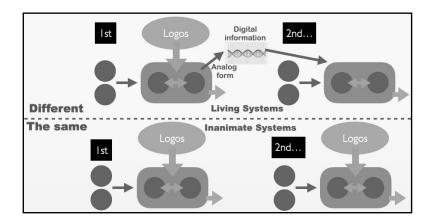
¹⁸⁾ Thymine is Uracil with a methyl group added.

5. What is Life

Before we can discuss the next level of emergent properties—that of life—we need to understand what key property separates living systems from non-living systems. The textbooks vary in their listings, but usually include growth & development, metabolism of complex molecules from simple ones. A key property of living systems in such a list is usually reproduction (although by this criterion, neither a man or woman is alive since, in isolation, they are incapable of reproduction; only a couple is alive by this distinction). Clearly, these are all important properties, but here I want to focus on the one great difference in the origin of systems.

In non-living systems, the Origin of the very first to appear in the history of the universe is the same as the origin of the second, third... trillionth, etc. The subsystems come together and interact lawfully according to the Logos and the resultant system expresses a set of emergent properties derived from the Logos. As mentioned, the natal universe was far too hot for atoms of helium to survive. Later, there are lots of them. Logically, there must have been an Origin event, the very first helium atom to appear, even if only nanoseconds before hordes of others also emerged. The Origin event of the first and subsequent origins of all the others are essentially the same.

The Origin event of the first of a living system is essentially the same as non-living systems—a set of subsystems come together and interact lawfully according to the Logos. The resulting living system has a set of emergent properties derived from the Logos. In living systems, however, this analog pattern of external interaction is converted into digital information and written for storage and long-term transmission down a lineage. The origin events of the second, third... trillionth examples of this living system are now radically different: the digital information is translated to guide the subsystems as they interact to recreate the analog form. The resultant system reflects the Logos and has the same set of emergent properties as the Original Ancestor.



In non-living systems, the Logos directs all origins. In living systems, the Logos only directs the Origin of the first such system, stored digital information plays this role in all the origins of such subsequent systems.

Unification Thought has no problem with the ~3 billion-year- history of life on Earth and its evolution over time. It agrees with the scientific description of the *What*, *When and Where* of life's evolution. It departs, however, from the Darwinian theory of *How* it evolved. The modern synthesis of Darwin's idea with genetics is based on the Central Dogma that information flow is one way.; DNA to RNA to protein to analog form. That evolution occurs when random change happens to the DNA, and when expressed as change in analog form, is selected for fitness to survive and thrive in the current environment.

The discovery of enzymes that contradict the Dogma, that copy the information from ephemeral RNA onto long-lasting DNA—600 varieties of which reside in the human genome—and the role of the new science of epigenetics in converting analog form into digital information for and transmission down a lineage is discussed in my essay *Evolution and Epigenetics* available on request to RICHARDLLL@MAC.COM.

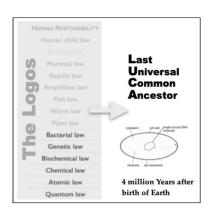
Unification Thought and epigenetic science are more in tune with Lamarckism, ideas

proposed by a contemporary of Darwin, where learnt skills are passed down a lineage. Such developments suggest that a new view of evolution to replace Darwinism will be a post-modern synthesis of Lamarckism and Epigenetics, and that information flow will involve the writing, as well as the reading, of digital information.

1) First Life

In the following sections, we will briefly describe the What and When of the evolution of life on Earth. The actual Origin event of the first and simplest living system is a current topic of intense debate. There is general consensus, however, that there must have been a Last Universal Common Ancestor (LUCA) from which all living systems are descended—all bacteria, protists, fungi, plants, and animals.

This supposition is the only logical explanation for all that is universal in all life: nucleic acids of a universal set of four D-monomers, proteins of a universal set of twenty L-monomers, a proton-motive force for manipulating chemical energy, a bi-lipid membrane to separate water into inner and outer, the universal method for manipulating sugars by phosphorylation, the use of



energetic ATP to drive uphill chemical transformations, etc. It is unreasonable to assume that this universal set of emergent properties were inherited from the Logos separately by many different lineages at separate times.

LUCA appeared about 4 million years After the Formation of the Earth (AFE) after what must have been a long sequence of changes and advancement. Nobel Laureate Christian de Duve notes in his excellent book¹⁹) on the What and When of evolution,

that each step in this sequence must have been probable, not improbable. Prof. de Duve was impelled when writing, by the mainstream Modern Synthesis, to accept random chance materialism, but his distaste for it often appears in his prose. That each step was probable is in accord with a view that embraces the wavefunction and the Logos.

The many descendants of LUCA diverged and developed and filled the oceans with prokaryotes, the technical term for bacteria and others that have no nucleus or internal membranes delineating internal compartments.

Bacteria ruled the Earth for the next 2 billion years of Earth's history (and still do from some viewpoints) and made an epochal step in evolution. For the first 500 million years of this period, LUCA and all descendants used simple chemical sources for the energy they need to thrive. Then, guided by the Logos, a complex molecule was synthesized that could trap the photons of light streaming from the Sun in excited electrons (usually from magnesium) that were channeled into a proton-motive cascade that could generate ATP and liberate hydrogen from water.

This was the advent of chlorophyll and photosynthetic, ATP-driven combination of carbon dioxide with hydrogen to form carbohydrates. The waste product, oxygen, flooded the atmosphere and eventually converted it from nitrogen/carbon dioxide to the nitrogen/oxygen one we delight in to this day. As planned in the Logos, this transformation allowed the later emergence of the reverse process: oxidizing carbohydrates to water and CO₂ and capturing the energy, by proton-motive force, in ATP, a process we humans are utterly dependent on.

In this indirect fashion, the Logos directs the energy liberated by the Sun to power all human life and development. All these remarkable emergent properties were derived from the Logos and captured in digital information. Many of the basics of our metabolism bear a remarkable similarity to those that first emerged in bacteria billions of years

¹⁹⁾ Christian de Duve, Vital Dust: Life as a Cosmic Imperative (NY: Basic Books, 1995)

ago and transferred down the ages to us.

2) Sophisticated Life

The next major advance in sophistication was the advent of eukaryotes that, unlike the much smaller prokaryotes, have a plethora of internal membranes that divide the interior small specialized compartments; the major one being the nucleus. This isolated the DNA, the shroud of active RNA and all the digital manipulation apart from all the analog protein manipulation happening in the rest of the cell.

We mentioned earlier that the eukaryote nucleus is like a sophisticated computer, where simple Triplet Code exons are embedded in higher-level information introns which is stripped away before assembling protein. To those raised in the simple genetics of prokaryotes, this was all nonsense and labeled Junk DNA. This concept is now in the dustbin of science concepts, along with phlogiston and the earth-centered solar system.²⁰⁾

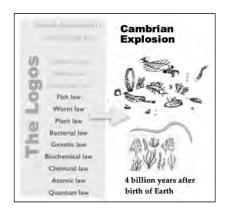
Just how that transition occurred is still debatable as many remarkable additions—such as the Logos-derived cytoskeleton and phagocytosis—emerged with little prokaryote precursors. Relatively quickly a eukaryote domesticated, so to speak, a prokaryote within which all the manipulation of energy processes were concentrated. This domesticated bacteria became the ancestor of all the mitochondria that power almost all eukaryote cells and multicellular life.

Later still, a similar domestication occurred of a photosynthetic bacteria which became the ancestors of the plant chloroplasts that power all green plants and trap CO₂ into the food for life.

²⁰⁾ See, however, my caveat in UT Center of Universe listed in Essays on Unification Science.

3) Multicellular Ocean Organisms

About 580 million years ago, there occurred a sudden and dramatic change. The ocean biome—for the land was bare and barren—changed in a geologically brief period from a community of bacteria and single-cell protists (such as yeast) to a jungle of multi-celled plants, such as seaweeds, and animals—both predators and prey emerged in the ocean.



During this *Cambrian Explosion*, all the major animal body plans of current animals were established along with some that went extinct after playing their role in the scheme of history. It remains an open question just what allowed for this remarkable injection of new forms from the Logos. Some favor high oxygen, others perfected eyes, etc.

Luckily for paleontologists (but not for the inhabitants) great swaths of the ocean floor were smothered in fine silt, entombing the inhabitants; later compressed into a fine-grained shale that preserved exquisite detail; later still lifted up by tectonic movements to become part of the Canadian Rockies in British Columbia; and not so long ago stumbled upon by Prof. Walcott who recognized its importance.²¹⁾

4) Land Animals

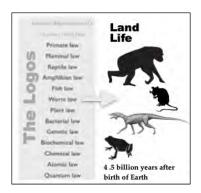
Following this period of innovation, the ocean was populated by fish—first the cartilaginous ones like dogfish and sharks, then the bony fish like cod and tuna.

Some left the salty ocean with new emergent properties that allowed them to thrive

Stephen Jay Gould, Wonderful Life: The Burgess Shale and the Nature of History (NY: W. W. Norton & Co., 1990).

in freshwater, and some of these tentatively explored dry land where plants and insects had already set up home.

These amphibians still reproduced in water until the advance of the amniotic membraned egg allowed the reptiles, the dinosaurs, and others to cut themselves off from reliance on water to reproduce.



The next advances derived from the Logos were the mammals, with the placenta to internally nourish the egg and the mammary glands to feed the young. The most sophisticated of these were the primates with large brains, dexterous limbs, and social clan structures with prolonged parental care.

5) Pre-human Hominids

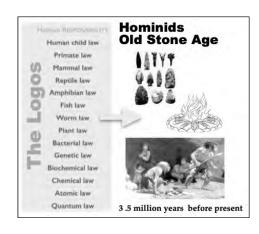
The final level of sophistication derived from the Logos was the advent of the hominids. These had dexterous hands, could walk upright, had large brains and simple language.

We can equate the period in which the hominids were the most sophisticated of the primates with the Paleolithic age (Old Stone Age), which lasted about 2,500,000 years. The cultural changes over this vast stretch time were very slow and incremental, with the controlled use of fire appearing just 400,000 years ago. The sophistication of the stone implements, for example, hardly changed over millions of years. Stasis and equilibrium were the rule.

Archeological evidence exists that shows that they buried their dead and eventually had mastery of fire for cooking. They were communal (clan and tribal level) and probably had a pre-language (pidgin) of simple nouns and verbs. They fashioned simple stone and bone tools, and were successful hunters and could fend of predators such as the

great cats.

The habitations were caves, and nourishment was gained by hunting and gathering. The fossilized Laetoli footprints left in 3,000,000-year-old volcanic ash, footprints of a pre-Neanderthal male, a female, and a child²²), suggest that pair-bonding reproduction was already established at this early stage.



Their capacities were equivalent to those of a six-year-old child in an adult-looking body.

6. Human Origin

The Logos had almost completed its task at this point and was almost fully expressed in the pre-human hominids. The final step was the coming together of the subsystems that make up infants with the emergent property from the Logos of the full human capacity.

The maturation of these infants into the *creative*, *I am*, *loving personality* that is the image of God needed an extra input not possible from the lawful Logos—which could only create robotic beings.

This extra input needed to complete the Purpose of Creation is called the Human Portion of Responsibility in Unification Thought. Neither God nor the Logos can fulfill this extra input of responsibility. The evidence of history is that this responsibility was

²²⁾ http://www.pbs.org/wgbh/evolution/library/07/1/l_071_03.html.

not fulfilled, and humans were reduced to intelligent and creative animals.

The multimillion-year stasis of the Old Stone Age was punctuated by the emergence of Man and the start of the Neolithic age ~100,000 years before the present (YBP) and was in full swing ~50,000 YBP. The stone and bone shaping of tools was much more sophisticated and decorated. They had a true language of syntax and grammar. The hunter-gatherer stage developed into that of agriculture and the domestication of animals >20,000 YBP and, most distressingly, the earliest evidence of a multi-person battle is 14,000 YBP.²³)

Habitations beyond caves were developed. The discovery of how to smelt copper from its ores and how to create its alloy, bronze, marked the end of the Neolithic and the start of the Bronze Age ~15,000 YBP. Writing was developed soon after. Unlike the million-year stasis of the Old Stone Age, innovative change over thousands of years was the rule in the New.

1) When and Where

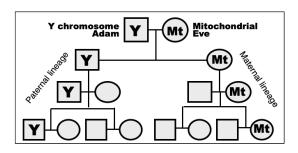
Assuming a new set of emergent properties happened at the origin of humankind; when and where did it happen?

The location of the Origin of Man, the Garden of Eden, has been roughly established by three lines of evidence that are all in essential agreement. These are the study of the female lineage using mitochondria, the study of the male lineage using the Y-chromosome, and the spread of languages around the world.

The history of the human female lineage is tracked by tracing the spread of genetic markers on the mitochondrial chromosome which is passed down the female lineage from mother to daughter. The mitochondria are not passed on by males. If a mitochondrion does make it from the sperm into the egg, it is immediately surrounded and destroyed.

²³⁾ http://en.wikipedia.org/wiki/Cemetery_117.

The pattern of human migration that emerged from these studies was that the female lineage started off in East Africa, then humans spread south into Africa and north to the rest of the world.



This original female is called "mitochondrial Eve" in the literature.

The history of the male lineage is tracked by tracing the spread of genetic markers on the Y chromosome which is passed solely down the male line from father to son, and is not passed on to females. The pattern of human migration emerged was that it started off in East Africa, then the humans spread south into Africa and north to the rest of the world. This original male is called the "Y-chromosome Adam."

The materialistic view of gradual speciation has the mitochondrial Eve and the Y-chromosome Adam were members of a "small breeding population." The unified view of a directed, specific mechanism for speciation has that this population was as small as two.

For a while, it looked as if this genetic Adam and Eve existed far apart in time, but advances in genetic chronology have now placed them close together in

Now, let me talk about the history regarding Adam's birth. Did Adam have a belly button or not? You must know it. Without a belly button, where was he born from? Adam had a navel cord, and he had a mother.

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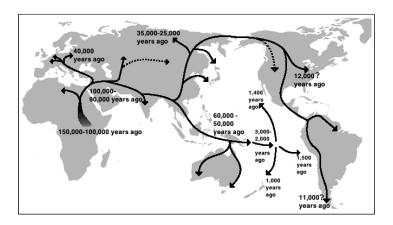
time: "Now, two major studies of modern humans" Y chromosomes suggest that 'Y-chromosome Adam' and 'mitochondrial Eve' may have lived around the same time after all. 180,000 to 200,000 years ago."²⁴)

²⁴⁾ https://www.nature.com/news/genetic-adam-and-eve-did-not-live-too-far-apart-in-time-1,13478

Language has changed over time and migration, and seems to have a single origin. Many linguists believe all human languages derived from a single tongue spoken in East Africa around 50,000 years ago.25)

The study of how language has changed over time as humans migrated from East Africa shows a similar pattern to the genetic studies:

"A new linguistic analysis attempts to rewrite the story of Babel by borrowing from the methods of genetic analysis—and finds that modern language originated in sub-Saharan Africa and spread across the world with migrating human populations."26)



All three lines of investigation suggest that the Eden into which the first humans were born was in East Africa less than 100,000 years ago. Genetic analysis of the genes for skin color indicate that the first humans were black, and that the yellow and white pigmentation arose much later as human migration progressed.

There is evidence that different races of hominid commingled on the route to Human, including races adapted to water as well as other races adapted to forest and

²⁵⁾ https://www.livescience.com/16541-original-human-language-voda-sounded.html.

²⁶⁾ http://aminotes.tumblr.com/post/4633090702/evolution-of-language-tested-with-genetic.

savanna. The advantages that occur in such 'miscegenation' is known as 'hybrid vigor' in practical genetics.

2) Fulfill Responsibility

We are now leaving the realm of science and entering the realm of religion. All religions state that something went wrong at this crucial time of the Origin. Be it Pandora's box of the Greeks, or the Forbidden Fruit in the Judeo-Christian Bible; the original plan failed.

The Divine Principle,²⁷⁾ the religious counterpart of Unification Thought,²⁸⁾ explains that the first human pair failed



their Portion of Responsibility. Without this, humans developed as intelligent, creative animals ruled by the animal brain that did not have the capacity to love as God loves.

The concept of Original Sin that has infected the human race ever since is compatible with epigenetics and psychology where dysfunctional parents raise dysfunctional children who become, in turn, dysfunctional parents. The Bible records a racial memory that the very first fratricidal murder occurred in the first family.

The *Divine Principle* states that religious history is the ongoing attempt at Recreation and the fulfillment of Human Responsibility. It explains the Old, New, and Completed Testament Ages in terms of this insight.

²⁷⁾ Rev. Sun Myung Moon, Exposition of the Divine Principle (NY: HSA-UWC, 2006).

²⁸⁾ Sang Hun Lee, New Essentials of Unification Thought: Head-Wing Thought (NY: HSA-UWC, 2014).

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In Search of Original Laws (I)

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- 1. Introduction
- 2. Discussion
- 3. Conclusion

Abstract

According to Unification Thought, Original laws, referred to as fundamental laws, may manifest themselves as the laws of the natural world. However, there can be found neither examples of originals laws nor any demonstration of such manifestation. It is my research interest to identify original laws and reveal their manifestation as the laws of the natural world. In this study, I have focused on quantum mechanics as the law of the natural world and traced back toward the source giving rise to such a phenomenon as a way of identifying an original law. In this process, numerous examples in the history of science as well as of civilization are considered in view of God-given creativities and application capabilities according to Unification Thought.

Key words: Original Laws, Laws of the Natural World, Quantum Mechanics, Quantization, Energy Levels

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1. Introduction

The fundamental postulate of Unification Thought is that God created humankind and the universe in God's own likeness.¹⁾ As to the creation of the universe, God created the universe following the ideas and concepts which He already had, and God's Creativity has been given to human beings.²⁾ As to the creation of humankind, God created human beings in a direct likeness to Him.³⁾

Although we are born of our parents biologically, it is God who creates us by following a unique idea envisioned in God's own Inner Hyungsang, thus giving us individualities.⁴⁾ Moreover, the inner Hyungsang, the object part within the Sungsang, contains aspects of function such as ideas, concepts, original laws, and mathematical principles.⁵⁾ Since original laws exist within God, they are referred to as fundamental laws.⁶⁾ The original laws may manifest themselves in the Sungsang aspect and the Hyungsang aspect, in our world, and it is the Hyungsang aspect that refers to the laws of the natural world.⁷⁾

What I have mentioned above comes from the "Theory of the Original Image" in Unification Thought.⁸⁾ Among the ideas and concepts introduced above, I am particularly interested in the original laws and associated laws of the natural world. To my knowledge, this topic has not received much attention despite its significance, and I intend to explore this topic in a series of studies in search of original laws. This is the first of a series of such studies.

¹⁾ Unification Thought Institute, Essentials of Unification Thought (Tokyo: UTI, 1992), 1.

²⁾ Unification Thought Institute, Essentials of Unification Thought, 104.

³⁾ Unification Thought Institute, Essentials of Unification Thought, 15.

⁴⁾ Unification Thought Institute, Essentials of Unification Thought, 15.

⁵⁾ Unification Thought Institute, Essentials of Unification Thought, 3.

⁶⁾ Unification Thought Institute, Essentials of Unification Thought, 5.

⁷⁾ Unification Thought Institute, Essentials of Unification Thought, 5.

⁸⁾ Unification Thought Institute, Essentials of Unification Thought, 1.

2. Discussion

In this study, the main focus of my investigation was on the identification of the original laws and relating them to the laws of the natural world. Instead of trying to identify original laws from the outset, I took an approach of finding a law of the natural world which appeared to be the manifestation of original law, and then examining its feasibility for such qualification by tracing back toward the source giving rise to such a phenomenon. As one potential candidate I chose quantum mechanics judging from its monumental place in the history of modern science.

1) Quantization in the history of modern science

In a brief review, the atomic theory of Bohr⁹) opened the door for quantum theory, and this quantum theory later gave birth to quantum mechanics a term coined by such physicists as Heisenberg, 10) Dirac, 11) and Schrodinger. 12) According to Oppenheimer, known as the father of the atomic bomb, the Schrodinger equation in quantum mechanics was likely to be one of the most complete, precise, and lovely things that mankind had discovered.¹³⁾ Suffice to say that quantum mechanics had great potential to be a manifestation of the original law. Using an analogy that quantum mechanics was a projected image and original law was a light source of a beam projector, we might get to original law by tracing back the sequence of events that had given rise to quantum mechanics.

In this sequence of events, the event prior to the discovery of quantum mechanics was most likely to be the atomic theory of Bohr. After all, Bohr's atomic theory was

⁹⁾ Kang Young Lee, Spin (Seoul: Stairs, 2018), 161.

¹⁰⁾ Kang Young Lee, Spin, 293.

¹¹⁾ Kang Young Lee, Spin, 320.

¹²⁾ Kang Young Lee, Spin, 309.

¹³⁾ Kang Young Lee, Spin, 318.

the seed for quantum mechanics as mentioned above.

To pick the next event in the sequence we needed to consider the source that had given rise to Bohr's atomic theory. It was the idea that the atomic energy levels were quantized. Bohr built his atomic model based on this idea and presented this model at the British Association for the Advancement of Science in 1913.¹⁴) Accordingly, our pick for the event prior to Bohr's atomic theory was the quantization of the energy levels of atoms.

While 116 atoms including natural and man-made are listed in the modern periodic table, nearly 5 million chemical compounds are known, and many of them are molecules. In addition to the quantization of atomic energy levels, it was later discovered that the molecular energy levels were quantized as well. Between these two discoveries, they had quantization of energy levels in common, while they differed in the scales of population. Thus, the underlying concept of two discoveries must be the quantization of energy levels.

So far assigned events in the sequence were quantum mechanics, the atomic theory of Bohr, and quantization of energy levels. Looking at this sequence of events I wondered if the next step was to look for the source of this sequence. That is, the source that served as a guiding light for these discoveries. As far as I was concerned, the most logical candidate for this source was the concept of quantization. If so, we expected human beings to be born with the concept of quantization, and furthermore, they were expected to apply this concept to developing new ideas and producing new things using their creativity, according to Unification Thought. 15)

¹⁴⁾ Kang Young Lee, Spin, 165.

¹⁵⁾ Unification Thought Institute, Essentials of Unification Thought, 25.

2) Quantization in the history of civilization

Finding evidence for such ideas would support my postulate that quantization belonged to original laws. Looking back in our civilization, an evidence in ancient times could be found in the step pyramid of Zoer in Saqqara Egypt. 16) Pharaoh Zoer commissioned Imhotep to build his tomb, and Imhotep, who was the first architect to introduce a pyramid style tomb; a constructed step pyramid for Zoer ca. BC 2660.17) The design of steps by a man in such ancient times was significant in my viewpoint, since steps could be interpreted as an expression of quantization in contrast to a ramp.

Imagine a ramp connecting two points of potential energy difference. In this case, we have continuous energy levels along the ramp. Suppose that this ramp is replaced by steps, we will have discrete energy levels each of which corresponds to a step. Moreover, both the number and the size of energy levels can vary by the design of the steps, thereby giving the builder power to implement his design concept of energy levels.

The Maya pyramid, El Castillo, 18) in Chichen Itza, Mexico served as a prime case where the builder's astronomical design concept was intentionally expressed in its features. This 30m tall pyramid built around AD 1000 had stairways up each of its four sides, and each stairway had 91 steps. Therefore, the total number of steps including one step at the top of the pyramid amounted to 365, a number corresponding to the total number of days in a solar calendar. Even in the eyes of a non-archaeologist, this feature of the Mayan pyramid testified to the fact that the builder had a design concept.

Still another evidence could be found in Terraced farming commonly found in many parts of the world.¹⁹⁾ Farmers traditionally cut sloped land into a series of successively receding platforms, terraces, for more effective farming, and these terraces on the slope

^{16) &}quot;Saqqara," http://www.wikipedia.org (searched date: April 1, 2018)

^{17) &}quot;Saqqara," http://www.wikipedia.org (searched date: April 1, 2018)

^{18) &}quot;Chichen Itza," http://www.wikipedia.org (searched date: April 1, 2018)

^{19) &}quot;Terrace (earthworks)," http://www.wikipedia.org (searched date: April 1, 2018)

resembled steps. Some terraces in the south-central Andes were built before 1000 AD.²⁰) This also testified to the fact that even plain farmers had a design concept and purpose in building terraces, another form of steps.

3) Quantization leading to Laser

Whereas the evidences mentioned above were limited to the macroscopic view of the natural world, evidences after Bohr's discovery were not limited to the macroscopic view of the natural world, but extended into the microscopic view point of the natural world.

A case in point was the invention of laser. On the microscopic level, the principle of laser was based on the discrete energy levels of laser material, and at least two energy levels were necessary for the emission of light of characteristic color.²¹⁾ On the macroscopic level, oscillators and amplifiers were designed to support the implementation of this principle in atoms and molecules.

In recognition of the importance of laser, the 1964 Nobel Prize in physics was jointly awarded to Townes, Basov, and Prokhorov for the invention of laser. Interestingly 54 years later, the 2018 Nobel Prize in physics was awarded for the revolutionary work in the field of laser physics, and it was shared by Ashkin, Mourou, and Strickland. Thanks to their work, lasers are currently used in many areas of industries, chemistry, biology, and medicine, ranging from laser printers to laser surgery.

Using evidences of both the ancient and modern world, I have tried to show that the concept of quantization has been within us throughout the history of mankind, and its successful combination with human creativity can have a profound impact on our civilization.

^{20) &}quot;Terrace (earthworks)," http://www.wikipedia.org (searched date: April 1, 2018).

²¹⁾ Amnon Yariv, Quantum Electronics 2nd Edition (New York: John Wiley & Sons, Inc., 1975), 196.

3. Conclusion

In this study, I set out to find any original laws. Starting from quantum mechanics, undeniably one of the most important laws of natural world, I traced it back toward its origin.

In the course of this investigation, I focused on the concept of the quantization of energy levels, and presented evidences of both the ancient and modern world to support my view that we were endowed with the concept of quantization.

At the same time, I demonstrated what the successful combination between this concept and human creativity could create for us.

Based on the insight that I gained from this study, I conclude that quantization has every reason to belong to original laws, and that original laws and creativities, which we are endowed with, can combine together to create amazing outcomes worthy of a Nobel Prize, to say the least.

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Transcendent Individualism as the Realm of Absolute Values

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Contents

- 1. Introduction
- 2. Values and society
- 3. Individualism, freedom and responsibility
- 4. Transcendent individualism and absolute values

Abstract

Unification Thought emphasises the original human nature as manifesting unique value and absolute value. However, this lacks a satisfactory socio-theoretical context. This paper will argue that unique value can only be realised in a society that promotes the freedom of the individual. Absolute value is characterised by the individual desire to challenge and transcend their limitations in multiple personal and social dimensions in the pursuit of truth, beauty, and goodness.

Key words: Individualism, Freedom, Original Value, Values, Transcendence

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'I came that they may have life and have it more abundantly'
(John 10:10)

1. Introduction

According to the biblically-derived basis of Unification Thought found in the teachings of the founder of Unificationism and the foundational textbook of Unificationists, Divine Principle, the Western sphere of democracy, centred on Christianity, is the foundation for the era of the Kingdom of God on Earth or Cheon II Guk (literally, the One Heavenly Nation). Since it is the belief of Unificationists that that era has now been inaugurated, the most urgent issue is the constitution of *Cheon II Guk*, which I take to be a question over the nature of the society thus envisioned. There is little doubt that when it comes to voting with their feet, the population of the world overwhelmingly choose to live in societies that are open, egalitarian, free, prosperous and peaceful, rather than those which are closed, hierarchical, oppressive, poor and conflicted, as the history of migrations, notably those of the last few years demonstrates. It is much harder to argue that the *telos* of history is towards such societies, as philosophers as recently as Fukuyama have argued, 1) as both recent events and the periodic appearance – and disappearance – of societies of a liberal and humanistic character in history would seem to suggest otherwise.

The *Divine Principle* and its author make another claim, that the person who has realised the purpose of creation is a being of unique value, absolute value, and eternal value. As a social theorist, rather than as a religious apologist, I am interested in what this view of the human person implies for the type of lifestyle and the type of social arrangements that Unificationism envisages, and whether such a view underpins a static or dynamic view of the human future. I will restrict myself to discussing the first two,

¹⁾ Francis Fukuyama, "The End of History?" The National Interest, vol. 16 (1989), 3-18.

unique value and absolute value, as the societal implications of eternal value are more fraught and too complex to consider in this paper.

2. Values and society

Before addressing these topics, one thing should be clarified. The concept of value is not a religious concept; it is a purely humanistic concept, that has its roots somewhere between the Enlightenment and the late 19th century when the first writings on value theory as a distinct branch of philosophy appeared in the writings of Brentano, Lotze, Meinong and others, though it has precursors in Plato's theory of ideas, the medieval scholastic concept of the just price and the utilitarianism of Bentham and Mill, among other sources.²⁾ The modern idea of values (in the plural), the ordinary language usage we make of the word when we are not wearing our philosophical hats, however, emerged with the advent of the modern science of society, or sociology, in the writings of Max Weber, in which values are judged to play an important mediating role in social interaction and institutional viability. It is the mediation of values in this sense which, according to sociologists, enables the existence of a shared space between proponents of profoundly different experiences, beliefs, and views within modern societies.

Weber took the view that values were functional aspects of social structures, largely irrespective of the actual moral force of particular and specific values, addressing (while skirting around) the fact-value dichotomy identified by Hume, wherein it is impossible - according to Hume - to derive a value judgement from the accretion of any number of facts. No one has yet advanced a plausible argument that Hume is wrong. In reality, though, in all social contexts (apart from conventions of philosophers possibly) we indiscriminately mix facts and judgements, even if there is no logical transition between

²⁾ William Henry Werkmeister, Historical Spectrum of Value Theories (Lincoln, Nebraska: Johnsen Publishing Company, 1970).

the two. Weber put values on a new footing, ontologically, by assigning them a function while being mute about their fundamental nature. The influential mid-twentieth century American sociologist Talcott Parsons, put it thus: 'An element of a shared symbolic system which serves as a criterion or standard for selection among the alternatives of orientation which are intrinsically open in a situation can be considered a value'.³⁾

While I am in general agreement with Parsons' description of values as 'an element of a... system', this describes their place from an 'outside' perspective only; their essential nature as conceptually specific, experiential and immanent in the emotions, is ignored in sociology. Perhaps the best exponent of this view of the *interiority* of values is the Romanian anthropologist Mircea Eliade, who links the root of value even in the modern secular world to an experience of the sacred and for whom 'even the most desacralized existence still preserves traces of a religious valorization of the world'.⁴⁾ For Eliade, to hold firmly a value or set of values involves a hierophany, a 'manifestation of the sacred [that] ontologically founds the world'.⁵⁾ While this may seem to imbue values excessively with meaning, they have the quality of remaining invisible and mysteriously opaque to inspection,⁶⁾ while inspiring and regulating social action.⁷⁾

A philosophical analysis of values can demonstrate that they can manifest as both conceptualisations of broadly agreed standards and an intense inner experience, though they do so under different conditions. Within normal societal discourse in open social circumstances, we have frequent recourse to value terminology, which commits us to nothing more than a general assertion that we have a preference for one thing or

³⁾ Talcott Parsons, The Social System (Glencoe, IL: The Free Press, 1951), 112.

Mircea Eliade, The Sacred and the Profane: The Nature of Religion (New York, NY: Harcourt, Brace and World, 1957), 24,

⁵⁾ Mircea Eliade, The Sacred and the Profane: The Nature of Religion, 21

⁶⁾ Michael Hechter, "Values Research in the Social and Behavioural Sciences, in M. Hechter, L. Nadel and R. E. Michod (Eds.), The Origin of Values (New York, NY: Aldine de Gruyter, 1993), 1-28.

⁷⁾ Clyde Kluckhohn, "Values and Value-Orientations in the Theory of Action: An Exploration in Definition and Classification," in T. Parsons and E. Shils (Eds.), Toward a General Theory of Action (Cambridge, MA: Harvard University Press, 1951), 399.

perspective over another, 8) or an interest in a specific thing. 9) But there is another kind of discourse, which takes place within closed social groupings, in which a strong sense in in-group and out-group consciousness is maintained, 10) in which value concepts take on a highly symbolic invocatory function and in which the experiential nature and sacred manifestation of the value is shared, or, at least, held to be shared. We can speak, therefore, of values as a conceptualised shared experience, conceptualisation or shared experience being uppermost depending on whether the social context is open or closed.

The objection could be raised that the very disparate social conditions under which this dual nature of values manifest itself, as information with an ethical subtext in open society and highly symbolised medium of shared experience in closed community, undermines the coherence of the philosophical concept, that is, of value as a single entity with a dual nature. I would argue, though, that the modern idea of value has co-evolved with the form of society in the post-Enlightenment period characterised by individualism, in which an individual can freely move between multiple belongings in different forms of life, each form of life having the nature of a closed group built around a core of shared values, but in which the hard distinction of in-group and out-group is mitigated by tentative membership and a complex, self-assumed pluralistic identity. Such societies - the liberal democracies - are, in theory at least, committed to maximising the freedom of the individual, while leaving the pursuit of meaning and happiness to the individual.

⁸⁾ Milton Rokeach, The Nature of Human Values (New York, NY: The Free Press, 1973), 5.

⁹⁾ Ralph Barton Perry, General Theory of Value: its Meaning and Basic Principles Construed in Terms of Interest (New York, NY: Longmans, Green & Co., 1926), 115-116.

¹⁰⁾ Henri Tajfel, "Social identity and intergroup behaviour," Social Science Information, vol. 13 (1974), 65-93.

3. Individualism, freedom and responsibility

Individualism is one of the most misunderstood socio-political and philosophical concepts. This is partly because it does not feature, or not feature highly in most non-western cultures which favour some form of collective identity and almost certainly privilege the collective over the individual. Louis Dumont makes a distinction between the "empirical subject of speech thought and will" which is common to all cultures and "the independent, autonomous and (essentially) non-social moral being" who is the inhabitant of modern societies. 11) Thus, Dumont distinguishes between the facticity of individuality - as singular body and capacities - and the belief that one is free and the essential equal of all other human beings. It is this latter concept, which has evolved in the crucible of European history and its Judeo-Christian inheritance, that has enabled the forms of society that we characterise as open to exist. Individualism, though, is not a peculiarity of Western culture; it is a periodic human discovery that has been made a number of times in history, notably by the Greek city states, but also in ancient Zoroastrian Persia and in medieval Islam. However, in the West, individualism has probably had its most sustained form, allied as it has been to the rise of science and modern market economies, which have improved human life considerably over the past few centuries. Thus, individualism is not peculiar to western thought and western ways of life, but a case can be made that it is fundamental to modernity. If so, this would entail that as collective cultures modernise, they will have to grasp the issue of individualism, otherwise progress will stall.

In my estimation, *Divine Principle* has a relatively sophisticated and enlightened concept of the individual. In the chapter 'The Principle of Creation' it states, "The univers e... is composed of individual embodiments of truth, each a unique manifestation of the

Louis Dumont, Homo Hierarchicus: The Caste System and its Implications (Chicago, IL: University of Chicago Press, 1970), 34.

dual characteristics of God" and "The myriad qualities of God--- are apportioned into diverse human beings". 12) This, we might say, is the metaphysical foundation of the unique value of each individual. It presages the appearance at some future date the appearance of a Unificationist humanism, just as humanist outlooks emerged in other religious cultures as diverse as Zoroastrianism, Buddhism, Islam, and Christianity. Indeed, it mirrors a contemporary humanist view, attributed to a 19th-century scholar Lysenkus-Popper, that with the death of a single person, a whole universe disappears. Moreover, in a section entitled 'The history of the providence of restoration and I', in what could be considered a significant statement of existential value, each individual man and woman is accorded the opportunity to stand as a figure of historical significance, by taking up the task of righting the wrongs of the past. 13) This accords with the contemporary views of many social psychologists that we find meaning in life through assuming our burden of responsibility. 14) Thus, the Divine Principle's view of the individual accords unique value both ontologically and as a social actor.

Nonetheless, a view of society is not complete by just its anthropology. One criticism I have of Divine Principle as a basis for social theory is that it has an underdeveloped notion of freedom. This can be accounted for somewhat by its origins in a strongly hierarchical culture of Confucianism, strong familial traditions and one, moreover, that tended to adopt deterministic forms of Christianity such as Presbyterianism. In its analysis of the story of Eden in Genesis, it emphasises the Fall from God's grace and alienation from God's presence, without sufficiently, in my opinion, contextualising that within the creation narrative of the autonomy of the original ancestors, although its interpretation is certainly more sophisticated than the Catholic concept of felix culpa. 15) The idea of

¹²⁾ Sun Myung Moon, Exposition of the Divine Principle (EDP) (New York, NY: HAS-UWC, 1996), 20.

¹³⁾ Sun Myung Moon, Exposition of the Divine Principle, 187.

¹⁴⁾ Jordan B. Peterson, 12 Rules for Life: An Antidote to Chaos (London: Penguin Random House, 2018).

¹⁵⁾ Literally, happy fault. The belief that the Fall was predestined, in order that man could receive the grace of salvation.

freedom is minimised and bounded by conditions, particularly the idea of responsibility, which is found to be bound up with the ideas of duty and obligation, again prevalent in closed communities and hierarchical societies. I will argue that this cultural loading perhaps prevents a more enlightened understanding of the relationship between freedom and responsibility. Rightly understood, responsibility is not the inhibitor of freedom, it is its complement and its guarantor.

The first stance of the responsible person is to accept that they are free, in both an existential sense and as a social actor making choices. Without this affirmation there can be no responsibility, only obedience, and at worst, slavery. The great tragedy of much of human history and still much of the world today is that social conditions do not allow people to be free and, therefore, not responsible, rather than duty-bound, though this number is, arguably, diminishing. The human thirst for freedom is unquenchable; we always choose it as an alternative to the burden of excessive societal expectation and to other forms of oppression, especially when we have experienced them.

The second stance of the responsible person is to accept that their choices and the acts that flow from them all have consequences, for good and ill, for which they reap the benefits and the costs. With experience comes a greater ability to discern between the two and the wise person will not only make better choices but also choose to impose limits on their actions. The actions that destroy, deplete, and offend are the ones that are most likely to result in a reaction that aims to curtail the freedom of the individual for the protection of the common good. For this to happen, the power of the community or the state must be invoked. Every invocation of the power of the greater collective or its authoritative representative entails a diminution of the freedom of the individual, which itself informs the state of freedom of the society. Consequently, that which guarantees the freedom of society is an act of self-limitation imposed on oneself for the sake of the greater good. It is something that emerges from the realisation and experience of the actual and potential consequences of one's actions in the world and

the harm that may occur because of them.

The third stance of the responsible person is to live and work for the common good to the best of one's ability, guided by conscience, for the betterment of oneself and the improvement of the lives of others. This might be called social responsibility and can take many forms, but underlying those is the commitment to the maintenance of freedom and the freeing of the oppressed, whether that be from politically oppression, or those rendered powerless by illness, poverty, ignorance or lack of opportunity, by addressing and seeking to solve the tangible barriers to their lack of freedom and empowerment. Social responsibility should not be confused with social justice, which is an ideological commitment to equality of outcome, regardless of the consequences for freedom. This results in reality, in limiting the freedom of the majority in favour of selected minorities. People are not and never will be equal except in the most abstract senses, but it is not unreasonable to work to decrease inequality and increase the freedom of the less free.

The culture of *Cheon Il Guk*, as both an affirmation of the present historical reality and a projection of an eschatological promise, should be one in which people want to live and reach their full potential, meeting challenges of their own choosing rather than those imposed on them. It must fundamentally be a society of freedom as the mythic garden of Eden was a place of freedom. The lesson of Eden was that the first ancestors did not protect their freedom and did not accept responsibility for their lives and their actions, but sought to play the victim, just as today (as throughout history) many seek to blame others or 'society' for their personal misfortunes. The victim mentality which seems to be sweeping so much of the West today is not the result of individualism, but the result of the death of individualism and the retreat into polarised collectives characterised by nihilism, dependence, and destructiveness.

Individualism is declining in the West for two reasons. One is that it is ignored in educational establishments and widely attacked, being replaced by postmodern values of equality, diversity, and inclusivity, which are undermining the fundamentals of modernity, such as evidence-based knowledge, as being expressions of Western hegemony. The other is that it has drifted over time from its roots in the spiritual iconoclasm of such figures as Francis, Luther, Kierkegaard and King and become all too often a justification for selfishness, and indifference to suffering and greed. It has the appearance of a spent force whose ideals no longer inspire a civilisation. As Arthur Miller more cynically put it, "an era is over when its basic illusions have been exhausted". The survival and reinvigoration of modernity will depend on the transformation of individualism into what I call *transcendent individualism*, which draws on the religious and secular heritage of the world's cultures for the highest values that sustain the human conscience, lust for discovery, and the instinct to altruism. These values will in all likelihood turn out to be universal and culminate in the absolute values of truth, beauty, and goodness.

4. Transcendent individualism and absolute values

According to the previously quoted extract from *Divine Principle*, ¹⁶⁾ each individual has unique value, while suggesting that the individual as such is incomplete. Unification Thought systematises this by referring to each created being, including human beings, as an 'individual truth body' as well as a 'connected body'. In Unification terms transcendent individualism is like the individual truth body and connected body; however, conceptually, it emphasises their continuity: connectivity as an expression of individuality. The destiny of the individual is to transcend mere individuality and be embedded in society, through multiple belonging in forms of life mediated by values that ensure the continuity of such institutional structures. The integrity of such transcendent individuals, however, can only be maintained in a realm of absolute values.

¹⁶⁾ Moon, EDP, 20.

One can argue about the ontological status of absolute values, depending on whether one is inclined to Platonism or some form of instrumentalism. Yet the existence of our civilisations and the institutions that constitute our societies are deontologically founded on the belief in such absolutes as truth, beauty, and goodness. Work by Russell, Carnap, Wittgenstein, Quine, and others have laid bare the logical basis of mathematical and linguistic truth, while fundamental science has added enormously to our knowledge of the universe, allowing the development of hitherto unforeseen technologies; work on chaos theory has added to our knowledge of the constituents of beauty - such as symmetry, proportion, and depth - that of scaled self-similarity and creative instability; and the research of psychologists is building a slowly growing picture of what constitutes the good personality. There is little doubt about the existential force of these values in the lives of individuals and cultures for betterment, prosperity, and peace, nor the minatory power afforded by awareness of the proximity of the disvalues of falsity, ignorance, ugliness, and evil.

While this makes a general case based on societal development and social expectations that absolute values and transcendent individualism are mutually supporting concepts, the argument lacks up to this point the requirement for some philosophical justification and underpinning. I believe this can be found in Münsterberg's concept of the actualisation of absolute values through stages, culminating in the "self-assertion of the world". 17) I take this to mean that the only world that can be asserted by individuals in a world of individuals as constituting an identical experience of the world is a world of absolute values. However, it can additionally be interpreted as the assertion by the individual that they as an individual constitute a world-in-potential determined by absolute values, which is exactly what transcendent individualism implies. Absolute values provide the metaphysical space for the concept of transcendent individualism, which in turn embeds them in realistic societal conditions.

¹⁷⁾ Hugo Münsterberg, The Eternal Values (Boston, MA: Houghton Mifflin Company, 1909), 74.

Because they are absolute, truth, beauty, and goodness are, in principle, unattainable. Yet, the human condition is such that, under favourable conditions, we strive against the limitations of our being and circumstances spurred on by the prospect of their attainment, because glimpses of the ineffable are had from time to time. *Cheon Il Guk* is a society of freedom because, in being free, it liberates individuals' creative capacity to pursue truth, beauty, and goodness and in pursuing these they ensure that it remains free. The transcendent individual is moving outwards from themselves. Being in themselves consciously and bodily individual, they nonetheless attempt to dissolve the boundary and limitations of the self to achieve sociality on many scales, from the familial to the communal, national and global. They challenge themselves to become better in every dimension of their being: physically, intellectually, emotionally, spiritually, and socially, not only to ensure their individual attributes – such as compassion, hospitality, empathy and altruism – are continually being extended outwards, but they are also becoming a person of value in the world and even a person of historical significance, through remediating the tragedies of suffering and oppression.

The society of *Cheon Il Guk* can never be a collectivist society, for that is the realm of slave mentality in which the individual is subordinated to the general will as that is expressed through a dictatorial regime, a totalitarian state, a religious theocracy, or political ideology. It must be a society of freedom and individualism, but one which emphasises the pursuit of truth, beauty, and goodness as aspiration above mere self-interest and the mundane values, social structures, and activities of daily life. If that seems paradoxical – an individualist society with a collective aim – that is because such a society can only emerge from the choice each of us makes to live or not to live by that principle, to be a free individual of unique value on the path of absolute value.

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Orthodoxy and Heterodoxy

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Abstract

The dominant system, tendency and current are generally considered as Orthodoxy, while the anti-dominant systems are regarded as heterodoxy. However, it isn't possible to fully understand this matter through this general definition alone. Orthodoxy and heterodoxy are correlative and flexible changeable concepts.

Whether it's an orthodoxy or heterodoxy is finally decided by the God through history. Therefore, true religion should not regard itself as Orthodoxy and denounce other sects or religions as heterodoxy. True religion should be based on love, tolerance and dialogue. Among these three, dialogue is emphasized here. Dialogue is a give and receive action in Unification Thought, Through give and receive action, integration and unification can be fulfilled. True dialogue is the only effective way to reconcile and unify the divisions of religions.

Key words: Orthodoxy, Heterodoxy, Tolerance, Reconciliation, Dialogue

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The era of dialogue between true religions has begun.

It is not a fake dialogue that you do not see or call each other, but an open-minded dialogue which arises from conviction, and personality.

True community only can emerge from true dialogue.

Martin Buber

1. Preface

The Reformation greatly changed the relations between Orthodoxy and heterodoxy in Europe. Orthodoxy regarded Heterodoxy as having wrong doctrines that harmed a person's faith. Therefore, in the history of Christianity, Heterodoxy was persecuted intensely and excluded from Orthodoxy. Historically, Constantine played an influential role in the proclamation of the Edict of Milan in 313, which decreed tolerance for Christianity in the empire. He called the First Council of Nicaea in 325, at which the Nicene Creed was adopted by Christians. This resulted in the first uniform Christian doctrine, called the Nicene Creed. In the Council of Nicaea, "The Church had taken her first great step to define revealed doctrine more precisely in response to a challenge from a heretical theology. As the result, the Trinitarianism of Athanasius was recognized an orthodoxy, on the other hand, the Arianism was recognized as heterodoxy. After that, Gnosticism, Donatists, and Nestorian were also excluded as heterodoxy. Waldensians that had a big influence on the south of France were suppressed and massacred for heterodoxy. In the Christian doctrine, the argument was whether Jesus was God, Jesus was a man, or Jesus was both of them. Trinitarianism was established as an orthodox doctrine, and those who assert on one side that Jesus was God or Jesus was man were often recognized heterodoxy. In the background that Islam religion was established in the 7th century, and the threat of Islam began to give the influence to the Byzantine Empire. Though two churches of Rome and Constantinople supported Trinitarianism together, they conflicted on the issue of the icon worship problem.

Eventually, they excommunicated each other in 1054 so that they were separated. This was the origin of the separation between the Roman Catholic and Orthodox church. After the 16th century, in the storm of the Reformation, the Roman Catholic church tried to excommunicate Luther and suppress his power, but various protestant sects including Calvin's were born and spread rapidly among the feudal lords and the farmers. In these situations, the Society of Jesus which advocated absolute obedience to the Holy Father was born, and it opposed the Reformation of the Roman Catholic church. Opposition of both Christian churches brought about intense religious wars in the 16th-17th century over the whole European land. Especially, the Catholics and Protestants were mutually excluded and they massacred each other, denouncing each other as heretics. Heresy trials and witch-hunts were prevalent not only in Spain, but also in Protestant countries.

In the United Kingdom, though the church of England was established as a legitimate church, severe religious conflicts among the Catholic and Calvin Puritans arose. As a result, many people were executed as heretics. According to the data of William Monster, about 3000 people were executed as heretics in Europe from 1520 to 1565.1)

Among these people, it naturally included Lutherans and people of the Reformation, but two-thirds of the people executed were said to be Anabaptists.²⁾ These Anabaptists were those who appeared in the Reformation period. They thought that baptism is only valid when the candidate confesses his or her faith in Christ and wants to be baptized. This believer's baptism is opposed to the baptism of infants, who are not able to make a conscious decision to be baptized. At that time, Roman Catholics and Protestants who encouraged infant baptism heavily persecuted the Anabaptists.3)

¹⁾ William Monster, "Heresy Execution in Reformation Europe, 1520-1565," in Ole Peter Grell and Bob Scribner, Tolerance and Intolerance in the European Reformation (Cambridge University Press, 1996), 49.

²⁾ William Monster, 49.

³⁾ Tetsuya, Nagamoto, "Aimaininaru Seito to Itan no kyoukai," Fukuin to Sekai, March, 13.

But in contrast to the early period of the 16 century when a lot of Anabaptists were persecuted, the concept of heresy greatly changed in the 17-18th centuries. Not a few European nations began to adopt a policy of separation between religion and politics based on religious tolerance in order to integrate the nations. The People's Revolution more accelerated this inclination. Thus, the Catholic Church also did not emphasize heterodoxy and excommunication. In the 20th century, the Pope finally admitted the fault of the Inquisition and religious court in the Second Vatican Council.⁴⁾

2. Orthodox and Heterodox in the Domain of Communism

These words(orthodox and heterodox) are mainly used in the domain of religion, however, they also used in the domain of thought, especially in political thought. For example, Marxism was established as an orthodox ideology among several socialism by establishing the Soviet revolution in the 20th Century. The argument was developed concerning the one-state theory of socialism and the Soviet eternal revolution theory. A follower of Stalin and Stalinism asserted the former, together with radicals who supported Trotsky's theory that socialism must be established throughout the world; thus, continuing the revolution.

In Japan, fierce conflicts broke out between Stalinists and Trotskyists from 1960. After Stalin's death, in North Korea, the ideology, Juche(principle of subjectivity) began to be taught by Kim II Sung while at the same time in China, Mao-Tse-tung's own ideology was established. In any case, Orthodoxy is a political ideology called Marxism-Leninism, and whether these thoughts were orthodox or not was judged on the basis of Marxism-Leninism.

The dominant systems are generally considered as Orthodoxy, while the anti-dominant

⁴⁾ http://www.y-history.net/appendix/wh0103-152.html(2017.4.28)

systems are regarded as heterodoxy. However, it isn't possible to fully understand this matter through this general idea alone. Orthodoxy and heterodoxy are correlative concepts, much like the difference between a flash and darkness, goodness and vice, or white and dark, though they are not mutually opposite and negative concepts. To illustrate, Christianity and the Buddhism are different religions and are not mutually heterodoxic. The concept of heterodoxy is the opposite concept of orthodoxy and it does not apply to a different religion. Orthodoxy and heterodoxy are conflicts between what is fundamentally the same category and within the same range. In other words, a conflict between the same religion is more severe than that of different religions.

3. Kakumaru vs. Chukaku

Kakumaru-ha (a sect of the revolutionary Marxisism) vs. Chukaku-ha (another sect of Revolutionary Marxisism). Both left-wing factions were very popular on campus between the 1970s and the 1980s. However, most of the serious battles were not left versus right, but rather, the fiercest fights were mostly in battles between the same left-wing factions. Kakumaru, based at Waseda University, and Chukaku, based at Hosei University, both fought fiercely against each other, even though they were from what could be considered the same ideology. Moreover, these two groups belonged to the same umbrella organization and the same organ newspaper, as their top-tier organization was called the "Revolutionary communist union".

Though they originally belonged to the same group, which adhered to Trotskyism, Kakumaru broke away, while Chukaku stayed in the group. In order to understand the sects of communism, we will now briefly explain the difference between Trotskyists and Stalinists.

Trotskyism is the theory of Marxism, as advocated by Leon Trotsky. Trotsky identified

himself as an orthodox Marxist and a Bolshevik-Leninist and supported founding a vanguard party of the proletariat, proletarian internationalism, and a dictatorship of the proletariat based on working-class self-emancipation and mass democracy. Trotskyists are critical of Stalinism, as they oppose the idea of Socialism in One Country. Trotskyists also criticize the bureaucracy that developed in the USSR under Stalin.

Seeing the history of international communism, at the time, the communists worshiped Stalin as if he were God. However, following the death of Stalin, during times of criticism against his control, Trotsky came to be re-evaluated.

Kakumaru and Chukaku believed in the same Trotsky, but in spite of the similarity, or because of the similarity, they nonetheless fought each other with weapons.

The following is from an article documenting when Chukaku's Marxist students attacked Kakumaru's Marxist-activist students at Tokyo University on December 30, 1973.

At 10:00 pm, the vengeful Chukakuha hit Kakumaruha's students with bars and iron sticks. They continued to angrily hit them in revenge for the slaughter of their comrades. The room of Tokyo University fell into a blood bath. The students cried "murder, murder" many times, but Chukaku's anger was not shallow. They pursued the depth of casualties, and the quantity of blood. They broke their opponents' legs, shattering ankles and knees, and finally hit the backs of the opponent's heads with hammers without mercy until they were dead.⁵)

As such, the people of these sects could be described as warrior-like gangs, though they read books, thought about revolutions, and practiced their respective ideologies. Besides, we must know that these people, who have almost the same thought, carried out such ghastly murders.

In the midst of these fierce confrontations, it is proper to highlight a particularly

⁵⁾ Takashi Tachibana, Chukaku vs Kakumaru (Kodansha, 1983), 14-15.

notable episode. A student of Waseda University was murdered on the campus by the Kakumaru sect. Kakumaru thought Kawaguchi was a member of the Chukaku sect.

They tortured Kawaguchi and eventually murdered him. Although this was merely a part of their violence, Takashi Tachibana, a famous Japanese critic, pointed out that "this incident was epoch-making in the student movement's history in Japan."

That being said, I have a different perspective from Tachibana, which is that this incident has a significant meaning in terms of Japan's student movement because non-violent movements were developed by anti-communists students who are members of circle associations such as the Carp and Bible research circle, etc. These students rejected violence and organized a campaign to assert reconciliation and love across almost all the campuses in Japan.

So far, in Japan's student movements, the only cases of violence have come from the radical new left movement; however, those who opposed this violence, those who asserted non-violence and called for dialogue, should be highly evaluated.

It is said that hatred for close relatives is bigger than that of ordinary people, and that hatred for people with a similar thought and character is stronger than hatred between people of a different thought and character. As seen before, conflicts between Kakumaru and Chukaku were not ideological but rather psychological.

Both sects do not regard their opponent parties as leftists and those aiming at revolution. On the contrary, the opposing factions consider each other to be the most vicious counter-revolutionists, definitively believing that the opponent is the worst evil. This is not based on rational thinking, but on a kind of religious conviction.

Generally, when an organization is divided into two or three smaller factions, a strong hatred between them is said to emerge. If two organizations confront each other, it is simply a conflict between new people. However, when the same organization is divided into two or three self-legitimate groups, each group can often feel as if other groups

are stealing the other groups'members; consequently, actual confrontations will be increasingly cruel and severe. In this fight, one side's plus is the other's minus. Therefore, the confrontation becomes progressively more violent, as each faction followers are apt to think they are legitimate, and between people so hatred against the others becomes more intense. In the students' hall of Waseda University, Kakumaru controlled the second floor, while the students of the Circle Association controlled the first floor. The Circle Association advocated freedom and democracy and supported good relations between Japan, the United States, and South Korea.

Though there was some fighting between Kakumaru and the Circle Association, there were no such fierce battles as those which took place between the Kakumaru and Chukaku followers. Therefore, we can say that their battles are not based on thought and creed, but they are rather a battle between orthodoxy and heterodoxy. So, we can say that it is a phenomenon of hatred between close relatives.

4. Learning from Heterodoxy

Almost all the controversy between Orthodox and Heterodox has been developed based on the revelations of prophets or founders. As such, several interpretations are needed when applying these revelations to real situations.

The orthodox and heterodox often consist of combinations of big and small theses that differ in validity, as far as it is a general judgment for human beings and the world.

As long as these interpretations are held on general judgment for human beings and the world, they almost entirely consist of large and small theses.

In the case of Marxism, which is said to be scientific when applied to the real world, interpretations are always disputable. For example, in the same way as Vladimir Lenin, who wrote "The Development of Capitalism in Russia" (1899) or "Imperialism and the

Highest Stage of Capitalism" (1917) in order to interpret Marx, so too was it necessary to write Paul's interpretation concerning Jesus' Gospel.

The criteria of the interpretation depends on whether it is a whole-sided interpretation or one-sided interpretation.⁶⁾

In the Gospel, on the one side, there are ethical rules which have universal validity, while on the other side, there are ethical rules that have partial validity. For example, as stated in the teaching of the Sermon on the Mount – "Love your enemies and pray for those who persecute you" (Matthew 5:44); together with the following quote, "Don't think that I came to send peace on the earth. I didn't come to send peace, but a sword" (Matthew 10:34). With these two quotes, we see that the Sermon on the Mount talks about universal ethics for human beings, but there are very few teachings that are possible to carry out literally. Thus, "if your eye, even your good eye, causes you to lust, gouge it out and throw it away. It is better for you to lose one part of your body than for your whole body to be thrown into hell. And if your hand — even your stronger hand — causes you to sin, cut it off and throw it away. It is better for you to lose one part of your body than for your whole body to be thrown into hell" (Matthew 29:30).

In these cases, total rightness cannot fully be expected when we face these opposing Bible words. Therefore, facing a mutually contradicted interpretation of the Gospel, we should know that total interpretation will bring about Orthodox thought, whereas partial interpretation will bring about heterodox thought.⁷⁾

Both orthodox and heterodox essentially return to the revelation, though orthodoxy is apt to compromise and cooperate with reality, and its interpretations for revelation are relatively realistic. On the other hand, heterodoxy is apt to exclude compromise with reality and interprets the revelation literally, and in many cases, it falls into a radical idealism.

⁶⁾ Youzou Horigome, Orthodoxy and Heterodoxy (Chuokouron, 1964), 33-34.

⁷⁾ Youzou Horigome, Orthodoxy and Heterodoxy, 34.

Both the Orthodoxy and Heterodoxy are based on an equivalent category that shares the same confrontational relations; therefore, their relation is not definite and universal, but rather flexible and changeable. For example, if Judaism was authentic, then Jesus would be heretical. If Catholicism were authentic, then Protestantism would be heretical. In this way, the heterodox of the previous period became authentic in the next period and was in charge of a central function of God's providence.

Therefore, the history of religion was a history of the Orthodox, and at the same time the history of heterodox. When a new religion appeared, they were persecuted as heterodox by the established and authentic religions.⁸⁾

The concept of Orthodox and Heterodox is very flexible, therefore, both parties should be modest and generous.

The role of the immune system — a collection of structures and processes within the body — is to protect against disease or other potentially damaging foreign bodies.

According to Tomio Tada, in the past, the immune system was thought to have the ability to make self-nonself discrimination that enables the body to protect itself from microbial organisms in the environment, therefore, in order to establish the self, the nonself was removed. However, recent research says that there is self in the extension of the non-self, which therefore shows the possibility of mutual coexistence between the self and the non-self. ⁹It is notable here that the function of the immune system is quite flexible.

The immunity function as the self sometimes makes the non-self ineffective and sometimes shows "generosity", thereby taking the non-self into the self and trying to coexist mutually.

Considering the immune system, we can find it very stupid for humans to emphasize

⁸⁾ Jaesoku Lee, Mimunekaramita Seito to Itan (Seiwasha, 1976), 18.

⁹⁾ Tomio Tada, Men-eki no Imiron (Seidosha, 2010).

the difference between a political system, religion, and ideologies while simultaneously waging wars with each other.¹⁰⁾

Applying this to the orthodoxy argument, in order to establish the orthodox, we should not exclude heterodoxy, as heterodoxy coexists with the orthodox in the same way as light and darkness. It is true that heterodoxy is offensive and unpleasant to the orthodoxy; however, orthodoxy can have a chance to develop itself by taking what heterodoxy states into consideration.

It is this modesty and tolerance that can form a strong power of immunity and it can also be a body that isn't confused by miscellaneous germs.

5. Unification between Orthodoxy and Heterodoxy

It is said in the Bible that after God completed each day of creation, He saw that it was good - Gen.1; 28. This suggests that God wanted His creations to be object partners embodying a goodness that He could take delight in. However, the Bible says that it was the root of sin for Adam and Eve to eat the fruit of the tree of the knowledge of good and evil. Due to the Fall, the human mind came to have a dual nature the nature of goodness and the nature of evil. The conscience is the faculty of the human mind, which, by virtue of its inborn nature, always directs us toward what we think is good. However, due to the Fall, human beings have become ignorant of God and thus ignorant of the absolute standard of goodness. For this reason, we are not always able to set the proper standard of judgment. Therefore, even if someone stands in the position of Orthodoxy following the conscience, it may change as time goes by. In this way, Orthodox may easily change into Heterodox.

Nevertheless, the problem is that anyone can believe that he or she is following God's

¹⁰⁾ Hiroyuki Itsuki, Tariki (Kodansha, 2000), 240-241.

providence, and thus claim that they are in the position of Orthodoxy.

Although it is difficult to tell them apart, it is definitely true that even if they assert that they are doing God's work, those who break the golden rules are not Orthodox at all. Radical Islamists are a good example of this. However, as long as they keep to the golden rules, they will have the potential to be orthodox. So, it is wrong for those who think of themselves as orthodox to denounce others as heterodox. In reality, it is really difficult to know God's will.

Even if they regard the other group as heretics, they should have respect and tolerance for them. Thus, it is self-righteous and even dangerous for them to think only of themselves to be right and orthodox.

Thus far, thinking of the history of religion, a lot of blood has been shed in the struggle between orthodoxy and heterodoxy. In the 21st century, we have to put an end to this miserable history.

The importance is not to label each other but seek the truth modestly. Reverend Moon said, "Each religion today thinks of itself as the highest religion, rejecting and looking down on other religions. It is not right to build fences against other religions and denominations. Religion is like a wide river flowing toward an ideal, peaceful world.

The river flows for long distances before it comes to the wide expanse of peace.

On its way, many streams flow into it. The streams cease to be streams from the point they meet the river. From that point, they, too, become part of the river. In this way, they become one. The river does not reject any of the streams that flow into it. It accepts them all.

It embraces all the streams and forms a single flow as it continues toward the ocean. People in the world today do not understand this simple truth.

The streams that seek out the river and flow into it are the numerous religions and denominations of today. Each stream traces its origin to a different spring, but they are all going to the same destination. They are seeking the ideal world overflowing with peace."11)

Unification is necessary. Why is it necessary? Because it's for peace. Wars arise in the states of divisions, for each asserts his legitimacy and conflicts against each other, even killing others in the worst cases. Though I described the ghastly massacre acts of communists before, Christians and Muslims who believed in God and love were historically more cruel in the name of punishing heresy. We should not repeat this tragic history again.

In order to do that, reconciliation between Orthodox and Heterodoxy is essential. In order to realize a state of oneness, tolerance and love are essential, we should not denounce the differences of the doctrines.

Rev. Moon said, "The will of God lies in peace. A world fragmented by differences in nationality, race, and religion, where people attack and fight one another and shed one another's blood, is not what God wants. When we shed blood and fight each other in His name, we only cause Him pain. A world torn to shreds has been created out of the desires of people to promote their own wealth and glory. It does not represent the will of God. God clearly told me so."12)

500years passed since Martin Luther protested against the Roman Catholic and Reformation began. But facing the 500th anniversary of the Reformation, the Lutheran World Federation and the Vatican released a historical document, "From Conflict to Communion" on June 17, 2013. This document has a subtitle, "Lutheran-Catholic Common Commemoration of the Reformation in 2017" formed by the Report of the Lutheran-Roman Catholic Commission on Unity. As being seen here, the most important thing for leading religions in the 21st century is to continue having a dialogue between all religions having the attitude of tolerance and the goal of reconciliation.

¹¹⁾ Rev. Sun Myung Moon, As a Peace-Loving Global Citizen (Washington Times Foundation, 2010), 242-243.

¹²⁾ Rev. Sun Myung Moon, As a Peace-Loving Global Citizen, 243.

Whether it's an orthodoxy or heterodoxy is finally decided by God through history. Therefore, true religion should not regard itself as Orthodoxy and denounce other sects or religions as heterodoxy. True religion which human beings expect to have should be based on Love, Tolerance, and Dialogue. A truly authentic religion is needed by humankind in the 21st century.

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Homoousia as True Parental Nature:

Understanding through the Resemblance to the Divine Image

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Contents

- 1. Proposal for a new concept of homoousia
- 2. Homoousia in the view of the resemblance to the Divine Image
- 3. Homoousia as True Parental Nature

Abstract

In Christian theology, the Trinity's same substance is traditionally regarded as divine nature, which defines three persons are God. However, the consubstantial nature of three persons should include both divine nature and human nature in that the doctrine of the Trinity originated from the trial to understand the unified nature of God and man Jesus, and in Unification Theology, the ontological identity of the Trinity is the True Parents of Heaven, Earth, and Humankind, who achieved the unity of God-man-woman in love. In this paper, I demonstrate the Trinity's homoousia as "True Parental Nature" through the process of resembling the Divine Image: a united being of Sungsang and Hyungsang, a harmonious being of Yang and Yin, and a being of individuality. The perfected person to resemble the Divine Image, in accordance with God's purpose of creation, is the True Parents. Human beings gain divine nature through the process of becoming True Parents in a reciprocal relationship with God, conversely, God possesses human nature by taking on the body of man

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and woman, the body of True Parents. Thus, the same substance of the Trinity, the perfected unity of God-man-woman in love as the True Parents of H.E.H, is True Parental Nature.

Key words: Homoousia, True Parental Nature, Trinity, Divine Image, God and Man

1. Proposal for a new concept of homoousia

The Christian doctrine of the Trinity holds that the Father, the Son, and the Holy Spirit are one God based on the Christian theological formula of "homoousia", the same substance of three persons. However, is it reasonable to regard the Trinity's consubstantial nature as divine nature? Although having the same substance as the divine nature identifies the Trinity as "God", after retracing the background of the establishment of homoousia, which expresses the unified nature of God and Jesus, or God and man, is it really appropriate to conclude the Trinity to be God?

According to Nicene-Chalcedon Creed, Jesus Christ is a being who has two natures -divine and human- in one person through the communion of the properties (communicatio idiomatum).¹⁾ Herein the orthodox creed strictly divides the divine nature of Jesus as the same substance with the (Heavenly) Father and the human nature of Jesus as the same substance as human beings. Therefore, when one views Jesus as God, his human nature is degraded as a disconnected factor and loses the possibility of connection with the Second Person.²⁾

Beyond the issue of the Son's identity, the fact that the two natures of the Son,

¹⁾ J. N. D. Kelly, Early Christian Doctrines (London, New York; Longmans, 1950), 143.

Theodore T. Shymmyo, "Unification Christology: A Fulfillment of Niceno-Chalcedonian Orthodoxy," in ed. Theodore T. Shymmyo and David A. Carlson, Explorations in Unificationism (New York: HSA-UWC, 1997), 26

who is one person among the Trinity, are absolutely separated leads to the inevitable division between the existence and works of God as the Trinity. The reason is that although the divine substance of the Son originated from divine nature, his work should include human nature.3) In the case that we define homoousia as transcendent 'divine nature', homoousia, which was developed in order to prove theanthropism between God and Jesus, conversely brings about a complete division between a transcendent God and accidental creatures. The equilibrium and harmony between the immanent Trinity and the economic Trinity, which is one of the contemporary Trinitarian issues, requires an answer concerning how to fundamentally make equilibrium and harmony between divine nature and human nature.

Unification Theology explains the unity of God and man centered on God's purpose of creation. Based on heart as motive, God created a loving person (愛的人間, homo amans) after the example of God's original image (Gen 1:27), a person who achieves the ideal of love can be one with God by completely resembling Him. The unity between God and man is not an a priori event but the result obtained through the fulfillment of both God's 95% portion of responsibility and human beings' 5% portion of responsibility. 'Divine nature', which a perfected man such as Jesus carries, is not a pre-existing divine nature like classical theology but postnatal. According to Exposition of the Divine Principle, a person can achieve complete oneness with God (John 14:20) and acquire a divine nature when one experiences the Heart of God and lives in accordance with the Will of God.⁴⁾ Likewise, Unification Theology considers the Second Person's divine nature to be the result of achieving the purpose of creation, so that three persons cannot mean God ontologically, but views homoousia as divine nature. Just as Basil accepted homoousia as meaning of equal value (ὁμότιμος),5) sameness of divine nature

³⁾ William Ralph Inge, Christian Mysticism: Considered in eight lectures delivered before, the University of Oxford, trans. So Kun Ahn (Korean) (Seoul: Numen, 2009), 95.

⁴⁾ FFWPU, Exposition of the Divine Principle (Korean) (Seoul: Seonghwa Publications, 2014), 46, 110-111.

⁵⁾ Benoit Pruche, "Introduction" to Basil, De Spiritu Sancto, in Sources Chretinnes (Paris, 1945), 28. George

is not ontological identification with God but worth identification with God.

Jesus spoke of this state of perfection, saying "You, therefore, must be perfect, as your heavenly Father is perfect." Thus, we see that a person who has realized the purpose of creation assumes divine value, comparable to God.⁶)

Herein the complete oneness between God and man means that not only Jesus as a human being acquired 'divine nature' by achieving individual perfection, but also God gained 'human nature' by taking the body of Jesus.⁷⁾ While classical theology is based in 'divine nature' and contemporary theologians express various ideas grounded in 'human nature' against the controversial creed, Unification Theology claims oneness between God and human beings in love, which contains both 'divine nature' and 'human nature' under the principle that a being assimilates with a partner with whom the being has entered into a reciprocal relationship in love.⁸⁾

Now that the oneness between God and human beings in love is based on the purpose of creation and the achievement of the ideal of love, theanthropism indicates that it is the trinity of God-man-woman rather than the oneness between God and Jesus. In Unification Theology, God is the Heavenly Parent, the harmonious union of dual characteristics, which manifests as male and a female substantially, so that a man and a woman should be married and become one with God. The perfected trinity of God-man-woman is professed as 'the True Parents of Heaven, Earth, and Humankind (hereafter, the True Parents of H.E.H)' in Unification Theology.

If doing so, how can we understand homoousia of the Trinity from the view of

Florovsky, "The function of tradition in the Ancient Church," *Eastern Orthodox Christianity*, edited. Daniel B. Clendenin, trans. Seoung Min Chu (Korean) (Seoul: Eun Seong, 1997), 161.

FFWPU, Divine Principle (Korean), 227.; FFWPU, Exposition of the Divine Principle (Seoul: Seonghwa Publications, 2014), 141.

UII, New Essential of Unification Thought: Head-Wing Thought (Korean) (Seoul: Seonghwa Publications, 1993). 263

⁸⁾ Sun Myung Moon, The Original Book of the Divine Principle (1951, not published), 22.

Unification Theology? The Council of Chalcedon formulated the divine nature of Three Persons; and trinitarianism began in earnest. Unification Theology also refers to 'divine nature' as the same substance of God-True Father-True Mother, equivalent to the Father-the Son-the Holy Spirit.9) This is because that divine nature is peculiar to True Parents, who realized the Trinity, while human nature is the general nature of all humankind. If we prescribe that only divine nature is homoousia, however, we would have a biased understanding of the nature of the Trinity.

Concerning the Son and the Holy Spirit's side, human nature is the foundation in the progress of the acquiring of divine nature, and will never disappear even after they achieve divine nature at the completion stage. When seen from God's side, God has divine nature from the beginning and takes on human nature after becoming the True Parents of H.E.H. Likewise, the actual Trinity has both divine nature and human nature, so that it is not desirable to mention only divine nature nor to ignore human nature. Without human nature, the Works of the Trinity become the construction of a castle in the air. In this respect, human nature is also important. Nevertheless, we could define the Trinity as having two natures like the example of Jesus. Nature itself describes a general concept of the being. Presenting the Trinity as having a dual nature would bring about ontological confusion and misunderstanding regarding the Trinity and various difficulties would follow caused by the doctrine of the two natures. 10)

Therefore, I'd like to use the term the homoousia of the Three Persons as "True Parental nature" instead. The True Parental nature can embrace both divine nature and human nature, as well as make the best of both the ontological meaning and the relational meaning of the True Parents of H.E.H, and the Trinity God, the Son and the Holy

⁹⁾ Editing Committee for Reverend Sun Myung Moon's Words, Rev. Sun Myung Moon's Words, vol.54, 1972,03,26.; FFWPU, Divine Principle (Korean), 46.

¹⁰⁾ Friedrich Schleiermacher, Der Christliche Glaube Nach Den Grundsätzen Der Evangelischen Kirche Im Zusammenhang Dargestellt (Berlin: Walter de Gruyter, 1960), II, 50, prop. 96.1. Kwang Seop Shim, Theology of Empathy and Dialogue-Friedrich Schleiermacher (Korean) (Seoul: Faith and Intellectual history, 2015), 583-584.

Spirit that they accomplished. It is logical that the True Parents of H.E.H., which is the complete union between God and human beings in love, have the True Parents nature as the same substance, and act as True Parents.

In this paper, I'll try to demonstrate the True Parents nature as homoousia of the Trinity. Through the process of becoming perfect substantial beings by human beings fulfilling the purpose of creation, I deal with how the Son and the Holy Spirit as human beings should become one with the Father as God and become the True Parents of H.E.H. The reason why I try to show homoousia is the True Parental nature by using the condition to be perfect substantial beings is that it ultimately refers to the True Parents as beings who have united with God by achieving the human portion of responsibility during their growth period. It is also an investigation into the resemblance to God's Original Image from the viewpoint that human beings should resemble God completely to be perfect substantial beings. In this paper, I'll investigate homoousia as the True Parental nature by dealing with a perfect substantial being in the view of being and relationship focused on the resemblance to the Divine Image out of the Original Image.

2. Homoousia in the view of the resemblance to the Divine Image

Having the same substance as the Father's means that the Son and the Holy Spirit resemble the Father's form, or Divine Image. The Son and the Holy Spirit as beings with Divine Image are united beings of sungsang and hyungsang, harmonious beings of yang and yin, and beings of individuality. A united being of sungsang and hyungsang implies the ontological existence of an individual. The meaning of the harmonious union

¹¹⁾ FFWPU, Divine Principle (Korean), 8, 410.

of yang and yin can be an ontological structure as attributes of sungsang and hyungsang, but, in regards to human beings, the union between yang and vin becomes the union between husband, a yang substantial being, and wife, a yin substantial being. 12) A being of individuality manifests a being of supreme value who gives stimulating joy to God through his/her unique individuality resembling God's Individual Image. 13)

The Son and the Holy Spirit as beings with Divine Image exist as a harmonious united being resembling the united structure of the existence of the Divine Image. The existence of a united being can be understood by applying the unity of substance. According to Jin Su Hwang, the unity of substance consists of two kinds of unity, namely, ontological unity and directional unification. The ontological unity is an indivisible unity that is fundamentally maintained as long as the substantial being is alive. For example, in human beings, the psychological functions and the physiological functions act simultaneously in a person's performance or action. While, the directional unification is becoming a temple of God by embodying the standards of God, an internal unity between the relationship of his/her mind and body and an external unity between the relationship of him/herself and others during his/her growth periods centering on true love. 14) Applying these unities into a united being, we can notice that the being with Divine Image exists as a united being for biological subsistence, and a united being for the perfection of the purpose of creation.¹⁵) Here I examine the ontological structure and meaning of the Son and the Holy Spirit as united beings for the perfection of the purpose of creation applied to the directional unification as the true parents.

¹²⁾ UTI, Unification Thought (Korean), 236.; UTI, New Essential of Unification Thought: Head-Wing Thought (Tokyo: Kogensha, 2006), 158.

¹³⁾ UTI, Unification Thought (Korean), 240.; UTI, Unification Thought, 162.

¹⁴⁾ Jin Su Hwang, "A Reconsideration of the Meaning of Sungsang-Hyungsang Unity: the Theory of Unification Thought and Hegel's Philosophy of Action", Research of Unification Thought 7 (2014), 109.

¹⁵⁾ Jean Zizioulas, Being as Communion: Studies in Personhood and the Church, trans. Se Hyeong Lee & Ae Seong Jeong (Chuncheon: Samwon Seowon, 2012), 57.

1) A United Being of Sungsang and Hyungsang

Unification Thought explains that there are four kinds of united beings of sungsang and hyungsang in a human being. Those are first, the encapsulation of all the elements of the universe, second, a dual being of spirit self and physical self, third, a united being of mind and body, and last, a being with a dual mind consisting of the united spirit mind and physical mind. Then, among them, having connected with the perfection of the purpose of creation and a being introduces as the central point a unified being with a dual mind consisting of the united spirit mind and physical mind. *Exposition of the Divine Principle* also similarly renders the relationship between the spirit mind and physical mind as a foundation of the relationship between sungsang and hyungsang.

The human mind consists of the spirit mind and physical mind. The relationship between these two minds is like that between internal nature and external form. When they become one through give and take action with God as their center, they form a united functioning entity which guides the spirit self and physical self to become harmonious and progress toward the purpose of creation. This united entity is the mind of a human being. 16)

The reason why the being with a dual mind consisting of the united spirit mind and physical mind becomes the foundation of the united being of sungsang and hyungsang is that the relationship between sungsang and hyungsang is an inseparable and continuous relationship.¹⁷⁾ Next, since the relationship between the sungsang and hyungsang of a human is generally comparable to the relationship between the mind and body, the spirit mind and physical mind, corresponding to the mind, assumes the subject position towards the spirit body and physical body, corresponding to the body. In other words, the spirit mind and physical mind, which are the minds of the spirit self and physical self, act on behalf of the spirit self and physical self, respectively. In the world of the original

¹⁶⁾ FFWPU, Divine Principle, 50,

¹⁷⁾ UTI, Unification Thought (Korean), 233.

creation, an object partner naturally follows the will of his/her subject partner, so that the body cannot but follow the mind, and the relationship between the subject and object partner of the mind itself applies to the relationship between the subject partner and object partner of the mind and body. Therefore, a being with a dual mind consisting of the united spirit mind and physical mind, which deals with the relationship of minds, becomes the basis of other kinds of united beings of sungsang and hyungsang.

It is also important that the being with a dual mind consisting of the united spirit mind and physical mind as the united being for the perfection of the purpose of creation shows that the unity between God and us starts from our mind. That is because the unity between the spirit mind and physical mind centered on God leads to the unity between mind and body—spirit mind and spirit body in a spirit self, physical mind and physical body in a physical self— and the unity between the spirit self and physical self, centered on God. In the relationship between the spirit mind and physical mind, the spirit mind in the position of the subject partner is 'the place God dwells in.'18) Concerning the continuity of sungsang and hyungsang, when God comes to the spirit mind, his/her spirit body, which is inseparable from the spirit mind, is also one with God, as is the physical self, which cannot be split away from his/her spirit self as well.

A human being, who becomes one with God by God dwelling in his/her spirit mind in a position of the subject partner, is a human being who as a united being of sungsang and hyungsang is governed by God. Hang Je Kim said, "God by forming a reciprocal relationship with spirit mind, which is the sungsang part in the structure of a spirit self, stands in the subject position to have dominion over a spirit self, then stands in the subject position to have dominion over a physical self, and thus stands in the subject position to have dominion over a human being" 19)

The being with a dual mind, consisting of the united spirit mind and physical mind

¹⁸⁾ FFWPU, Divine Principle (Korean), 66.

¹⁹⁾ Hang Je Kim, Unification Dogmatics Research III (Asan: Sun Moon University Publisher, 2006), 228.

of the Son and the Holy Spirit as original human beings, is the original mind that forms a united entity through give and receive action centered on goodness as the absolute standard.²⁰⁾ While fallen people struggle between the standards of the evil mind and original mind, the Son and the Holy Spirit always abide by the standard of the original mind centered on God.²¹⁾ The good original mind orientation means the perfection of the purpose of creation, so that spirit mind and physical mind become one through give and receive action so as to achieve the purpose of creation. In the functional aspect, the spirit mind seeks for a life of value such as beauty, truth, goodness, and love in order to grow the spirit self and the physical mind seeks for material life such as food, clothing, shelter and sex to grow the physical self, and they become one through harmonious give and receive action between the spirit mind in the position of the subject partner.²²⁾

However, we have to pay attention to the fact that the relationship of the subject partner and object partner in the relationship between the spirit mind and the physical mind, which desire for the perfection of the purpose of creation, is not equal, in contrast to the usual Unification Theology. Unification Thought refers to the relationship of the subject partner and the object partner between the spirit mind and the physical mind as below:

In the original order of things, the spirit mind and the physical mind exist in the relationship of subject and object, since the spirit self is subject and the physical self is object. Accordingly, the physical mind should be subservient to the spirit mind. The union of the spirit mind and the physical mind constitutes the "human mind." The human mind in which the spirit mind functions as subject and the physical mind as object is called the "original mind." That the physical mind obeys the spirit mind means that a life of values (namely, a life of pursuing and realizing values) should be given priority and a material

²⁰⁾ UTI, Unification Thought (Korean), 171.

²¹⁾ FFWPU, Divine Principle (Korean), 69.

²²⁾ UTI, Unification Thought (Korean), 171, 233-235.

life (a life of pursuing material satisfaction) secondary. This means that a life of truth, goodness, beauty, and love is the ultimate purpose, or goal, and a life of food, clothing, shelter, and sex serves as the means to achieving that goal. Once the physical mind obeys well the spirit mind and fulfills its proper function, the spirit self and the physical self can resonate well with each other. This is the state in which one's human character is perfected. This is the way in which human beings should originally have lived.²³⁾

Certainly, it's a general opinion in Unification Theology that the object partner submits to the subject partner, however, it's rarely mentioned that the pursuit of the subject (spirit mind) is primary and the pursuit of the object (physical mind) is secondary. Given that investing equal value on both the subject and the object is the norm, obvious discrimination like this way is very uncommon. In contrast to most relationships of subject and object, the relationship between the spirit mind and the physical mind is a vertical relationship derived from a hierarchical order, which can be understood in considering the perfection of the purpose of creation.

Though I have explained both the spirit mind and the physical mind as the united being of sungsang and hyungsang so far, actually both the spirit mind and the physical mind belong to the realm of sungsang in the view of the mind and body. Moreover, according to the layered structure of sungsang and hyungsang in existing beings, the physical mind is the mind that even animals have as instinct, and meanwhile, the spirit mind is located in a higher level than the physical mind as a mind of the spirit self, which is an exclusive aspect of human beings. Because this layered structure originated with God's creational order, inside the original mind, the obedience of the physical mind to spirit mind, which is placed above, is inevitable.

²³⁾ UTI, Unification Thought, 156-157.

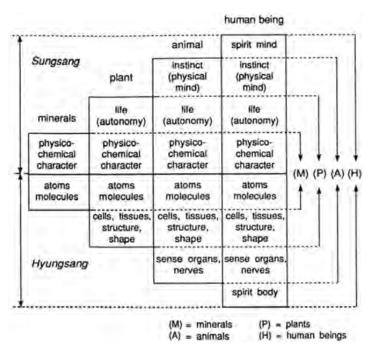


Fig. 1. Layered Structure of Sungsang and Hyungsang in Existing Beings²⁴⁾

The reason such a subordinate relationship of the physical mind to the spirit mind implies the subordinate relationship of physical self to the spirit self, is because the perfection of the spirit self is the ultimate goal of a human being as a united being of sungsang and hyungsang. It depends on the perfection of the spirit self, which is the complete resemblance to the Divine Image that a human being pursues. In Unification Theology, the three stages of human life manifest as a life in mother's womb (10 months), a life on earth (100 years), and a life in the spirit world (eternity). Just as the period in the mother's womb is the period for preparation for the earthly life, the earthly life is the period for preparation for the spirit world where people breathe through love,

²⁴⁾ UTI, Unification Thought, 107.

who are guided forward through oneness in love with God in love for a guide. In the spirit world, a human being lives as a spirit self eternally, and therefore, the united being of sungsang and hyungsang as a united being for the perfection of the purpose of creation ultimately means the perfection as a spirit self, the union of the spirit mind and the spirit body.²⁵⁾ Divine Principle describes the relationship of the spirit self and the physical self for the perfection of a spirit self as follows:

The spirit can grow only while it abides in the flesh. Thus, the relationship between the physical self and the spirit self is similar to that between a tree and its fruit. When the physical mind obeys the spirit mind and the physical self acts according to the good purpose of the spirit mind, the physical self receives living spirit elements from the spirit self and becomes wholesome. In return, the physical self provides good vitality elements to the spirit self, which enable the spirit self to grow properly in the direction of goodness.²⁶⁾

The spirit self can grow only in the reciprocal relationship with the physical self, mentioned above,²⁷⁾ the spirit self in the growth period is also subordinated to the physical self. Although the physical self relies on the spirit self in an existential way for the purpose of creation, the spirit self depends on the physical self for actual survival. The spirit self and physical self with respectable reason subordinate to each other, so they have mutual subordination and mutual complementation at the same time. Therefore, on the assumption that the perfect substantial being is a divine spirit, which is a spirit self in the completion stage, the core united being of sungsang and hyungsang for the perfection of the purpose of creation is the united being of mind and body, which includes the spirit self and the physical self until becoming a divine spirit.

The united being of mind and body is a united functioning entity formed by the

²⁵⁾ FFWPU, Pyeong Hwa Shin Gyeong (Seoul: Seonghwa Publications, 2009), 55-58; FFWPU, Divine Principle (Korean), 65-68.

²⁶⁾ FFWPU, Divine Principle, 48.

²⁷⁾ UTI, Unification Thought (Korean), 172.

mind, a united entity between the spirit mind and physical mind, and body, a united entity between the spirit body and physical body through give and receive action with God's purpose of creation as their center. Since the mind and body take charge of the intangible-functional aspect and the tangible and material aspect, respectively, it is the best type to express the axiom of the united being of sungsang and hyungsang.²⁸⁾ Thus, it's appropriate to regard the existing structure of the united being of sungsang and hyungsang of a human being toward the perfect substantial being as the united being of mind and body.

Structurally, the united being of mind and body corresponds to God's inner identity-maintaining the four position foundation. The inner identity-maintaining four position foundation, which is the combination of the inner four position foundation and the identity-maintaining four position foundation, maintains itself ontologically and is formed as the unity when sungsang and hyungsang are engaged in give and receive action. Similar to this structure, the Son and the Holy Spirit as original human beings are united beings through give and receive action of their mind (thought) and body (action) toward goodness. They live with various thoughts and activities, with not only their own self but also with other people, so they are relative beings who try to form unity in their inner and external relationship.²⁹⁾ The united beings of mind and body for achieving the purpose of creation desire for experience of God's heart and practice a life of love, so they live to form external unity in their relationship with others through a life of beauty, truth, goodness, and love as well as to form internal unity of their mind and body.³⁰⁾

²⁸⁾ UTI, Unification Thought (Korean), 31.

²⁹⁾ UTI, Unification Thought (Korean), 100.

³⁰⁾ UTI, Unification Thought (Korean), 66-70.

2) A Harmonious Being of Yang and Yin

A harmonious being of yang and yin as a united being of the perfection of the purpose of creation means that husband and wife as a yang substantial being and a vin substantial being, respectively become one as a couple. In Unification Theology, the Son is an original man and the Holy Spirit is an original woman, so that their conjugal union becomes an archetype of an original couple. Unification Thought explains the importance of an original couple as four types. First, originally, a husband and wife each represents one of God's dual characteristics of Yang and Yin and signifies the manifestation of God. Second, the union of a husband and wife signifies the completion of the creation of the universe because their union represents the final stage of God's creation of the universe. Third, since originally a husband and wife each represents one half of humankind, their union signifies the unity of humankind. Fourth, a husband and wife each represents one half of the family; therefore, their union signifies the perfection of the family. Of greatest significance, the passage of conjugal union as the manifestation of God is as follows:31)

A husband and wife each, originally, represents one of God's dual characteristics of Yang and Yin; accordingly, their conjugal union signifies the manifestation of God.

The reason why the original couple as the harmonious union of yang and vin becomes the manifestation of God is understood firstly, through the resemblance to the existence structure. While the original human being as the united being of sungsang and hyungsang resembles the inner identity-maintaining four position foundation in the two-stage structure of existence which resembles the two-stage structure of the Original Image, the couple as the harmonious union of yang and yin resembles the outer identity-maintaining four position foundation. The outer identity-maintaining four position

³¹⁾ UTI, Unification Thought, 158-159.

foundation, which is the combination of the outer four position foundation and the identity-maintaining four position foundation, for the Original Image, is the harmonious state of the outer four position foundation between the original sungsang and original hyungsang prior to the creation of all things. The original couple, a husband, a substantial being of sungsang or a substantial being of yang and a wife, a substantial being of hyungsang or a substantial being of yin, are forming their own inner identity-maintaining four position foundation, on which they live in harmony and help each other and realize the conjugal union, the outer indentity-maintaining four position foundation.³²⁾

A man and woman alone, each represents one half of God, or represents a substantially divided characteristic of the dual characteristics of the Original Image, which alone doesn't manifest God completely. That's why it is said that an individual resembles God's inner four position foundation if he / she is united with God's heart and manifests God's internal nature. In the viewpoint of God's purpose of creation which pursues the perfection of the ideal of love, a being who completely resembles God is in the conjugal union who forms the unity of two different characteristics of God. Concerning the identity-maintaining four position foundation is a foundation of existence structure involving 'self-identity;' a human being as an imaginable substantial being can realize the perfection of individual resembling God only when forming a conjugal union centered on God, like the Jewish thought that "the man who remained unmarried was really an incomplete and unfinished man." (33)

Similarly, the perfection of a human being suggested by the *Divine Principle* is also depicted as the perfection of the four position foundation as a family which is established by a couple forming a trinity centering on God, following the perfection of the four position foundation as an individual through forming a trinity of one's mind and body

³²⁾ UTI, Unification Thought (Korean), 101, 238

³³⁾ Paul King Jewett, Man as Male and Female: A Study in Sexual Relationships from a Theological Point of View (Grand Rapids: Eerdmans, 1975), 121.

centered on God. In addition, since the perfect substantial being who becomes a couple and establishes the four position foundation as a family qualifies as an owner of all things,³⁴⁾ he/she also forms the four position foundation of ownership by forming a trinity with all things.

Thus, for an individual to become perfect, he must form within himself a four position foundation in which the mind and body form a trinity, the center of which is God. For a man and a woman to become a perfect husband and wife, they must build a four position foundation in which they form a trinity with God as their center. For the universe to reach its perfection, it must form a four position foundation in which human beings and the natural world form a trinity with God as their center.35)

Another reason a couple as the harmonious union of yang and vin is the manifestation of God is that a couple can function as a perfect substantial body of God. Previously I mentioned that God can abide in a person's spirit mind, which means that a human being has a wishful mind to attend God.³⁶⁾ The mind attending God, in other words, is to form a reciprocal relationship in order for God to dwell in the mind. The purpose to attend God is that a subject and an object become one centered on goodness, so it's in the center where subject and object form their unity that God can abide.³⁷) Therefore, when a perfected man and woman unite as a couple, God can live with them. and can be a functional perfected body of God.

It's the 'True Parents,' the couple of the Son and the Holy Spirit, who are a union with God as their center. The significance of the True Parents is that they can act as 'a substantial substance' beyond an imaginable substance by achieving the perfect image of God. The unity with God starts from an individual and becomes a couple, and then

³⁴⁾ UTI, Unification Thought (Korean), 237.

³⁵⁾ FFWPU, Divine Principle, 296.

³⁶⁾ Rev. Sun Myung Moon's Words, vol. 50, 1971.10.24.

³⁷⁾ Rev. Sun Myung Moon's Words, vol.82, 1976.01,31.; vol.20, 1968.03,31.

becomes a parent, embodying God's love from the viewpoint of a human being. But, if we look into the process of perfection from God's side, the starting point of a substantial substance is when a perfected man and woman marry and become the 'true parents.' In other words, the substance called a substantial body of God means true parents.

When a husband and wife love each other horizontally, centering on God, His vertical love dwells there, and life is created through the multiplication of love.³⁸⁾

The place where Adam and Eve become perfectly one in heart and body as husband and wife is also the place where God, the subject partner giving love, and human beings, the object partners returning beauty, become united. This is the center of goodness where the purpose of creation is fulfilled. Here God, our Parent, draws near and abides within His perfected children and rests peacefully for eternity. … This is the place where the Word of God is incarnated and brought to fulfillment. It is the center of truth and the center of the original mind which guides us to pursue the purpose of creation.³⁹⁾

When you desire to unite with your partner in true love, the true love of the absolute 40 God will abide with you.

To act as God's intact substantial body is to let God experience love directly through his/her body. God's love starts from parental love which can begin after a perfected man and woman become true parents.

Let us investigate the nature of God's love. Had Adam and Eve attained perfection, each becoming a substantial object partner to God, resembling one of His dual characteristics, they would have joined as husband and wife and raised children in a godly family. In so doing, they would have experienced three kinds of original love with their three object partners: parental love, conjugal love, and children's love. (The love of the first object partner, the love of the second object partner, and the love of the third object partner.) Only

³⁸⁾ UTI, Unification Thought, 159.

³⁹⁾ FFWPU, Divine Principle, 30.

⁴⁰⁾ FFWPU, Cheon Seong Gyeong (Seoul: Seong Hwa Publishing Co., 2014), 1.2.2:4.

then would they complete the three object purpose and form the four position foundation. This would be the fulfillment of their purpose of creation.⁴¹⁾

Thus, if we think of the realization of the ideal of love as the goal of every human being, a human being can be called God's suitable body when becoming a true parent. That is, an individual or a couple who doesn't unite with God is not the perfect substantial being, and a person who even rounds his/her character but doesn't marry, cannot be regarded as a complete substantial being. Only true parents can be considered as perfect and complete substantial beings. In other words, while the perfection of the personality, the resemblance to God's inner heart, leads a person to act like God's sungsang, the conjugal union, the resemblance to God's outer structure, acts like God's hyungsang. Thus, only true parents, who resemble God's original sungsang and hyungsang, can function as God's inner and outer body. God lives in the bodies of true parents, continuously desiring for the result of the ideal of love. 42) If a person in a true parent couple corresponds to God's identity-maintaining the four position foundation, the multiplication of children by the true parents corresponds to God's developmental four position foundation by resembling God's creation of human beings.⁴³⁾

There might be some confusion about the issue of God's dwelling because the unity of subject and object can apply to many cases besides a couple. It's obvious that the relationship between mind and body, parent and child, nation and citizen, and so on can correspond to the relationship of subject and object, and if these pairs are united centered on goodness, we could imagine God would dwell in them. However, the conjugal union establishing the true parents as God's perfect body has an exclusive point such as the start point of God's direct dominion. For example, there is a saying that God abides in the spirit mind of a perfect individual who forms a unity between mind and

⁴¹⁾ FFWPU, Divine Principle, 38-39.

⁴²⁾ Rev. Sun Myung Moon's Words, vol. 102, 174, 1978, 12, 24; vol. 323, 2000, 05, 28.

⁴³⁾ UTI, Unification Thought (Korean), 238.

body as subject and object, respectively.⁴⁴⁾ But, if the individual didn't marry yet, God's dominion by dwelling in his/her spirit mind is only in an indirect way. *Divine Principle* explains God's direct dominion as follows: "Human beings abide in the realm of direct dominion when, as subject partner and object partner, they unite in the love of God to form a four position foundation and become one in heart with God." Then, it gives a specific example like this: "Once Adam and Eve had perfected themselves as individuals centered on God, they were to live together as one, forming the four position foundation in their family." Thus, we realize that God's direct dominion starts from the conjugal union.⁴⁵⁾

In addition, God's dwelling in the spirit mind indicates God's dominion over a human being whose dominion is not that of the complete stage from the beginning. Even if a human being attends God in his/her spirit mind, the person inevitably needs a growing period such as a formation stage, growth stage, and completion stage to realize God's will naturally.⁴⁶⁾ Human beings, originally, can be regarded as God's temple because they can attend God in his/her spirit mind, communicate with God, realize God's Will and live along with God's will from the beginning. Nevertheless, to be settled as God's temple, still 3 stages are required.⁴⁷⁾ Moreover, the family is the complete temple where God abides, so unless the husband and wife in the family become true parents, God cannot but act and manifest him/herself within limitation. So, even a person who forms the family should undergo the three stages of growing period at the family level. Therefore, the Son and the Holy Spirit also pass through the three stages not only for individual perfection but also family perfection as true parents. This is because the growing periods consists of 3 stages of formation, growth, and completion, and each stage has 3 levels of formation, growth, and completion.

⁴⁴⁾ Rev. Sun Myung Moon's Words, vol.3, 1958.01.12.

⁴⁵⁾ FFWPU, Divine Principle, 43-44.

⁴⁶⁾ Rev. Sun Myung Moon's Words, vol.69, 1974.01.01.

⁴⁷⁾ FFWPU, Divine Principle (Korean), 57.

That's why God's direct dominion can start from true parents. True Parents are God's perfect temple and the substantial object partner who God has direct dominion over. Even fallen people can be governed by God directly if they attend the True Parents as God's temple as their center and make a relationship with them. The realm of God's direct dominion arises from the True Parents and can gradually expand up to the family, society, nation, universe, and so on.⁴⁸⁾

3) A being of individuality

A human being is an individual truth being and a connected being resembling God's Universal Image and Individual Image. When we call such a human being a being of individuality, it usually indicates the individual truth being connected to God's Individual Image. Unification Thought refers to that human being, as a being of individuality who has a unique individual image which manifests in three aspects such as a person's appearance, behavior, and creative activity.⁴⁹⁾ The being of individuality is a being who gives joy to God by showing his/her unique beauty through his/her appearance, behavior, and creative activity resembling God. As parents have a feeling of love when seeing their children who are their manifestation, God feels that the appearance, behavior, and creative activity of each human being is also beautiful and lovely, reflecting Him; and He becomes pleased.⁵⁰⁾

This being of individuality seen from the viewpoint of the united being of the perfection of the purpose of creation corresponds to 'the good object partner for the joy of God' described in the Divine Principle. In the Divine Principle, the good object partners for the joy of God make God feel the fullness of joy because God is stimulated by His/Her good object partner by feeling His/Her original internal nature and original external form

⁴⁸⁾ Rev. Sun Myung Moon's Words, vol.22, 1969.01.21.

⁴⁹⁾ UTI, Unification Thought (Korean), 240,

⁵⁰⁾ UTI, Unification Thought (Korean), 241.

through them. Such mention coincides with the fact that God feels pleased when looking at the being of individuality who is God's manifestation. Therefore, we can deem that the direction point of the being of individuality is the same as one of a good object partner for the joy of God.⁵¹⁾ To bring the greatest joy to God, by taking after Him completely, the beauty of the original individual should realize the three blessings which the good object partners for the joy of God pursue.

How can the creation give God the greatest joy?

God created human beings as the final step in creating the universe. He created them in His image, in the likeness of His internal nature and external form, and gave them sensibility to all feelings and emotions because it was His intention to share joy with them. After their creation. God blessed Adam and Eve:

Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth. -Gen. 1:28

These are the three great blessings: to be fruitful (mature and ready to bear fruit), multiply, and have dominion over the creation. Had Adam and Eve obeyed this divine mandate and built the Kingdom of Heaven, there is no doubt that God would have felt the greatest joy as His sons and daughters rejoiced in the world of His ideal.⁵²⁾

Although expressing the beauty of a being of individuality is to give joy to God considered to be on God's side, it comes to receive love from God on the person's side. Joy is not produced by an individual alone, so if there is joy, it implies that a being has a partner, and with him/her forms a common base and seeks to unite through give and receive action.⁵³⁾ While the emotional force that the object partner returns to the subject partner is called 'beauty,' the emotional force that the subject partner gives to the object partner is called 'love.' Since God as a parent and subject partner

⁵¹⁾ FFWPU, Divine Principle (Korean), 45.

⁵²⁾ FFWPU, Divine Principle, 32.

⁵³⁾ FFWPU, Divine Principle (Korean), 45.

ceaselessly gives love to human beings as the children of God, as much as a human being returns beauty to God as an object partner, the give and receive action of love and beauty continues. Thus, the more an individual becomes 'God's good object partner' by returning his/her unique beauty, the more he/she receives the deep and great love from God.⁵⁴⁾ If an individual called a good object partner for the joy of God returns beauty to God, the individual, a unique child of God, can be called 'the only begotten son,' and 'the only begotten daughter' emphasized on his/her receiving love from God. 55) It's because of that that the true son and daughter who are able to receive love from God are referred to as the only begotten son and daughter in Unification Theology.56) The standard for the begotten son and daughter to receive love from God is also the perfection of the three great blessings.

In the Garden of Eden, Adam was God's only begotten son and Eve was God's only begotten daughter. · · · They should have grown to maturity and blossomed in the springtime of their lives. At that point, what would God have done? When they were fully in bloom, emitting their unique fragrances, God would have joined them together. That is, He would have held a beautiful wedding for them. Then Adam and Eve would have realized God's supreme ideal of creation. But before this, God's only begotten son and only begotten daughter first needed time to grow until they were fully mature. 57)

The Son and the Holy Spirit as the only begotten son and daughter who are also the original individuals and the good object partners for the joy of God can be the first persons who return joy to God and receive unique love from God by achieving the words of the three great blessings. However, Adam and Eve, who were supposed to be the first begotten son and daughter as well as the first God's good object partners, lost their qualification and became beings of sorrow due to the Fall. When the Son

⁵⁴⁾ FFWPU, Divine Principle, 38.

⁵⁵⁾ Rev. Sun Myung Moon's Words, vol.50, 1971.11.06.

⁵⁶⁾ Rev. Sun Myung Moon's Words, vol.41, 1971.02.15.

⁵⁷⁾ Rev. Sun Myung Moon's Words, vol.159, 1969.05.12.

and the Holy Spirit fulfilled their responsibility as the only begotten son and daughter, they became the archetype of the original being of individuals. Also, fallen people can be true sons and daughters as the good object partners for the joy of God and the only begotten son and daughters receiving love from God, when they attend the Son and the Holy Spirit and live in full accord with the archetype life of the Son and the Holy Spirit.⁵⁸⁾

Grounded on that, the only begotten son and daughter are the true manifestation of God and the true son and daughter of God, the fact that they monopolize God's love implies they are the united beings with God. They display the peculiar and close parent-child relationship between them and God. The parent-child relationship has intensified because of the fulfillment of the three great blessings, so it can be called the oneness of heart, image, and ownership with God.⁵⁹)

Meanwhile, the fact that the being of an individual, who returns joy to God by manifesting God through his/her unique beauty, comes out as the only begotten son and daughter proves that a man and a woman are both God's Image. Moreover, they would become an only begotten son and daughter who receive exclusive love from God when they achieve the perfection of the being of an individual. This means that a man and a woman both have equal value and deserve respect.⁶⁰⁾

Up to the present, women were victimized by the Pauline hierarchical model in the history of theology. The model of 'the creation order,' which Augustine and Aquinas had firmly established and K. Barth reaffirmed in modern times, assigns men, who represent the soul and head, at a high position, and women, who represent the body, at a lower position. This aided the oppression of women. According to Unification Thought, however, a man and a woman both are God's Image. The bible also describes

⁵⁸⁾ Rev. Sun Myung Moon's Words, vol.9, 1960.05.01.

⁵⁹⁾ Rev. Sun Myung Moon's Words, vol.31, 1970.06.04.

⁶⁰⁾ FFWPU, Pyeong Hwa Gyeong (Seoul: Seonghwa Publications, 2013), 1001.

not only the fatherhood but also the motherhood of God symbolically (Hosea 11:4; Samuel 49:15, 66:13; Psalms 25:6).⁶¹⁾ Jesus's teachings also appeal to the equality of sexes and the actual works of Jesus turn out to be the liberation of the suppressed woman and the underprivileged.⁶²⁾ According to J. Moltmann, there is no Christian source to support the Pauline model. For a man and a woman in the image of God, the relationship between the two should not practice the man's superiority but two persons' mutuality. 63)

The differences between a man and woman are worthwhile because each of them manifests one of God's dual characteristics and stimulate God to feel joy. Furthermore, every man and woman is a being of individuality who has a unique disposition and characteristic, so that each person can be God's one and only begotten son and daughter who gives peculiar joy to God and receives exclusive love from God. Like Divine Principle mentioned; "From the horizontal perspective, every person possesses equal value, but that does not do justice to his true worth. From the vertical perspective of Heaven, each individual possesses the loftiest cosmic value."64)

3. Homoousia as True Parental Nature

The same substance of three persons in Unification Theology is the attribute which can be carried when God and man become one in love. Especially, from the view of the Son and the Holy Spirit as human beings, oneness with God in love and carrying

⁶¹⁾ Leonardo Boff, Holy Trinity, Perfected Community. translated by Young Seon Kim & Ok Joo Kim (Seoul: Christian Herald, 2011), 95.

⁶²⁾ Elisabeth. S. Fiorenza, Bread Not Stone: The Challenge of Feminist Biblical Interpretation, trans. Yun Ok Kim (Seoul: The Christian Literature Society of Korea, 1994), 19-25.; Rosemary, R. Ruether, New Woman New Earth: Sexist Ideologies and Human Liberation, trans, Seoung Hee Son (Seoul: The Society of Modern Ideologies, 1980), 41-56.

⁶³⁾ Jürgen Moltmann, The Trinity and the Kingdom: The Doctrine of God, trans, Kyuun-Tschin Kim (Seoul: Korea Christian Publications, 2004), 272-273.

⁶⁴⁾ FFWPU, Divine Principle, 97.

the divine nature imply that they pass the process to experience God's heart and to resemble both the Divine Image and Divine Character. In this paper, I chose the Divine Image among the Original Image and argued that the beings who resemble the whole of the Divine Image are True Parents. Thus, I'd like to conclude by saying that the divine nature of the Son and the Holy Spirit as the perfect human beings, is the nature which is acquired after they become the True Parents.

I think that it's more reasonable to identify Homoousia of the Trinity as the True Parental nature instead of the divine nature, considering God's purpose of the creation. The perfection of love as the purpose of creation implicates not only the perfection of the subject partner but also one of the object partner. However, the divine nature cannot display both perfections of love precisely. From God's side, although His/Her ontological identity is God, His/Her identity is the True Parent that manifests the ideal of love including the reciprocal relationship. If we call Him/Her just God, His/Her identity as the True Parent can be omitted, and the aspect of His/Her perfection of the ideal of love by taking the substantial bodies of the Son and the Holy Spirit cannot emerge. True Parental nature means that God is the True Parent of all humankind and has achieved the perfection as the True Parents.

For humans, also, the True Parental nature is better, which explains why human beings become the true parents through the perfection process. The fact that human beings become true parents means they received and fulfilled the three great blessings given by God. They clearly show that they are the beings who manifest God's ideal of love substantially. The True Parental nature not only defines the persons who achieve perfection by becoming true parents as human beings but also prevents the perfect persons from being regarded as God ontologically. It's also the same when we apply it to the same substance of the Trinity instead of an individual person. The identity of the Trinity

⁶⁵⁾ Rev. Sun Myung Moon's Words, vol.304, 1999.09.05.

⁶⁶⁾ FFWPU, Cheon Seong Gyeong (Seoul: Seonghwa Publications, 2013), 1.2.2:1.

is not God but the 'True Parents.' Therefore, the same substance which evinces the identity of the Trinity is the True Parental nature.

To define the Trinity's homoousia as the True Parental nature has another benefit to integrate the relationship between immanent trinity and economic trinity rather than their separation. The True Parental nature represents that the essence of the Trinity is love, and weaves the relationship between immanent trinity and economic trinity with love. From the position of the ideal of love, all relationships are the relationships between subject and object. The subject and object form the reciprocal relationship and desires for their unity. In this perspective, the relationship between immanent trinity and economic trinity is the relationship of subject and object, and they try to realize the unity through their give and receive action.

While the intangible God is the origin of true love, true life, and true lineage, 67) the True Parents of H.E.H formed the Trinity as the first substantial ancestors.⁶⁸⁾ When human beings, or the creation in the position of children, attend the True Parents and become one heartistically, like the Son and the Holy Spirit in the position of children, experience God's heart and unite with Him/Her in the immanent trinity, they can unite with God and inherit the True Parental nature.

The homoousia identified as the True Parental nature clarifies the existence and activities of the True Parents of H.E.H., who are the union between God, the intangible and vertical True Parent, and the Son and the Holy Spirit, the tangible and horizontal True Parents.

⁶⁷⁾ FFWPU, Pveong Hwa Shin Gyeong, 271.

⁶⁸⁾ FFWPU, Pyeong Hwa Shin Gyeong, 209.

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Appendix

Manuscript Submission Guidelines

The Journal invites the submission of original manuscripts dealing with Unification Thought. Submitted manuscripts should be original pieces of work that have neither been published in other places nor currently on offer to another publisher.

Articles should be no longer than 8,000 words typewritten with 12 point font based on the Microsoft Word standard, including an abstract of 150-200 words, 4-6 keywords, footnotes, and references. The style of footnotes and references should follow the **Chicago Manual of style.** The paper also requires a brief statement of 200 words (on a separate page, at the beginning of the manuscript) providing information about the author's name, degree, educational background, present affiliation, publications, and research interests.

Examples of footnotes in book, article, website, and others are provided below:

1) Book

Sang Hun Lee, New Essentials of Unification Thought: Head-Wing Thought (NY: HSA-UWC, 2014), 90.

Sung Bae Jin, Unification Philosophy of Science 1. A New Renaissance: Systematizing the Academic Studies of Godism (Asan: Sun Moon University Press, 2019), 25.

Unification Thought Institute, Essentials of Unification Thought (Tokyo: UTI, 1992), 1

Rev. Sun Myung Moon, As a Peace-Loving Global Citizen (Washington: Washington Times Foundation, 2010), 242-243.

2) Journal Article

Francis Fukuyama, "The End of History?" *The National Interest* 16 (1989), 3–18. Keisuke Noda, "From Unification Thought to Unification Philosophy," *Journal of Unification Studies* 16 (2015), 135.

3) Article in a Book

Theodore T. Shymmyo, "Unification Christology: A Fulfillment of Niceno-Chalcedonian Orthodoxy," in ed. Theodore T. Shymmyo and David A. Carlson, *Explorations in Unificationism* (New York: HSA-UWC, 1997), 26.

Richard L. Lewis, "Bent and Twisted Spacetime," in *Unification Science* (Asan: Sun Moon University Press, 2019), 19.

4) Popular Magazine

Robert Karniol, "Japan Set to Cut Forces Strength by 20 Percent," *Jane's Defence Weekly*, December 9, 1995.

5) Degree

Mihwa Choi, "Contesting Imaginaires in Death Rituals during the Northern Song Dynasty," (PhD diss., University of Chicago, 2008).

6) Presentation paper

Sung Jo Park, "Theoretical and Practical Approaches toward Unification Policy: Reflections

and Perspectives," Paper presented at the conference organized by the Knowledge Center, Public Administration and Policy and Korea Institution of Public Affairs in Seoul National University, December 5, 2005.

7) Newspaper Article

Axel Berkofsky, "EU's North Korea Policy a Non-starter," Los Angeles Times, July 14, 2003.

8) Website

"Saqqara," http://www.wikipedia.org (searched date: April 1, 2018)

Kellerhals, "Syria Did Not Disclose Building." http://www.kaps.org.(searched date: May 1, 2008)

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