The state of mind of people today and the outlook for the future

Introduction

The call for an "age of spirituality" is being made as a mandate for today's society. Why, then, is this "age of spirituality" being called now? At the very least, such a demand reflects the growing "mental desolation" of modern society and the sense of crisis it is causing. It is undeniable that crimes are becoming younger and more heinous, and the killing of parents and children has become an everyday occurrence.

For many people, however, these "incidents" are "special" events and are dismissed as something they had nothing to do with, or are lucky not to have been involved in.

Modern society has developed driven by the expansion of science, technology, and commercialism. Objectivity and pragmatism have become primary, and subjective human spirituality and beliefs are relativized or individualized. And sometimes they are unquestioned. And shared spiritual foundations and values are disappearing. Such a state of affairs is likely to create a situation of spiritual alienation among people, and this is also a factor in the "mental desolation.

In this paper, in exploring the causes of the situation of spiritual alienation faced by modern people, we first overview the process by which the modern ego, established by modern rationalism, gained freedom through the Enlightenment thought, and then lost the basis of its spiritual foundation through the subsequent development of mechanistic natural science. The modern ego, which has acquired such isolated freedom, is now creating its own alienation situation in order to free itself from the obsession that it is part of the machine. However, the assumptions of the mechanistic view of nature, which was the source of this obsession, are being overturned by the many new discoveries of quantum physics, which are beginning to suggest a completely new vision of the world that can replace it. In the present age, which is undergoing a major shift in worldview since Copernicus, we will discuss the possibilities of how the modern ego and its state of alienation will be transformed in the future.

<From values given to us to values we find for ourselves.>

1.Relativization of the value base through the establishment of the modern "ego”

What Modern Rationalism Strived For

Since ancient times, human beings have been able to form a community, accept as their own values the rules of that community and the values based on the specific beliefs shared by that community, and live in accordance with those values, thereby gaining a stable "emotional ground" for a time. Even

today, there are many people around the world who live this way of life.

However, in the process of Western Europe's modernization, the Renaissance and the Enlightenment thought that followed were oriented toward the possibility of man as an "individual" and the establishment of his freedom. This was an attempt to liberate the "individual" from the communal and religious authority to which he or she had been subordinated.

The "ground of the mind" for the individual freed from authority was so-called "reason. Rather than blindly following the rules of the community or religious teachings, the individual would rely on his or her own "reason" as the greatest foundation for judgment. This was the dawn of modern rationalism.

In its early stages, however, "reason" was not something relative that differed from person to person, but something absolute that ultimately led to something "divine. This "divine thing" is not the "God of revelation" of so-called orthodox Christianity, but the God within oneself. It was a "God of principle. Furthermore, the Enlightenment philosophy that followed, which ultimately placed human reason at the highest level while assuming a theistic concept of God, led to the transformation of modern rationalism into a more anthropocentric rationalism.

However, while many ordinary citizens enjoyed the benefits of the Enlightenment's social transformation through freedom, equality, and democracy, they still maintained their belief in the old "God of revelation," even though the Reformation transformed their personal faith from a church-based faith to an individual faith. This situation continues in modern Western society.

Modern rationalism has played a major role in political, economic, social, and scientific reform. However, in terms of the "state of mind" and personal beliefs of the general public, there is an increasing number of people who are oriented toward Enlightenment-based liberalism, while at the same time, in the West, where Christianity is deeply rooted, there are many who continue to maintain the old Christian worldview, and the two sides are becoming polarized.

The Current Conflict between the Value of Revealed Religion and Modern Rationalist Values

In the U.S., the conflict between Pro-Life conservatives who adhere to so-called Christian fundamentalism and so-called Pro-Choice liberals who hold modern rationalist beliefs has become more serious than imagined, as evidenced by the situation in the U.S., where a blood-soaked struggle is being waged on the abortion issue, to the extent that there have even been bombings. It is becoming more serious than imagined. Not only on the abortion issue, but also on various policy issues, the issue of whether to defend Christian values or to make a liberal modern rationalist choice has become the biggest issue in the presidential election, and American society is beginning to show signs of being ideologically divided.

In the last presidential election, many liberalists on the West and East coasts were anti-Bush, while

in the Central region, many people voted for Bush over any other political issue because they believed that he was "pious. In other words, President Bush won the last election not because of support for his Iraq policy, counterterrorism, or other political issues, but simply because he was able to appeal to the conservative base in the central region of the U.S. by being "pious" and more conservative in his Christian values. And this fact was also made clear by the results of post-election polls.

In short, conservatives, who deeply adhere to the Christian worldview and its values, feel an acute sense of crisis over the destruction of Christian values by modern rationalist liberal thought.
In Western society, where modern rationalism was born, its ideas have not necessarily penetrated all the way down to individual beliefs, but rather the Christian worldview and values, which are premised on faith in a God of revelation and salvation, still persist as individual beliefs, and have become a force of resistance to modern rationalist thought.

However, it should not be overlooked that modern rationalism, which came about through the Enlightenment, was originally intended to liberate the "individual" from the belief in the "god of revelation" and its religious decree, as mentioned above, and to liberate the "individual" by enabling them to judge based on each person's "reason.

Similarly, the conflict between the West and Islamic fundamentalism, which has recently become a global issue, may at first glance appear to be a conflict between monotheistic religions such as Christianity and Islam, but in fact, what the Islamic fundamentalists themselves fear the most is the so-called Western way of thinking. In fact, the essence of it is the modern rationalist free thought mentioned above. They should intuitively know that if such an ideology is brought into Islamic society, it will inevitably destroy the Islamic religious worldview and values that they have long held.

-How Scientific Positivism Transformed Modern Rationalism. -

Although modern rationalism is generally regarded as leading to the further development of scientific positivism, it should be noted here that there was a major transformation in the process.

Descartes advocated the so-called "dualism of mind and matter," which became the basis of the mechanistic view of nature in modern science. The reason of one's own doubt, which remains to the end whether one doubts or not, is an undeniable reality and is based on a principle other than the world of material extension governed by the laws of physics. Descartes believes that the origin of this principle may be traced to the "principle God" as mentioned above. At the same time, Descartes believed that the world of material extension, which is governed by physical laws also created by God, could predict all future developments if only its physical laws could be determined, and this was the beginning of the so-called mechanistic view of nature that followed.

In other words, Cartesian mind-matter dualism was premised on the existence of a spiritual principle other than the world of material extension governed by physical laws, and the establishment

of the so-called modern ego was also based on this premise.

Later, in the field of philosophy, the debate between rationalism and empiricism continued, and in the field of natural science, scientific positivism, which integrated rationalism and empiricism, was established in the course of Copernicus, Galileo, and Newton.

In other words, a method was established in which a theory created by reason could be accepted only when it was proven through empirical experiments and other means.

After Newton's establishment of classical physics, natural science developed rapidly, and based on the mechanistic view of nature, the mechanisms of everything from the universe to living organisms as machines were increasingly elucidated. In other words, scientific positivism has come to be seen as the basis of physicalism.

In other words, while scientific positivism has brought about the development of modern civilization through the elucidation of physical phenomena and their application, proving the reality and validity of objectively verifiable material principles, spiritual principles, on the other hand, remained an unprovable metaphysical argument and was left behind in the progress of scientific civilization while remaining outside the scope of scientific positivism. Eventually, the very existence of such an objectively unprovable thing as a mental principle came to be doubted, and it became more "scientific" and "rational" to regard mental activity as a kind of advanced physical phenomenon and such a view is now gaining ground.

The Loss of the Divine Spiritual Principle and the Isolation of the Modern Ego

Here, the modern ego, which was originally established on the premise of an absolute foundation of spiritual principles, has lost the absolute basis of its spiritual foundation as scientific positivism has subsequently shifted toward materialistic monism.

However, neither Newton, who established classical physics and scientific positivism, nor Einstein, who later discovered the theory of relativity, were themselves materialists. They themselves were still the aforementioned theists, but it was only a personal belief of sorts, and independent of their "subjective" beliefs, the various achievements of modern scientific positivism based on classical physics and its worldview are still the work of many "scientists. The various achievements of modern scientific positivism based on classical physics and its worldview, independent of their "subjective" beliefs, have convinced many "scientists" and "modern peoples" who learned their worldview of the objectivity and absoluteness of material principles and, in contrast, have strongly impressed them with the doubtfulness and tenuousness of the reality of such things as spiritual principles. It is undeniable that the "modern people" were convinced of the objectivity and absoluteness of material principles.

Under such circumstances, the "reason" of rationalism is no longer the reason as a principle that leads to the divine, but the "reason" of man's own reason or physical laws (whether or not the creator

of those laws exists is no longer important), and it has become "reason" in the sense that it is logical and fits the logic. The science taught in ordinary school education is this kind of materialistic natural science, and people today have unwittingly come to accept the worldview presented by this materialistic natural science as the most rational (scientific) worldview, and whether they are aware of it or not, they have come to think and live based on it.

However, while the worldview presented by this materialistic natural science is at first glance wonderfully logical and orderly, yet it is in fact sternly inorganic, and it unconsciously instilled in us a view of human beings, like dust on the surface of the earth, who were meaninglessly born by chance on a planet like a dot in the solar system which is also a small part of this vast material universe that has existed solemnly since its primordial beginning.

In particular, people who have not been brought up believing in a particular religious worldview, such as the Western Christians I mentioned earlier, have been influenced by the above inorganic and mechanistic worldview in many cases, as a matter of course. They were thrown into such an inorganic world where the reason or meaning of their existence are unknown. By the modernization through Enlightenment thought, modern people were "liberated" from the religious worldview and values that had been their spiritual bases. Furthermore, by the urbanization through the modern Industrial Revolution, they were "liberated" from the rules and the value systems of their indigenous communities also. It means many of the modern people were left out in the conditions where they have to make their own judgments of right and wrong, find their own basis for all standards of behavior, and even discover the meaning of their own existence.

-Society as the only "spiritual stronghold" and the consequences of alienation from it.-

In such a situation, the only thing that "oneself" can rely on is the recognition of one's own significance in social evaluations and human relationships. However, the elemental reductionist view of modern science casts a shadow here as well. The division between oneself and others, like the independent atoms of classical physics, is inherent and fixed, and people tended to regard themselves as essentially isolated from each other, just like billiard balls.

In such a view of the world and human beings, those who are good at what they do and are valued by society, and those who are not so good at what they do but have received unconditional love from their families, especially their parents, can find their "spiritual home" there. However, those who are not valued by society because of poor performance, or those who cannot feel unconditional love from their parents even if their performance is good, will not be able to find a "spiritual ground" or truly feel the value of their own existence. If they cannot be recognized by others just being themselves, they will try to assert and make others realize their existence by using extraordinary measures. In the worst case, it's possible they'll resort to the worst possible means. If others do not recognize their

existence, they can only assert and feel their own existence by means of freely eliminating the existence of others. This is nihilism at its most extreme, but even apart from such extreme cases, it is undeniable that the worldview presented by materialistic natural science has a tendency to produce such nihilism.

As mentioned earlier, in such an inorganic worldview where the meaning of one's own existence is unclear, it is extremely important to have deeper connections, mutual understanding, and mutual appreciation among human beings as a guarantee for a healthy life. In particular, unconditional assurance of one's raison d'etre by parents (or their alternatives) within the family from early childhood will become indispensable.

However, if such "unconditional love" from parents is transformed into "conditional love," such as excessive expectations for the sake of the parents' ego or public image, or evaluation only when the child behaves as a good child, then the child may not be able to fulfill his or her own expectations. In the worst case, the child's true "self" will be increasingly alienated, and in the worst case, the child will become invisible to his or her true self, as described above, and fall into a situation of mental alienation like a transparent human being.

In this sense, the "abnormal behavior" of minors in today's Japanese society, which has been occurring one after another since the Sakakibara incident in Kobe, is quite natural.

The modern ego, which was initially established on the premise of the dualism of material and spiritual principles, was "liberated" from social and religious authority by the Enlightenment thought and gained freedom as an individual, but later, as scientific positivism slanted further toward materialist monism, the freed modern ego lost the other pillar of spiritual principles, which should have been its original support, and was, as it were, raised to the second floor and had the ladder removed.

This is where the "modern problem" of the relativization of the value base and the uncertainty of one's spiritual foundation arose.

The "Copenhagenian" Shift in Worldview

-Exposing the Limitations of the Classical Physics Worldview and the Elemental Reductionist Approach-

The inorganic and mechanistic worldview of classical physics and its method, elemental reductionism, have had a great impact on people's way of life, and until the present day, much of what is called "science" has been built on the premise of such a classical physical worldview. On the other hand, in the world of physics, it has become clear that the "objective reality" of matter, which classical physics had believed in as its premise, must be fundamentally revised by the so-called "quantum

mechanics" [1] theory that has been developed since the 1920s. [2][3]

Once thought to have been completed by Newton's classical physics, Einstein's theory of relativity led to a transformation of the basic ideas of physics. Nevertheless, they are still basically along the same lines in that both are based on the basic premise of the objective reality of what we call matter. The difference is that Newton's classical physics considered space-time to be absolute, while Einstein proved that it is only relative. In other words, Newton thought that no matter where one goes in the universe, distance and the flow of time are always constant and unchanging (in short, they have absolutes), whereas Einstein proved that there is no such thing as an absolutely objective distance or flow of time, since both the distance and the flow of time change with each state of motion. This is how Einstein proved the so-called relativity of space-time. However, both of them never doubted the objective reality of matter, even though there is a difference between absolutes and relativities. In this sense, they were on the same side.

However, Niels Bohr and his disciples in Denmark (the so-called Copenhagen School of quantum physics) steadily devised and discovered theories and principles that Einstein could not accept until the end. Until the 1980s, the debate continued as to whether Einstein was right or the quantum physicists were right, and in particular, the so-called EPR paradox, which led to the question of "nonlocality," the major remaining question. The so-called EPR paradox [4], which raises the question of "nonlocality," has also been proven to be correct by experiments, thanks to the recent development of experimental equipment. Here, the "objective reality of matter in a single universe," which had been the basic premise of materialistic natural science until then, and which even Einstein believed in until the very end, had to be reconsidered from the very beginning.

Let us look at the resulting world view of quantum physics in some more detail.

-Quantum Physics Suggests a New Vision of the World-

Classical physics has taught us that matter is composed of atoms, and that atoms are composed of nuclei and electrons orbiting them. However, it was soon discovered that if the electrons had objective reality, they would generate electromagnetic waves in the blink of an eye as they revolved around the nucleus, using up all their rotational energy and colliding with the nucleus due to the nucleus's gravitational electric force.

If the electrons collide with the nucleus in an instant, the matter composed of them can exist only for an instant. In reality, however, matter appears to continue to exist forever. In order to solve this great contradiction, new theories such as Schrodinger's wave equation were developed.

What they found was that elementary particle, which are the ultimate form of matter such as electrons, have dual natures of wave and particle, and that until they are observed, their actual existence cannot be determined. What is meant by the fact that the way of existence is not determined

until it is observed is that subatomic particles are in a state before existence when they are not yet observed.

What exactly is meant by pre-existence is the state in which "possibilities" in countless positions simultaneously "coexist" or "superimpose" with each other. The word "innumerable" does not mean that all possibilities coexist in the same way, but rather that all possibilities, including all probabilities in between, from the most likely (high probability) to the least likely (low probability), coexist. When the range of possibilities and the probability of coexistence of each position are graphed, they are represented as a function graph, which is called the Quantum Wave Function in quantum mechanics.

In other words, until it is observed, all possibilities of existence within the probability range expressed by the wave function coexist at the same time, and only one of them is selected at the time of observation to determine its existence. Moreover, position and momentum are never determined simultaneously; once position is determined, momentum cannot be determined, and once momentum is determined, position cannot be determined. This is called the famous Heisenberg uncertainty principle.

In other words, elementary particle, which is the ultimate form of matter, is determined in the way it exists only after it is observed, and even if it is determined, only either its position or momentum can be determined. It turned out that there is no such thing as a subatomic particle with a solid objective position and momentum, which moves around on its own regardless of how it is observed, as was believed until classical physics.

If this is true, then the moon in the night sky, which is composed of such subatomic particles, must also be in a state of undetermined existence unless it is observed. However, Einstein was not convinced by such "irrationality," and he was stubborn to the very end, leaving the famous line, "God does not play dice," as proof that quantum theory is incomplete in that the deterministic law of causality, which had been the fundamental principle of classical physics, cannot be applied and can only be discussed in terms of probability. In fact, he himself triggered the subsequent development of quantum mechanics with his "light quantum hypothesis," but he was not convinced by the observation problem and probability theory until the very end. However, no matter what Einstein said, numerous subsequent experiments proved the correctness of quantum mechanics. Finally, the definitive proof was obtained by the aforementioned verification of the EPR paradox.

Proof of Non-locality and Non-separability of Particles - The EPR Paradox

The EPR paradox is actually a thought experiment devised by Einstein-Podolsky-Rosen to prove the incompleteness of quantum mechanics. Suppose first that twin photons are ejected in opposite directions. The light is polarized, but according to quantum theory, the angle of polarization is not "determined" until it is "observed. In any case, these two photons must be polarized to opposite angles

due to their interaction when they are emitted. However, since neither photon's angle of polarization is "fixed" until it is observed, the moment either photon is observed, the angle of polarization of the observed photon is fixed for the first time, and the angle of polarization of the other photon is determined accordingly. The angle of deflection of the other photon is determined to be the exact opposite. According to quantum theory, this can happen even if both photons are 100 million light-years apart.

Einstein said that if quantum theory is correct, then the moment the angle of polarization of one photon is determined by observation, the information is transmitted "across the speed of light" to the other photon at exactly the same time, thereby determining its opposite angle of polarization. This is contrary to the principle of relativity, which holds that "nothing can exceed the speed of light," and thus attempted to prove that quantum mechanics was incomplete.

For many years, this thought experiment could not be actually verified by experiment due to the lack of observational equipment, etc. In 1964, a mathematical theory called Bell's inequality was proposed to prove it, but it could not be accurately verified by experiment, and until recently, the physics world was unable to determine which one is actually correct.

However, in 1982, a rigorous experiment by Alain Aspé and his team at the University of Paris [(5)] finally proved that quantum mechanics is correct.

The results of this experiment proved that, as quantum theory claims, elementary particles "do not determine their way of existence until they are observed," and that they are "nonlocal" and "inseparable.

Thus, the "nonlocality" and "inseparability" of subatomic particles have been proven.

Basically, "nonlocality" and "inseparability" mean the same thing, but there is a difference in the context in which the terms are used.

Non-locality refers to the fact that, in the case of the twin photons in the previous example, even if both photons are 100 million light-years apart, when one photon's way of existence is determined by observation, and then the way of existence of the other photon, which is 100 million light-years away, is correspondingly determined at exactly the same time. This means that each photon has a "connection that transcends spatial distance" and that "the range of mutual influence is not local.

Inseparability basically refers to the relationship between the twin particles mentioned above, but it is not limited to that. Therefore, the observation of a single particle is sometimes used to mean that its "infinite interconnectedness" determines the existence of all particles in the universe at the same time.

This fact completely overturns the assumptions of the old classical physical worldview and its elemental reductionist approach, and it is precisely this fact that forces a "Copenhagen-like" major shift in worldview and cosmology that goes beyond the "Copernican turn" of the past.

Instead of the old billiard-ball theory of atoms, in which each part has its own independent existence, "all particles must now be viewed as a part of interconnected system in the whole universe

that are all interconnected with each other."

According to the bootstrap hypothesis [6] of Jeffrey Choo, who further developed Heisenberg's S-matrix (Scattering Matrix) theory, which led to the discovery of the uncertainty principle, it is believed that at the quark level, each particle itself does not have its own unique properties, but that each particle's properties emerge from the relationships among the particles. Rather, it is believed that each particle manifests its own characteristics depending on the relationship between the particles. To illustrate this fact that the nature of quarks stands in relation to each other, let us compare the nature of quarks to the character of human beings, which changes according to their relationships with each other. For example, a person may be an honest son to his parents, but a stubborn father to his children, or a loyal subordinate to his boss, but a ruthless boss to his subordinates. In other words, "there is no fixed entity or inherent property in itself, but everything depends on interdependent relationships to manifest its apparent characteristics.

Currently, the "superstring theory" [7] and the "M-theory," which is regarded as the ultimate theory of physics, have been introduced to further develop the bootstrap theory and compensate for its deficiencies, but they assume "an oscillating body consisting of 10 or 11 dimensions," which renormalize multiple dimensions beyond the 4-dimensional space-time of 3 dimensions plus time that we can normally perceive. If these theories are verified, they will not only unify Einstein's general theory of relativity and quantum mechanics, but also open up a revolutionary worldview beyond what has been clarified by quantum theory to date. However, it is said that this may take another 100 years.

-Quantum Observational Problems and the Anthropic Principle-

Although no one at the cutting edge of quantum physics today doubts the fundamental correctness of the theory, the only controversy that still exists is over the interpretation of the so-called quantum observation problem.

If one possibility is selected out of the various possibilities for existence by observation, the big question remains: where do all other possibilities that were not selected disappear to at that moment?

The Copenhagen School of quantum physics, which is the traditional orthodox school of quantum physics, answers this question by saying that at the moment of observation, the wave packet of the wave function contracts and only one possibility comes into existence, while the other possibilities completely vanish.

However, according to this interpretation, the act of observation by human being is of great significance, and if we are to go further, the way of existence of the universe as a whole cannot be determined without human observation. We humans, who have not been around since the beginning of the universe, are able to go back in time and determine the existence of the universe as it would have existed long ago through our acts of observation.

If one follows the Copenhagen Interpretation in a straightforward manner, such a conclusion would be reached. In fact, John Wheeler and others have proposed a theory [8] that human acts of observation even define the primordial universe backward in time, since the "delayed selection experiment," which he invented, was actually verified through experiments in 1984, proving that acts of observation affect the past state of particles backward in time.

Such an influence of human existence on the establishment of the universe is called the "anthropic principle" in cosmology, and the interpretation of the anthropic principle like Wheeler's above is called the "strong anthropic principle," while Hawking's interpretation, which takes into account the influence of human existence, is called the "weak anthropic principle.

The reason why the concept of the anthropic principle had to be introduced into the construction of cosmology is that the probability of an initial singularity accidentally creating a universe in which human beings could exist was estimated to the power of 10 minus 1230 when the universe was created by the Big Bang, a number that is almost impossible to happen by chance.

To explain this miraculous fact in terms of the Copenhagen interpretation of quantum mechanics, since the beginning of the universe, no one had ever observed the particles in the universe, so the way they existed was undetermined, and countless possibilities (e.g., 10 to the 1230th power) "coexisted" or "superposed. However, with the appearance and observation of human beings, the wave packet of the wave function contracted at once, and from the coexistence (superposition) state of the innumerable (10 to the 1230th power ways of being) of the universe, only the universe in which the planet Earth was born and in which human beings could appear came into existence. This is generally what Wheeler and his colleagues mean.

In the Copenhagen Interpretation, human beings, once reduced to the level of dust on the surface of the earth by classical physics and materialistic natural science based on the worldview of classical physics, have suddenly become the main actors in the universe, and are even involved in the creation process of the entire universe.

In the Copenhagen Interpretation, human acts of observation have a decisive meaning in all physical phenomena, and as the "contraction of the wave packet of the wave function" which the Copenhagen Interpretation claims is not necessarily derived from mathematical equations, a mathematically more "reasonable" interpretation emerged.

The Many-Worlds Interpretation

The many-worlds interpretation is a theory that was first proposed by Hugh Everett in 1957. This many-worlds interpretation holds that at the moment of observation, the wave packet of the wavefunction contracts and not only one possibility comes into existence, but that all possibilities represented by the wavefunction simultaneously branch out into different worlds and come into

existence in each of these worlds. Since the human observer also branches off into different worlds at the same time, it is thought that only one possibility seems to have materialized for one person in that branch.

In other words, the real world is not a single entity, but is branching out moment by moment with the number of possibilities, and we (the same person) in the world are branching out in the same way, but each of us cannot be aware of the other branching out worlds or ourselves in them, and therefore, for the present self, there is only one world at any given time. Therefore, it is interpreted that there always seems to be only one world for the present self.

On first impressions, this theory sounds even more unrealistic than the mainstream Copenhagen interpretation, but more and more physicists are now supporting it because it is the most theoretically consistent and does not involve any unnaturalness or superphysical elements such as the anthropic principle.

In cosmology, this many-worlds interpretation holds that from the beginning of the Big Bang, an infinite number of universes (e.g., 10 to the 1230th power) have existed in their own worlds, each with its own branching. (12) Then, in one of those innumerable universes, the earth happened to be born, and a universe in which human beings were nurtured also came into existence. However, since countless other possible universes have also come into existence, the fact that the universe in which we exist is not a miracle, but a matter of course.

And since the branching world continues to come into existence at this very moment, branching out moment by moment into as many possibilities as there are possibilities, there is not one future for each of us as observers, but countless possibilities for the future.

However, even in this many-worlds interpretation also, there are many unanswered questions, such as to which of the many possibilities of branching oneself is connected to which of the many possibilities of branching oneself.

These questions should be the subject of joint research with psychology, cerebral physiology, etc., rather than physics alone, but at present, science in general is still based on the classical physical worldview. It will take some time before such a full-fledged study is conducted. However, it is also true that Pauli, one of the leading figures of quantum mechanics, and Jung, the giant of depth psychology, had already predicted the necessity for the future collaboration of their respective research fields in the middle of the 20th century. (13)(14)

In any case, according to the new worldview common to both the Copenhagen interpretation and the many-worlds interpretation, as clarified by quantum mechanics, "each particle is not independent and self-existent in its own right, but is connected to each other beyond spatial distance, and the connection extends to the entire universe. Therefore, objects composed of such particles and we human beings are all connected in such an infinite interconnection" (15).

Moreover, the apparent properties of each thing do not exist as an entity in itself, but are the

manifestation of interdependent relationships among themselves.

We have seen above that the fixed and inorganic worldview presented by classical physics and modern science developed by the elemental reductionist method, and the method of dividing and analyzing parts as having fixed entities, have had a great impact on the worldview and ways of thinking and living of modern and contemporary people. The new worldview presented by quantum mechanics and its development is something that has the potential to revolutionize the way human beings view the world, thereby significantly changing the way we view things in the future.

-The classical physics-based worldview that continues to persist and the resulting status quo-

Today, many physicists focus only on the practicality of quantum mechanics and do not go into depth about the world picture it suggests or its interpretation.

Although the theory of quantum mechanics was recognized for its practicality and validity from an early stage, the new worldview it suggests could not be actually confirmed until recently due to the underdevelopment of means of verification. Hence, questions that would lead to a fundamental rethinking of the classical physical worldview have long been left unanswered. And, as usual, only the classical physical worldview remained the "common sense" in scientific fields other than physics and in the general public, and the situation continued to the extent that Einstein's theory of relativity added a slight modification to it.

This classical physical worldview has established the "common sense" that "a thing consists of parts that are independent of each other, and the whole is formed by the external interactions of these parts. This "elemental reductionism" has become a common-sense approach, which states that the whole can be grasped by analyzing the characteristics of each component and the power relationship of their external interactions.

Even in human relations, each individual, who has a fixed self-identity like billiard balls colliding with each other, expects others to change their behavior through external interactions and bargaining with others, just as billiard balls collide with each other, and in some cases, expects others to change their behavior. This has contributed to the creation of diplomatic tactical human relations based on the view that the division and independence between the self and others is inherent and fixed.

This is also thought to be the reason why more and more people are becoming "reclusive" because they are tired of such "external pressure" and "bargaining" with others, and also why they do not associate with people they do not like, but only with those they are comfortable with, resulting in fragmented and rigid modern human relationships.

There is an unconscious stereotype and illusion that a jerk is "intrinsically" and "eternally" a jerk, and conversely, a person who has a good feeling for someone is intrinsically and eternally a good feeling for that person. When that illusion crumbles, the relationship will also fall apart. Moreover, the

"modern ego," once "liberated" from all restraints, is more interested in its own "freedom" and "comfort" than in repairing such broken relationships. This leads to an increasingly diluted and diplomatic relationship. In the worst case, the only "friends" they have are their pets, a social phenomenon that symbolizes the "loneliness" and "alienation" of the modern ego in modern civilization.

The Possibility of Restoring the Humanity of the Modern Ego through a New Worldview

However, in contrast to the classical physical worldview that seems to have contributed to the isolation and alienation of the modern ego in modern civilization, the aforementioned revolutionary discovery of quantum mechanics has revealed that "everything in the world is fundamentally connected, and from the particle level, nothing in the world has an independent and fixed identity of its own. There is nothing in the world that has an independent and fixed identity, and each "relationship" excites a mutual "internal change," and each "internal state" excited by that particular relationship is the "state" of that particle at that time. The fact that each "relationship" excites mutual "internal changes" and that each "internal state" excited by that particular relationship is a characteristic of that particle at that time, and that between other particles another mutual internal change is excited and another characteristic appears, is truly suggestive. As mentioned earlier, this will not only force us to fundamentally rethink our view of natural science, but will also have a great impact on our worldview, the future of society as a whole, and the way people live their lives.

In recent years, based on the quantum worldview described above, research has already been conducted to explore the nature of the new "ego" and its relationship with others, as well as the future of society. [(16)(17)] However, this is just the beginning, and more research from various fields is awaited in the future.

The so-called "self-identity" that is attracting increasing attention in the recent social situation called the "age of spirituality" can be reinterpreted from a new viewpoint based on quantum theory as "not something that has an inherently fixed essence or nature. It is "the sum total of one's internal state excited by various relationships with others from the past to the present.

Naturally, this is also true of others. What seems to be the essence or true nature of another person to us is never that person's "true nature," but rather an aspect of that person's "sum total of internal states that have been excited by relationships with various other people from the past to the present, which is temporarily expressed by their relationships with us and their current situation.

Conversely, if we can go back and learn about a person's past circumstances and relationships, we can fully understand why he or she currently has that aspect of the internal state, which in turn will help us to understand what kind of circumstances and relationships he or she needs at the present time and how we can contribute to that. This will also allow us to create our own internal changes (toward

the person) and external actions that can contribute to the person's situation and relationship.

Furthermore, as quantum theory suggests, just as all the particles of the universe are intrinsically connected and united as one system, the self and the other are never separate, and this separation is only virtual. Moreover, "countless possibilities of existence coexist," both in the self and in others, and infinite possibilities are open to the nature of the relationship and its future.

At the same time, each point connected to the infinite network of unity has a unique pattern of relationships, and no two points have exactly the same pattern of relationships, so in that sense, each point is "irreplaceable. Once it is lost, the exact same relational pattern can never be reproduced again. The same can be said of human existence: the pattern of relationships connected to any person is unique in the universe, and once that person is lost, it can never be recovered again. This means that every person is unique and irreplaceable. Moreover, this is true not only for human beings, but for all living things and all beings. This recognition of the fact evokes respect and deep reverence for all other beings, including oneself.

In real-life relationships, every person is unique in the pattern of relationships that lead to that person, so there must be something to be learned from every person that is different from oneself. When people share this kind of awareness, human relationships in general will become dynamic, creative, and warm, in which people learn from each other, understand each other, and improve each other.

Only then will the "modern ego," which once abandoned the values it had been given and became oriented toward its own freedom and judgment, realize that, although it has won its freedom as a result, it finds itself in an inorganic wilderness, surrounded by countless others who try to interfere with its freedom, and that it has to flee. If one tries to escape from this situation, loneliness and alienation await him or her.

By acquiring a new view of the world and the human being, the modern ego, which had been isolated until then, will be able to respect others based on "its own judgment," and will be able to recover the human relationship of learning from others and improving oneself together. It is also expected that they will acquire a sense of unity with the interconnected and organic world.

<Conclusion>

The modern ego, established by modern rationalism, gained freedom through the Enlightenment thought, and then lost the basis of its spiritual foundation through the development of mechanistic natural science, and yet, in order to be free from the obsession that it is a part of the machine, it shuts off all relationships and, as a result, suffers from a sense of loneliness and alienation. We have reviewed the modern composition of people who are plagued by a sense of loneliness and alienation, and have seen that the assumptions of the mechanistic view of nature that were the source of this obsession have

been overturned by the newly emerged quantum theory, opening up the possibility of acquiring a completely new worldview and view of humanity.

The new worldview suggested by quantum theory, which could be the premise for such new possibilities, has been the subject of a number of books published in the so-called new science genre that began to emerge around the 1970s. Various educational books for the general public have been published.

Many of these books point out the similarity between the world image suggested by quantum theory and the concept of śūnya in Buddhism. However, since this is not the subject of this paper, I have not dared to mention it here.

In the 1950s, American psychiatrist Stanislav Grof began research on the effects of drugs on people's states of consciousness. He began his research on the effects of drugs on people's states of consciousness. In the course of his clinical experiments over the next 30 years, he discovered that during the course of their experiments under the influence of drugs, subjects retained memories of their families, relatives, ancestors, peoples, and species, and in some cases, even memories of pre-human life forms, that they would never have known personally. In addition, when the contents of what at first glance appear to be mere hallucinations are examined closely, many cases were found to contain historical facts and special information, such as details of ancient Egyptian mummy production techniques that were not known to the individual or to the general public. This research has led to the publication of a study that suggests that individual consciousness is connected to a vast domain that extends beyond individuality to include family, ancestors, ethnicity, humanity as a species, and all living things in general. [(18)] This led to the establishment of a new field of psychology called transpersonal psychology.

In the field of biology, the theory of "morphogenetic fields" proposed by Rupert Sheldrake of the University of Cambridge has also presented a new viewpoint that organisms, and in some cases minerals, share "morphogenetic fields" that transcend individuality, and that these fields play an important role in the evolutionary process. This is a new viewpoint that has been put forward.

However, we must be careful in the movement to integrate these new discoveries in physics, psychology, biology, and other fields into a new thought movement.

Some of the so-called "new age movements" have occult mystical ideas lurking in the background, and there is a sense of "arbitrariness" in their attempts to use new discoveries in advanced science to support or promote their own occult ideas.

It would be a great loss to mankind if even new discoveries themselves were to be looked upon with a suspicious eye due to numerous such self-serving publications.

The "new facts" we have seen so far and the world and human perspectives revealed by them will contribute to a healthier and more constructive way of life and society in the future, without relying on "arbitrary" interpretations. In order for the "new facts" we have seen so far and the world and human

perspectives revealed by them to truly contribute to a healthier and more constructive way of life and society in the future, it will be necessary not only to conduct further steady research in each field, but also to conduct interdisciplinary joint research across fields. Currently, both the natural sciences and the humanities have become increasingly divided and specialized, and there is a lack of mutual utilization of the results of such research. For this reason, the results of physics have not been fully incorporated into the fields of psychology and philosophy, and vice versa. Similarly, it is expected that medical science, sociology, and religious studies will increasingly need to collaborate on various issues in the future. The deeper insights and discoveries about the world and human beings that will come to light in the future may end in "can't see the forest for the trees" if research is conducted only in individual fields of specialization. The time has come to gather the wisdom of mankind and look toward the direction of a new civilization. I believe that the success or failure of this effort will have a bearing on the future existence of the human race.

<References>

(1) Werner Heisenberg *Physical Principles of the Quantum Theory*
Dover Pubns ; ISBN: 0486601137 ; (1930/06)

(2) Werner Heisenberg *Physics and Philosophy: The Revolution in Modern Science*
(Great Minds Series) Prometheus Books ; ISBN: 1573926949 ; Reprint ed. (1999/05)

(3) Werner Heisenberg *Philosophical Problems of Quantum Physics*
Ox Bow Pr ; ISBN: 0918024153 ; (1979/06)

(4) Fred Alan Wolf *Taking the Quantum Leap*: Chapter 9. P153-P163
Perennial ; ISBN: 0060963107 ; Revised ed.(1989/01)

(5) Michael Talbot *The Holographic Universe*: P52-P53
Perennial ; ISBN: 0060922583 ; Reprint ed. (1992/04)

(6) Fritjof Capra *The Tao of Physics*: P276
Shambhala Pubns ; ISBN: 1570625190

(7) Brian Greene, The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory
W W Norton & Co Inc; Reprint (2010/10/11)

(8) John Archibald Wheeler , Kenneth Ford, Kenneth William Ford *Geons, Black Holes, and Quantum Foam: A Life in Physics* : Chapter 15, P334-P339
W W Norton & Co Inc ; ISBN: 0393319911 ; (2000/02)

(9) Stephen W. Hawking、The Universe in a Nutshell
Bantam; Reissue (2001/11/6)

(10) Sumio Wada, Quantum Mechanics Tells Us About the World: Multiple Overlapping Pasts and Futures
Kodansha ; ISBN: 4062570122 ; (1994/04)

(11) Sumio Wada, Schrodinger's Full of Cats:
The Many-Worlds Interpretation Opens a New Worldview of Quantum Mechanics. Kawaideshoboshinsha (1998/09)

(12) David Deutsch *The Fabric of Reality: The Science of Parallel Universes-And Its Implications*
Penguin USA (P) ; ISBN: 014027541X ; (1998/08)

(13) Wolfgang Pauli, ed. by C.P. Enz & K.V. Meyenn, trans. to Eng., R. Schlapp *Writings on Physics and Philosophy*: Chapter 17, P150Springer-Verlag ; ISBN: 354056859X ; (1994/10)

(14) C.G. Jung *Synchronicity*
Routledge,an imprint of Taylor & Francis Books Ltd ; ISBN: 0415136490 ; (1985/09/19)

(15) David Bohm & B Heley *Foundation of Physics Vol.5: On the Intuitive Understanding on Non-locality as Implied by Quantum Theory*: P96-P102

(16) Danah Zohar & I. N. Marshall *Quantum Self： Human Nature and Consciousness Defined by the New Physics*
Quill ; ISBN: 0688107362 ; Reprint ed. (1991/05)

(17) Danah Zohar & Ian Marshall *The Quantum Society： Mind, Physics and a New Social Vision*
Quill ; ISBN: 0688142303 ; (1995/07)

(18) Michael Talbot *The Holographic Universe*: P66-P72
Perennial ; ISBN: 0060922583 ; Reprint ed. (1992/04)