

Globethics Repository

The logo for Globethics, featuring the word "Globethics" in white sans-serif font on a solid blue rectangular background.

Proposal of the nous self concept as a worldview for the symbiotic integration of modern science

This page was generated automatically upon download from the Globethics Repository.
More information on Globethics see <https://www.globethics.net>. Data and content policy
of Globethics Repository see <https://repository.globethics.net/pages/policy>.

Item Type	Article
Authors	Uejima, Kayo
Publisher	EUBIOS ETHICS INSTITUTE
Rights	With permission of the license/copyright holder
Download date	2026-09-11 08:04:31
Link to Item	http://hdl.handle.net/20.500.12424/176463

Proposal of the Nous Self Concept as a worldview for the symbiotic integration of modern science

- Kayo Uejima, M.A.

Ph.D. Student, Graduate School of Social and Cultural Sciences, Kumamoto University

Email: kayo@lablink.jp

1. Overview

In this paper, I try to explain in detail from a philosophical perspective the design of the Nous-Self concept.³ The most important viewpoint that is lacking in science is the linkage between the whole and part as well as the position and standpoint of each scientific domain as a whole. I attempt to show a linkage between the whole and part as well as position of each scientific domain in the whole with the Nous-Self Concept. This means symbiotic integration of worldview in various scientific domains with the Nous-Self Concept as a universal policy that can contribute to attainment of the Millennium Developmental Goals (MDGs) for construction of a sustainable society.

Symbiotic integration of science and philosophy with a comprehensive exploration needs collaborative work of a lot of diverse people rather than one genius for construction of sustainable society. Because, progress by collaboration of international diverse people rather than progress of only one genius can contribute to concrete construction of sustainable society. Though I will later write more scientific detailed evidence about the Nous-Self concept, I only propose the Nous-Self concept that becomes a foundation of a new worldview as a scientific and ethical direction for MDGs by arrangement of scientific concepts to edit various modern scientific domains with philosophy.

In short, I suggest the Nous-Self concept for contribution to universal policy concerning construction of sustainable society. The Nous-Self concept aims at one of fundamental frameworks for creation of new ethical standards. This is because the Nous-Self System is formed by systemic physiology as an organism. At the same time, the Nous-Self Process is formed by a process of interaction between consciousness and the social system.

In this paper, Nous shows the notion that links to the universe. Nous also shows infinite and self-rule by continuous motion of itself. At the same time, Nous shows the intelligence of living universe as noetic.

Self shows the notion that links to individual from the universe. Information shows the notion that links to transformation of form between Self and Nous for emergence and evolution between individual and universe. If the individual self with spatial structure has an open system as organism, individual self becomes a partial system of universe as whole system. If an individual self with spatial structure has nesting hierarchy as the being, individual self becomes the universe as itself. This means macrocosm and microcosm that cosmos exists outside and inside Self. Self with nesting hierarchy as the being has a boundless open system as the organism. Nous-Self concerns the form of organism as a notion.

The form of organism as a notion derives from metaphysics of Aristotle. Lancelot Law Whyte (1995) indicated that the form as a notion has the meaning of shape, configuration, structure, pattern, organization and system of relationships. Whyte (1995) indicated the need of natural philosophy for integration of spatial form in multiple process in physics, biology, psychology and art.

In the case of molecular biology, scientists consider that DNA base sequence operates and controls the form of organism. What operates and control the form of DNA base sequence throughout body?

In the case of biophysics, biophysicists considers frequency, wavelength, phase of wave and field as well as DNA base sequence operates and controls the form of organism. What operates and control the form of wave sequences?

In the case of sociology, sociologists consider that social system operates and controls form concerning organization of individual as organism. What operates and control the form of social system?

In the case of psychology, psychologists consider that cognitive system or the relationship between individual and others like another individual, society, transpersonal etc operate and control the form of individuality. What operates and control the form of individuality throughout consciousness?

The above concerns the holon structure of form concerning self-organization and self-sustainment. A confused state of modern science and technology as well as philosophy for underlying solution of ethical problem derives from lack of comprehensive direction to elucidation of mechanisms for linkage of each level concerning each holarchy like the above.

³ This paper also links to my contributions to report of Working Group 2 (Ethical worldviews of nature) and WG3 (visions and hopes of the nature) in Ethics and Climate Change in Asia and the Pacific (ECCAP) project in UNESCO Bangkok.

In other words, the one of the most important scientific enigma is a mechanism for linkage of each level concerning each holarchy like the above. In short, how does a level of holon link to other holons?

Thus enigmas go back to ancient Greek philosophy. For example, in the case of Aristotle, the key notion for solution of this enigma is motion for organization of organism. Meanwhile, in the case of Plato, the key notion for solution of such an enigma is Idea as information for process of organism. In the case of cosmological perspective by Aristotle, while organism gradually repeated self-organization for generation of form in individual organism, all occasions in self-organization created a systemic process as wholeness in the limited space and time. In the case of self-organization by the organism, Aristotle emphasized the functional world rather than the geometrical world*. In other words, Aristotle had a scientific perspective as a functional system of organism.

The difference between functional world and geometrical world links to the difference between life as the being and the living creatures as the becoming. The life as the being links to the operation concerning motion. The living creatures as the becoming link to function concerning autocatalysis. The autocatalytic cycle becomes a system for adjustment of entropy for the becoming. The living creatures balance the decrease or increase of entropy concerning irreversibility i.e. adjustment between non-equilibrium and equilibrium needs the creation of autocatalytic cycles. This autocatalytic cycle creates function in the system. Multilayer functions as *Energeia* by autocatalytic cycle accelerate the self-organization as *Enthelecheia*. The process of differentiation of functions and differentiation of functions for self-sustainment creates spatial structures. This means that the one of the most difficult scientific enigma is elucidation of mechanism concerning emergence of autocatalyst.

By biological discovery and physical discovery, scientists of advanced system theory attempt to elucidate scientific enigma like the above by integration of notions between motion and information. In the case of physics, a Russian scientist, Ilya Prigogine (1980) who was familiar with ancient Greek philosophy including Aristotle and Plato, aimed to integrate the functional world and the geometrical world. In other words, he aimed to integrate between functional systems as organism and information theory with entropy as the dissipative structure theory that showed direction of advanced system theory. About the functional perspective of Aristotle, Prigogine

(1980, p.4) indicated as below: *"We see the progressive organization of a biological space in which every event proceeds at a moment and in a region that make it possible for the process to be coordinated as a whole. This space is functional, not geometrical. The standard geometrical space, the Euclidean space, is invariant with respect to translations or rotation. This is not so in the biological space. In this space the events are processes localized in space and time and not merely trajectories."* In short this suggests a dissipative structural theory as potential order and measure about irreversibility as well as systemic linkage in each holons of organic holon.

Ervin Laszlo (2004) suggested Akashic Field theory for integration of various scientific domains and thought as well as comprehensive direction for elucidation of mechanism for linkage of each level concerning each holarchy. Meanwhile, though Laszlo (2004) showed a process of linkage between individual and universe in his theory as well as comprehensive direction for solution of scientific enigma, he didn't show the process and system of organism concerning Self. Self becomes core of every occasion and phenomenon. Every occasion and phenomenon derives from the Self as organism.

Therefore, in this paper as a proposal of *Nous Self* concept, I aim my proposal of the fundamental vision of *Nous-Self* Concept by arrangement of notion of process, system and information in order to complement the Akashic field of Ervin Laszlo.

2. The self and care

The care concept by Takao Takahashi (2008) is an example of a holistic approach with cosmological inclination can be adapted to various scientific domains and social systems in order to aim at a concrete solution of ethical problems for future generations. Thus I aim to create a concept like Takahashi with a holistic integrative approach as a naturalist with cosmological inclination as contribution of philosopher to diverse society and people as well as nature.

The *Nous-Self* System is needed for research and development of medicine that are based the attribution of human-beings including systemic physiology of human-beings. Most ethical problems in material civilization derive from lack of perspective of systemic physiology as an organism in modern western science.

In the *Nous-Self* System, all occasions as continuance of moment affects systemic physiology. The self is center of all occasion. Therefore, I defined **self** as: *"The self is the synthesis that is created by momentary and continuous interactive relationship between*

society and individual organism that nature and cosmos enfolds."

Depending on the definition of self, I have designed a lot of diagrams, only some of these are included in this paper. My intention for construction of sustainable society is creation of a social system where human beings can harmonize with nature, diversified society and pluralist culture.

At this time, the core concept of the segmented scientific and philosophical domains is the self-concept. Then, systems theory is effective as a methodology for editing achievement by modern science and modern society. Because, at this time, only both self-concept and system theory are cross-sectional ideas in society, science and philosophy. By utilizing systems theory, for suggestion of new self-concept that can be utilized as actual universal policy, creation of self concept concerning systemic system as organisms is my goal. Because human beings are multicellular organisms that live in society on the Earth that is enfolds by the Universe. This means need of concepts of all systems including social system, natural system, cognitive system, etc. While utilizing the concept of all systems for elucidation of an organism, elucidation of systemic physiology in Nous-Self concept as an organism can link to the important direction of science and philosophy for actual contribution to construction of sustainable society.

Ervin Laszlo (1987) suggested Grand Evolutionary Synthesis as a direction of science and philosophy that can suggest actual construction of sustainable society by interaction between philosophy and science like my suggestion. He considered science that had a scientific system. Therefore, he indicated the need and idea of elucidation of scientific system for direction of social evolution.

As universal policy for construction of sustainable society, elucidation of systemic physiology as an organism is needed. For elucidation of systemic physiology, achievements of the segmented scientific domains is needed. Therefore for editing scientific components, I suggest a framework of Nous-Self concept by Nous-Self System and Nous-Self Process with achievements of system theory.

3. Nous-Self Process

The fundamental ethical problem derives from attribution of human-beings. For comprehensive explanation of the relationships between the fundamental ethical problems and attribution of human-beings, I had designed the following diagram while I consider the consistency of two diagrams and the flow about transformation of information concerning mechanism of formation of

occasion. Figure 1 illustrates the Nous-Self Process. Figure 2 illustrates the Nous-Self System.

I have already explained the theoretical background about the foundation of Nous-Self Process as process of self in my paper (Uejima, 2008). Individual self as atman with microcosm is the integration of various social holons including process as part in whole which has subordinate and integrative function to the upper holon as social humans. Human beings each have a social holon.

- 1) Economic holon: economic material value that links to reward and benefit.
- 2) Political holon: belief that links to control of someone by acquirement of power.
- 3) Educational holon: educational morals that links to relativity.
- 4) Diversity holon: there is relief by belonging that links to stabilization and dependence of mind.
- 5) Bio organization holon: Body awareness in body with spatial space as organisms concerning psychophysical operation
- 6) Earth holon: collective unconsciousness, soul and nature as cooperative by organic network
- 7) Universe holon: Spirit, Oneness, Emptiness, Nothingness, Something Great as creation by universe

From 1-4 compose social holons, while 5-7 compose the Organic holon. Meanwhile, there is a boundary zone in the process between social holon and organic holon. The boundary zone shows the limitation of cognitive system with system of perception in species. In addition, a boundless zone in process means the initial boundary conditions of boundary from boundary to infinity. The initial boundary conditions of the Universe are that it has no boundary. This boundless zone also means not only philosophical differences between metaphysical concepts and empirical concept but also the biggest scientific enigma for elucidation of scientific mechanism for formation to substance from wave for formation concerning emergence and evolution^{*1}.

Furthermore, I add the following explanation about holons that human-being can recognize as occasion by cognitive phase transition of information^{*} with "Nous-Self Process" that I had designed as matrix.

- (1) Physical transition of information concerns formation of social holon.
- (2) Molecule transition of information concerns formation of holon of bio- organization and holon of earth in organic holon.
- (3) Causal and subtle transition of information concerns formation of holon of universe.

When we observe ethical problems of medical ethics and bioethics as well as environmental ethics with Nous -Self Process, we

can understand the gap between the social holon of the above boundary zone and organic holon of the below of boundary zone (Figure 1). In short, though the organic systemic system that emerges in life concerns organic holons, a social system focuses on social holons. Though ethical problems concerning medical ethics and bioethics as well as environmental ethics derives from disharmony between organic holon and social holon, as far as social system keeps on focusing on developments of social holon, humans cannot solve fundamental ethical problem.

By the way, Gregory Bateson (1979) showed that information is any difference that makes a difference. In other words, our perception can recognize only information as difference. In the case of our perception concerning affordance as remarks of J.J. Gibson (1979), we can recognize information as difference that various perceptions as the observer configure in a dynamic process of communication between the environment as objective others and subjective self with spatial structure. Thus perspectives show viewpoints as observers. We can recognize each object by relative comparison of object as differentiation.

In short, our cognition needs to classify objects in nature with the essence of wholeness by differentiation. The classification with thus cognition becomes the viewpoint of the observer. Our cognition has the limitation of perception as species. It is important that we always awake our cognition about classification of occasion including nature. Therefore, about classification by our cognition as viewpoint of observer, each color in Nous-Self Process (Figure 1) shows the object that we recognize and classify.

If we lose perception or transform perception, what can we recognize in occasion including nature? One of answers to this question folds in our recognition with condition of coma as remarked by Arnold Mindel (1989).

4. Nous-Self System

4.1. Philosophical ideals

Philosophy emerges from culture, religion, mythology and lifestyle in a diversified society. Philosophy is folded in society. Therefore, philosophy affects the mindset of human-beings. As a result, philosophy affects behavior of human-beings. Philosophy affects the meta cognition of people. After Takao Takahashi (2001) investigated the influence of philosophy to students in high school, he discovered some concept of modern western philosophy affected the value of Japanese youth regardless of awareness. Thus influence of modern western philosophy to youth shows the possibility that affects to meta cognition of scientists. Therefore, suggestion of direction of

philosophy as well as science is the most important.

The suggestion of a new worldview for direction of science and the intention of construction of sustainable society is the most important role of philosophy. This also is the most important purpose of ethics.

(1) The distinction between modern western philosophy and eastern philosophy

At first, a simple distinction between modern western philosophy and eastern philosophy is in Table 1.

Table 1: The difference of concepts between modern western philosophy and eastern philosophy

Modern western philosophy	Eastern philosophy
➤ Dualism	➤ Monism
➤ Reductionism	➤ Holism
➤ Rationalism	➤ Intuitionism
➤ Materialism	➤ Organismic
➤ Humanism	➤ Cosmology
➤ Analytical	➤ Holistic
➤ Individuality	➤ Community
➤ Happy as individual	➤ Harmony as whole
➤ System	➤ Process

The origin of modern western philosophy as well as modern science was Ancient Greek philosophy. Ancient Greek philosophy had both characteristics of Table 1. Meanwhile, the origin of Eastern philosophy is Indian philosophy. Of course, religion, mythology, culture and lifestyle of diversified society affected the philosophy of each nation. Therefore, derivation of two mainstreams became religion, mythology and culture of each nation. However, characteristics of philosophies in diversified minorities of Mongoloids are close to eastern philosophy. From an anthropological viewpoint, traditional philosophy in the world had an organic perspective as the characteristics of eastern philosophy. In short, organic perspective of eastern philosophy leaves behind the archetype of human-beings. Khroutski (2007) indicates that distinction between modern western philosophy and eastern philosophy has distinctions between rational and realistic.

Secondly, Table 2 shows achievement and detriment of material civilization. Material civilization that I use adapts to sensate culture by Pitirim A. Sorokin (1941). He indicated that the first generation of sensate philosophy was Descartes, Lockes, Kants, Humes or Comtes. The second generation was scientific philosophy and ideational or idealistic system by potential Kants and Humes of philosophy. The linkage between modern philosophers since Descartes and modern

scientists since Newton affects development and problem of modern material civilization in Table 2.

The detriment by modern material civilization concerns the lack of concepts of eastern philosophy that Modern western philosophy lost or downplayed. Meanwhile, achievement by modern material civilization is based on contribution to modern western philosophy. This means the limits of modern western philosophy, material civilization and modern social systems.

The distinction between modern western philosophy and eastern philosophy means the possibility that relationship between modern western philosophy and eastern philosophy becomes gestalt in social cultural system. This means that the relationship between modern western philosophy and eastern philosophy becomes relationship between yin and yang.

4.2. Transcendence of material civilization by symbiotic integration of modern western philosophy and eastern philosophy

The symbiotic integration of western philosophy and eastern philosophy can contribute to transcendence of material civilization. This is the most important task in modern philosophy. In spite of Preference Utilitarian, Singer (1993) indicated need of cosmological perspective for transcendence of self as social animals in ethical perspective. However, his cosmological perspective is similar with cosmological perspective in pure reason of Kant. In short, Singer as well as Kant focuses on process of consciousness for solution of ethical problem.

Pitirim Alexandrovich Sorokin (1965, p.842) indicated prognosis of the shape of integral sociology to come as future direction of sociology and he suggested a supersystem for transcendence of sensate culture.

At first, for symbiotic integration between accomplishments of modern western philosophy and eastern philosophy, I utilize the mind-set of yin and yang in Tao. Chinese traditional philosophy like theory of yin and yang and the five elements thought yin and yang as worldview. Yin and yang is close to thought of gestalt in cognitive process of western thought. Though gestalt concerns cognitive principle for influence of dualism, Yin and yang as holistic and cosmological approach means fundamental principle that constructs human, society and nature that is enfolded by cosmos. Yin and Yang emphasize balance as whole that means holistic harmony. In this paper, I emphasize balance as whole between modern western philosophy and eastern philosophy for suggestion of new mind-set for science and policy.

Secondly, for symbiotic integration of modern western philosophy and eastern philosophy as

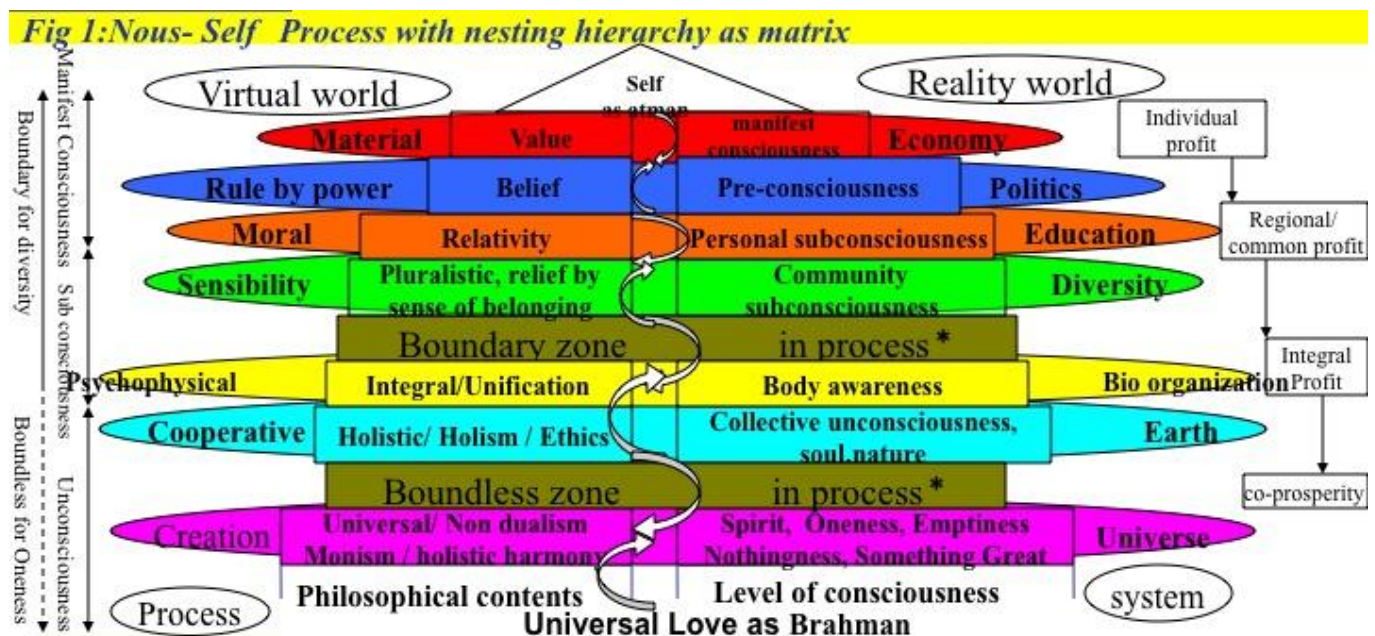
well as ancient Greek philosophy and philosophies of diverse minorities, I attempt creation of new self concept. Self also is a core scientific concept. Therefore, creation of new self concept can link to not only symbiotic integration of diverse philosophy but also various scientific domains. Indian philosophy like Advaita philosophy of Sankara elucidates all occasion in process of Self with universal approach including integrative, holistic and cosmological perspective. Eastern philosophy considers self as process in nature and cosmos as evolution for creation including light and shadow like Shiva or Tao or Nothingness as Mu or Wu or Bhava. Meanwhile, "Know of thyself" was philosophical theme by sophists including Socrates.

Thirdly, I use a genealogical chart of system theory. The origin of system theory was Aristotle. While system theory affects philosophy, system theory contributes logical direction and symbiotic integration of science. At the present, a core idea of system theory is an open system. However, in spite of suggestion about open system, classical system theory elucidates classical open system with boundary. This logic is inconsistent. The inconsistent idea of classical system theory is derived from reductionism of modern western philosophy. If scientists of system theory explore logical open system, they need to consider interaction between universe and individual self as well as social system, natural system and cognitive system. Thus inconsistent idea is the potential task in modern science. Because, this potential task is derived from a lack of mindset of metaphysics or cosmology. For solution of this problem, Laszlo (1980) founded system philosophy.

Fourth, for transcendence of scientific mindset, symbiotic integration between modern western philosophy and diverse philosophy is needed. For transcendence of scientific mindset, I suggest elucidation of Nous-Self System with systemic physiology. Nous is word of Ancient Greek philosophy. Curd (2007) indicated the meaning of nous that Anaxagoras suggested at the first: "*Nous has control over all things that have soul, both the larger and the smaller.*" This suggests not only a perspective that Anaxagoras took the actions of humans and animals as the model for how nous controls the cosmos, but also a perspective that nous differs from the other ingredients. This is the nous that Aristotle, Plato, Anaxagoras indicated concerns cosmology and metaphysics. Nous-Self System as my suggestion becomes the reinstalling of metaphysical and cosmological concept in scientific concept that modern science rejected for oppression by Church as a remark of Erwin Schrodinger who was

Table 2: Some achievements and problems caused by material civilization concerning modern western philosophy

Achievements with modernization by modern western philosophy, science and technology (Achievement by material civilization)	Detriment with modernization by modern western philosophy, science and technology (Detriment by material civilization)
➤ The development of science and technology ➤ Much knowledge by modern science ➤ Many artificial materials by science and technology ➤ Virtual linkages by information technology ➤ A material rich, convenient and comfortable lifestyle ➤ Rich and convenient lifestyle by using much material and energy ➤ The progress of globalization by development of capitalism ➤ Stabilization of democracy ➤ Expansion of western ideas and civilization with capitalism and democracy by globalization ➤ Spread of centralist and bureaucratism ➤ Human dignity and Human Right ➤ Spread of modern education and English ➤ Spread of western medical care	➤ Social problem that cannot be controlled by domestic and international law and moral (e.g. use of atomic weapons in war) ➤ Destruction of environment ➤ Discrimination of minorities concerning identify of cultural and ethnic communities ➤ Decline of social responsibility ➤ Growing economic disparity ➤ Collapse of culture and rural community ➤ Lack of linkages and communication to wild nature ➤ Decline of real sense of life and community as a natural creature ➤ Decline of body awareness and functions as natural creature ➤ Decline of spontaneous healing ability as natural creature ➤ Lack of holistic wisdom as like Tao and a sense of ethics

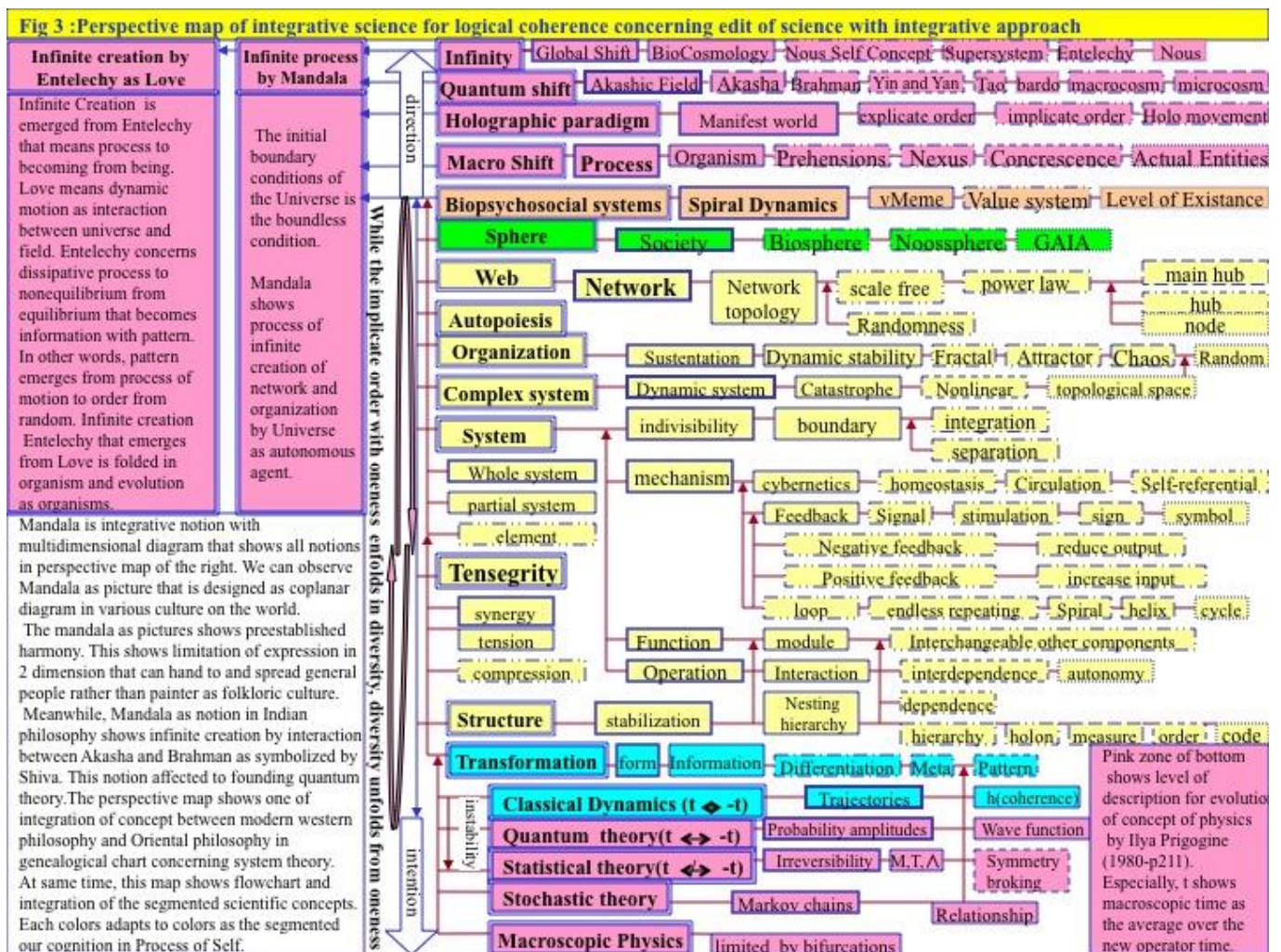
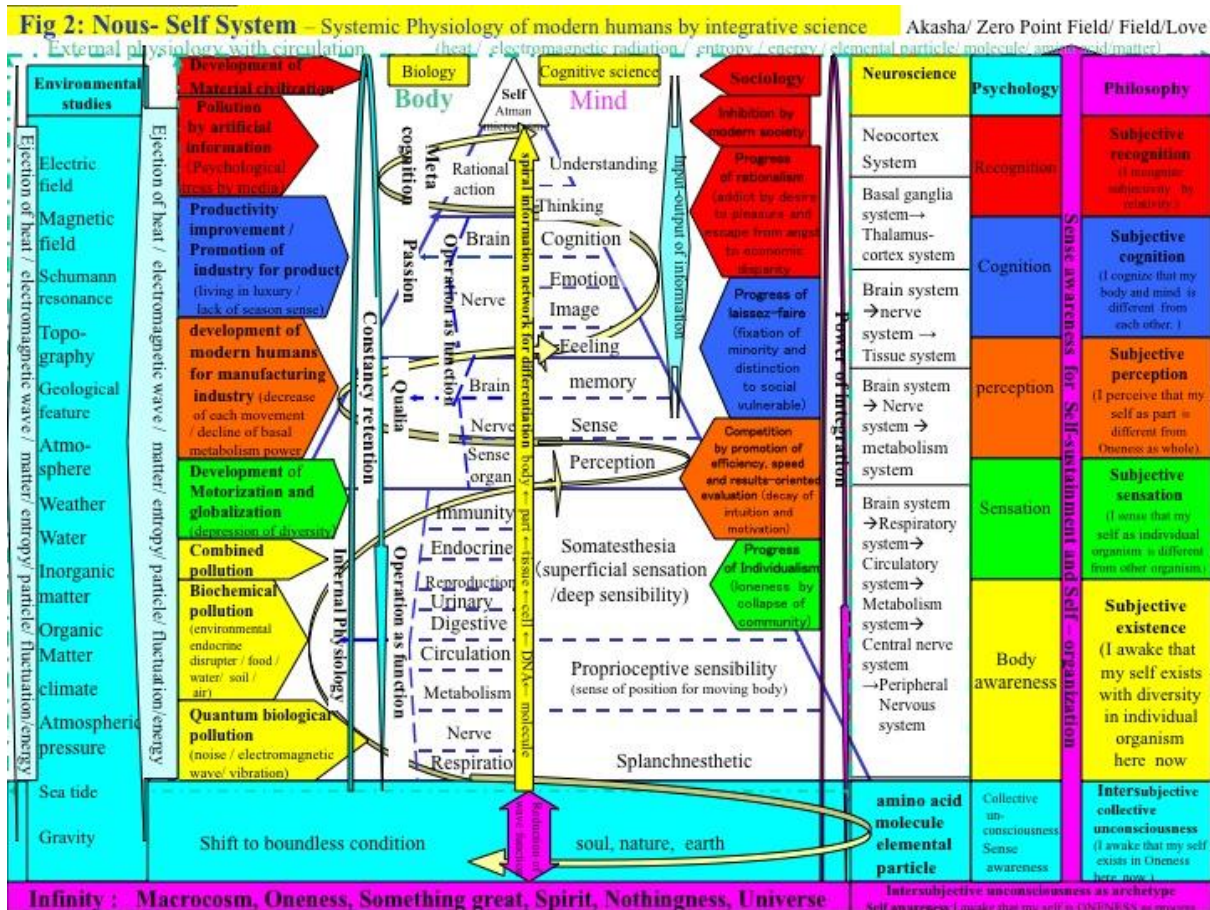


*1 Boundary zone express instinct of species. Boundary zone shows the limitation of cognitive system with system of perception in species.

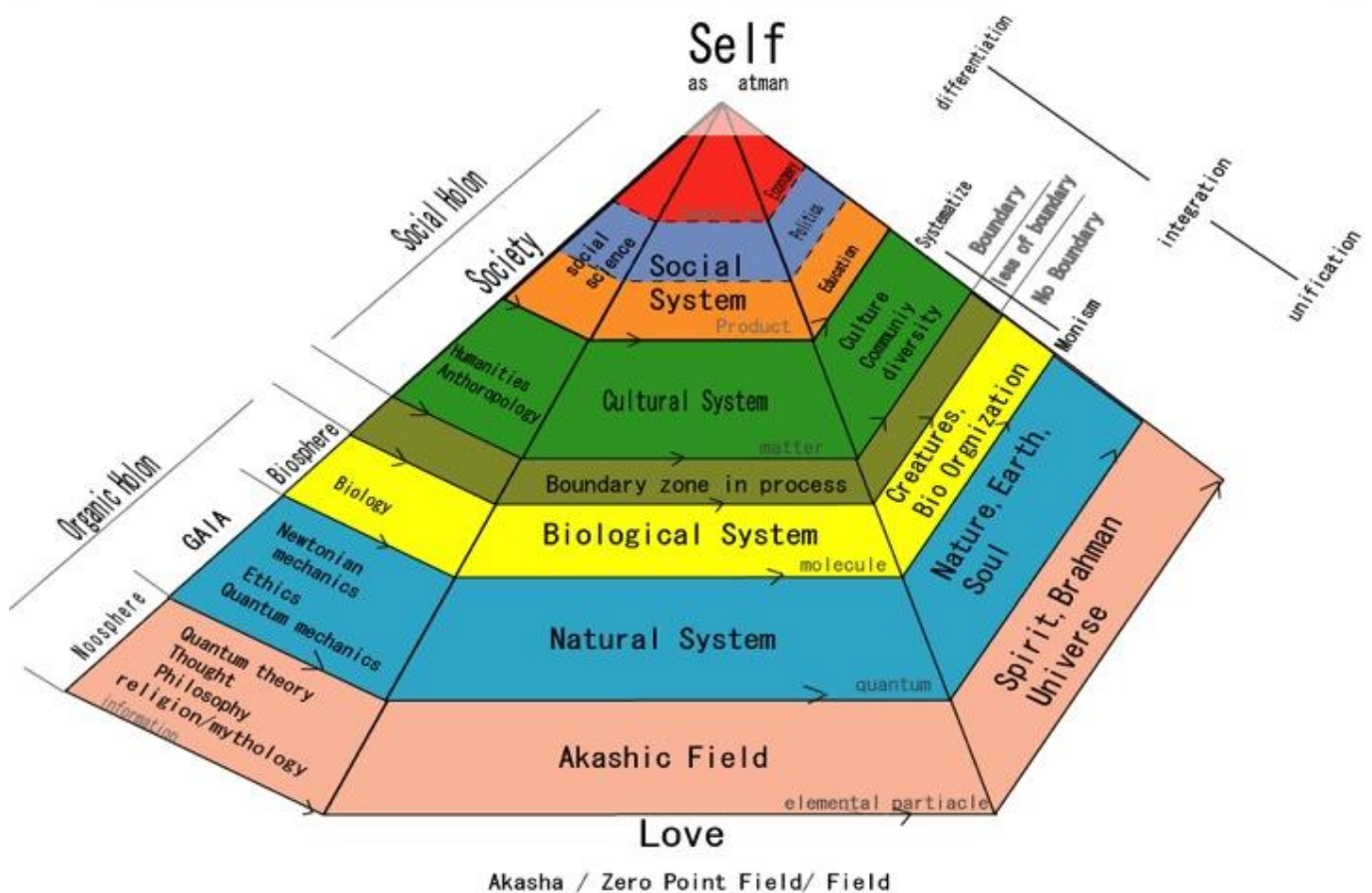
*2 Boundless zone in process means the initial boundary conditions of boundary from boundary to infinity. The initial boundary conditions of the Universe are that it has no boundary.

We can observe that partial system has each autonomy order. However, if we observe linkage between partial system and whole system, we can understand systemic linkage that has interdependent order. Arthur, Koestler (1978) indicated that thus orders are fundamental structure of holon

This nesting hierarchy means holachy with holon structure. The each color shows each holon. This diagram shows process concerning emergence of self by philosophical contents as thought. At the same time, This also shows process concerning emergence of self by natural system, psychological system and social system as organism. In sum, This diagram can link process and system for emergence of self of individual self with microcosm as atman from macrocosm as Nous Self.



**Fig 4: Conceptual schema of science and thought by Nous -Self concept
for Symbioses as Integration of science and thought by nesting hierarchy of self**



the founder of quantum theory or a remark of Georg Henrik von Wright.

Founders of quantum theory like Erwin Schrodinger, Georg Henril von Wright and David Bohm were affected by Indian philosophy. W.K. Heisenberg who was founder of quantum theory was affected by ancient Greek philosophy. Quantum theory was derived from mindset of Indian philosophy and ancient Greek philosophy. George Henrik von Wright (1981) indicated a direction for explanation of science transcendent that concerns metaphysics. While Sorokin (1965) traced about view concerning consciousness by authority of quantum theory, he prefigured that development of quantum theory affected not only social system but also socio cultural system.

The symbiotic integration between modern western philosophy and oriental philosophy as well as suggestion of Nous-Self concept aims to show direction of science and policy for construction of sustainable society in order to aim to contribute achievement of MDGs.

5. Ethical significance of the Nous-Self System

The hypothesis of Nous-Self System with systemic physiology of human-beings as organisms has mechanisms for external sustention as external physiology and mechanism for internal sustention as internal physiology concerning homeostasis in body as spatial structure. Konstantin Viktorovich Sudakov (2008) tried to demonstrate system quanta that meant specific operators in the dynamic activity of the organism's functional systems discovered by P. K. Anokhin with scientific experiments about neurophysiological and neurochemical mechanism.

In our time, material civilization that is based on material consumption including process for supply of product and energy has spread in the world by globalization from westernization. Material civilization gives not only efficient and convenient lifestyle with rich products but also spreads economic disparity. Meanwhile, modern humans keep on losing not only body awareness but also contact to nature and various physical motions by work and

ambulation in modern lifestyle. As the result, modern humans keep on losing physiological function for sustentation of homeostasis concerning spontaneous healing system.

Though science can contribute to development and spread of material civilization, science cannot show fundamental methodology of ethical problem like destruction of community and communions of environmental destruction and chronic disease.

Science emphasizes scientific evidence as a quantity for reproducibility by linkage with technology. As the result, most scientists also research physiology in partial systems with the controlled experimental laboratory and laboratory animals or the simulated model by computer. Scientific evidence concerning physiology that is developed and discovered with the controlled experimental laboratory and laboratory animals or the simulated model by computers becomes fundamental of product and technology including drug and medical technology. The research of evidence as a quantity in a short period concerns the relationship between a partial system and physiology in a controlled experimental laboratory is not more difficult than research of evidence as quantity in relationship between the actual whole system and physiology.

In the latter situation, one of scientific methodologies is epidemiological study. Though epidemiological study generally is designed after emergence of some ethical problems like pollution or environmental assessment for scientific judgment in court or policymaking, due to difficulty in reproducibility as epidemiological studies tend to be considered more weaker than scientific evidence gathered in the controlled experimental laboratory. However the results will be different when they derive from differences between a whole system and a partial system as a topic for investigation or research.

For example, as damage by pollution links to damage of the whole system, epidemiological study or environmental assessment treats the relationship between physiology and whole system as possible. Neil Cherry (2001) wrote an environmental assessment for a lot of people including victims in the world^{*2}.

The bias becomes a problem in epidemiological study and environmental assessment. Especially, the problem of bias concerns cognition of victims about pollution. For example, if victims are familiar with pollution, a victim might claim more serious damage about pollution which is a bias. This shows that science focuses on natural system that is based on quantity as physiology of human-beings by influence of dualism and rationalism. Actually,

human-beings have both natural system and cognitive system as well as a sociocultural system as an organic system. Therefore, response of body by knowledge of pollution and recognition of stress for emergence of social problem like pollution is normal. However, most scientists or physicians downplay bias as a problem of mentality caused by trauma that affects the response of victims.

In short, this shows lack of ethical awareness in scientists or physicians as well as ethical problems in science caused by dualism and reductionism that has the trend of reduction to individual problem in spite of whole social problems. Scientific explanation by quantity about response or narrative of victims is difficult. Because, trauma and narratives of victims contain relationships between the whole system and pollution concerning damage, statistical analysis that is based on deviation by linearly analysis with quantity of partial system in a short period that scientists or physicians utilize in epidemiological study and environmental assessment cannot describe transformation in nonlinearly dynamic process of whole system in long period. The consistency between nonlinear phenomenon and linearly statistical analysis becomes a mathematical task. Instead, there is case that origin of transformation in individual data rather than the analyzed data shows transformation of whole system. Because each individual has wholeness. Furthermore, when scientists select analytical methods, subjective assessment by scientists affects the selection of analytical method and data for analysis. This analytical method and data by scientists becomes an ethical bias rather than bias concerning recognition of victims.

In sum, it is difficult that science controlled by dualism and reductionism deals with problem concerning whole system. After Jahn and Dunne (2001) classified science concerning interaction between mind and matter consciousness as tangible physical module (module T) and coconscious mind module(module C), they indicated the limitations of science concerning materialistic view and need of comprehensive quantitative science.

The proposal of direction for transcendence of the above limitations of science by reductionism and dualism is elucidation of systemic physiology as Nous-Self system. The transcendence of limitation of modern science can contribute to construction of sustainable society. This means targets of integrative science as science of ethics. Systemic physiology as Nous - Self system is useful for epidemiological study or environmental

assessment as well as design of policy for construction of sustainable society.

The actual systemic physiology also closely relates not only to the natural environment but also socio culture.

4.4. Perspective map for suggestion of Nous-Self System (Figure 3)

1) Philosophical significance of perspective map

My purpose of perspective map is close to the following suggestion of Werner Karl Heisenberg (1984) who discovered the Uncertainty principle in quantum theory, who lamented the circumstance that physics was imitated in modern philosophy by boundaries, and he indicated that scientists needed research in the limited domains. Then, while he suffered for contributions to development of atomic bomb in Germany in his youth, he indicated that balance between scientific truth and religious truth needed for integration in self and for ethical solution by development of science and technology.

While George Henrik von Wright (1981) recognized the significance about causal explanation, he indicated attribution of domain by causalist like Wiener is function, purpose (fullness), and organic whole (systems) in biology. Scientific elucidation of the natural system is facilitated by development of biophysics as well as development of molecular biology for development of observation equipment of quantum. Therefore, Nick Lane (2000, p.571) indicated a distinction between physicists and neuroscientists. Lane indicated that quantum physicists tried to elucidate consciousness for failure of providing a physical basis for consciousness by molecular biology.

Karl H. Pribram (1982, p.29-30) who is founder of the holographic model of brain indicated the relationship between mentality and brain about fundamental problem concerning observer of natural science as below:

"(1) Brain, by organizing the input from the physical world, as obtained through the senses, constructs mental properties.

(2) Mental properties are the pervasive organizing principles of the universe, which includes the brain.

Paradoxically, almost all behavioral and neuroscientists would today subscribe to some form of statement one, while, as noted above, statement two reflects the belief of many of the most influential theoretical physicists. Mathematicians have faced the dilemma more directly: how is it that the operations of their brains so often describe faithfully the basic order of the universe they perceive? "

Thus the distinction between quantum biologists and molecular biologists is distinction of research topic by their mindset concerning their worldview concerning philosophy in scientists⁴¹. Therefore, if symbiotic integration of their research achievement is possible, what scientific perspective can we get? For suggestion of Nous-Self System to scientists from my standpoint as a philosopher, I designed a perspective map (Figure 3) for expression of flow-chart of concept on the base of logical consistency and mind-set concerning scientific idea of scientists concerning system theory with their autobiography as well as the paper of scientists. In the case of logical consistency, each scientific concept shows modules in the scientific system as one of the cultural systems. In short, if we think of science as a scientific system, each scientist becomes an element as well as scientific domain becomes partial system in scientific system. Because science is one of partial system in social cultural system as remarked by Sorokin (1965) and Ervin Laszlo(1987).

One of the important roles of philosophy is holistic arrangement of scientific knowledge and suggestion of scientific direction. Because philosophy becomes one of meta cognition in scientists. Only verbal expression has limitation for handing on and spreading. Therefore, I designed perspective map as methodology for elucidation of Nous-Self System by collaboration of diverse people on the future. For suggestion of the direction of science on the future, nobody can keep on sustentation of logical coherence by collaboration between scientists and philosophers for a long period without a flow-chart concerning definition of each scientific concept by diagram. I had designed perspective map for symbioses as integration of science and philosophy as well as relationship between science and philosophy by cognitive process of human-beings by literature study as philosophical method.

Philosophical concepts are folded in scientific concept. Scientists utilize philosophical ideas and philosophical concepts in order to develop and discover new domains of science. Meanwhile, a lot of scientists that are familiar with philosophy indicated limitation of science. The concept of Autopoiesis that Humberto Maturana and Francisco Varela suggested derive from auto – αὐτό for self- and poiesis – ποίησις for creation or production by Aristotle.

Hence, holistic arrangement of modern scientific concept is possible by investigation of mind-set concerning meta cognition of scientists with word as scientific concept in paper and their

idea in their autobiography. Of course, holistic arrangement of all modern scientific concepts is impossible by myself. Therefore, I focus on some frequently-used concept in genealogical chart of system theory that shows scientific relationship between whole and part segmented scientific domain.

Explanation and construction of framework of Nous-Self System needs achievements of modern system theory and a full scientific explanation of the concept is being published separately.

I designed a Conceptual schema (Figure 4) of science and thought by Nous-Self concept for symbioses as Integration of science and thought by nesting hierarchy of self for integration of science. Each colour in the conceptual schema adapts to each colour of Nous Self process as cognition of human-beings.⁴ I designed the perspective map and Nous-Self System as base of classification of each holon with holon structure of conceptual schema.

The perspective map (Figure 3) is a flow chart of each concept in nesting hierarchy with holon structure of concepts itself by meta cognition and mindset of scientist and philosophers that I read and elucidated. Therefore, the definition of each concept shows the process of concept of right side and lower level. Furthermore, concepts of lower pink color show concepts that are developed by quantum theory in genealogical chart of physics. Concepts of yellow colour show concepts that are developed by system theory in genealogical chart of biology. Concepts in green show concepts that are developed by environmental science in genealogical chart concerning solution of environmental problem. Concepts in orange show concepts that are developed by sociology and psychology like the biosychosocial system by Don Edward Becknd and Clare W. Graves that is frontier of social system in genealogical chart concerning solution of social problem.

Information concepts in blue show concepts that are developed by information theory that develops interdisciplinary domain of mathematics, physics, neuroscience, biology, engineer, cognitive science and social science in spite of background of mathematics and electronic engineer. In other words, information concepts including concepts concerning dissipative structure are bridge concept that can link to mathematics, biology, psychology and physics including Newton mechanics and

Quantum mechanics or natural system, cognitive system, social system.

Concepts of darker pink show philosophy or thought concerning Nous-System theory that describes circulation of flowing of meta cognition of scientists and philosophers between philosophy and quantum theory in perspective map.

5. Discussion

The operational implications of the theory are further explored in another paper. Here we can discuss some of the implications.

At the present, modern science can elucidate process, network, structure and function in partial system or element with statistic or objective and scientific proof in elaborate designed experiment and calculated method. Though demonstration about the mechanism of the whole system that can be integrated into natural system, cognitive system and social system with objective quantity is difficult, I attempt to integrate natural system, cognitive system and social system by Nous-Self system with systemic physiology as hypothesis.

Since systemic physiology of human beings has a dynamic web of networks and multilayered loops that is formed by linkages of complex systems, distinctions between molecule biology and quantum biology mean different observations to gradual transition in process concerning transformation of information. This difference shows the following distinction of perspective about self-concept.

In the case of molecular biology, this considers interaction between the living creature and natural environment. Meanwhile, in the case of quantum biology, this considers interaction between the living creature and external environment including nature and universe as well as Fields. The distinction of both derives from difference in the viewpoint as observers. While perspectives of molecular biology and quantum biology have lack of perspective of interaction between society and living creature, Luhmann (1981) focused on elucidation of mechanism of social system in society without perspective about interaction between society and nature as well as cosmos.

Thus modern western science with reductionism causes new ethical problems about enhancement of human-beings as species concerning spread and development of new technology like nanotechnology. Wolbring (2009) indicated a need for a much broader, holistic analysis of the impacts of science and technology developments as direction of

⁴ Refer to the pdf file of the electronic version of *EJAIB* for colours.

human-beings as species and relationship between human-beings and other species.

Khroutski (2006) emphasizes elucidation about process of interaction between society and nature as well as cosmos for future direction of science and philosophy. Laszlo (2004) aims to integrate accomplishments of molecular biology and quantum biology as well as sociology and physics. The actual occasion in actual reality world emerges from multilayer loops that is formulated by complex and hierarchical linkages in element, partial system and various networks like Nous-Self system (Figure 2). A system with structure that means the integral of the order and measure for formation of organization repeats functional transformation for sustentation of organization.

Conclusion

In this paper, I suggest the Nous-Self concept as a new worldview for construction of a sustainable society. The Nous-Self concept is composed with Nous-Self process and Nous - Self system.

At first as my conclusion, in the case of systemic physiology of Nous-Self system, systemic physiology concerns scientific elucidation of spontaneous healing system and process of coma. The elucidation of spontaneous healing system and process of coma show the direction of medicine for actual construction of sustainable society.

Second, I hope that the scientific philosophical elucidation about mechanism of Nous-Self concept by collaboration of diverse people in the world as well as linkage of diverse people for elucidation begins to show a way like Tao for tangible construction of suitable society. Konstantin S. Khroutski indicated the important intention about harmony between holistic approach and reductionism as below in peer review of this paper: *"We need not transcend reductionism, but need to develop our holistic approach in symbiose with reductionism, taking its useful results as the means for the realization of the goals of Nous-Self System constructions and Nous-Self Process effects."*

The spread and development of symbiotic integration of science and philosophy for harmony as whole can gradually construct actual sustainable society. Finally, I suggest the final ethical target of Nous-Self concept as Love becomes fundamental for self-awareness as new ethical standard with daily ethical practice that diverse individual people gradually create sustainable society in each lifestyle and society. Because Love is folded in life as remarks of Darryl Macer (1998).

References

- Aristotle (1959) "Metaphysics", 「形而上学」、岩波文庫
- Barabasi, Albert-Laszlo, (2002) *Linked: The New Science of Networks* : Perseus Books Group
- Bateson, Gregory (1979) "Mind and nature: A Necessary Unity", 『精神と自然～生きた世界の認識～』, 思索社
- Battista R. John (1987) "The Holographic Model, Holistic Paradigm, Information Theory and Consciousness", The Holographic Paradigm and other paradoxes, pp.143-155
- Beck, Don, Edward (1999) "The Search for Cohesion in the Age of Fragmentation From the New World Order to the Next Global Mesh", Center for human emergence initiating action for global transformation
- Brower, V. Z. Andrew, "Rapid morphological radiation and convergence among races of the butterfly *Heliconius erato* inferred from patterns of mitochondrial DNA evolution (molecular clock/Pleistocene refugia/Western Hemisphere/Mexican mimicry)", *Proc. Natl. Acad. Sci. USA*, 91, 6491-6495, July 1994.
- Burnet, John (1953) "Plato's Phaedo", Edited with Introduction and Notes, Oxford U.P., 「パイドン～魂の不死について～」, 岩波文庫
- Casti L. John (1994) "Complexification: Explaining a Paradoxical World Through the Science of Surprise". Perennia
- Cohen Sophie, PoP Fritz-Albert and Yan Yu (2003), Nonlocal effects of biophoton emission from the human body, "International Institute Of Biophysics", URL: <http://www.lifescientists.de/publication/pub2003-04-1.htm>
- Colborn, Theo, Dumanoski, Dianne; Meyers, John, Peter (1997) "Our Stolen Future: How We Are Threatening Our Fertility, Intelligence and Survival.", Plume 『奪われし未来』, 翔泳社
- Cooper .H. Guy, "Coyote In Navajo Religion And Cosmology", The Canadian Journal of Native Studies VII, 2 (1987).
- Curd, Patricia (2007), "Anaxagoras", Stanford Encyclopedia of Philosophy
- Darryl, R. J. Macer (1998) "Bioethics is Love of Life: An Alternative textbook", Eubios Ethics Institute
- David, Joseph, Bohm (1980) "Wholeness and the Implicate Order", London: Routledge, 『全体性と内臓秩序』, 青土社
- Descartes René (1911), "The Philosophical works of Descartes", 『哲学原理』, 岩波書店
- Edelman, Maurice, Gerald (2004) "Wider than the Sky: The Phenomenal Gift of Consciousness", Yale Univ. Press, 『脳は空より広い』, 草思社
- Edmund, Husserl, (1931) "Cartesian Meditations", Springer USA, 『デカルトの省察』, 岩波書店
- Gibson, J. James (1979) "The Ecological Approach to Visual Perception", 『生態学的視覚論ーヒトの知覚世界を探る。』サイエンス社
- Grass, F. H. Klima, S. Kasper (2004) "Biophotons, microtubules and CNS, is our brain a "Holographic computer?", *Medical Hypotheses* 62, pp.169-172
- Graves, W. Clare (1970) "Levels Of Existence: An Open System Theory Of Values", *Journal of Humanistic Psychology* 1970; 10; 131
- Creath Katherine and Schwartz E. Gary (2005), "What Biophoton Image of Plants Can Tell Us about Biofields and Healing", *Journal of Scientific Exploration*, 19, No. 4, pp. 531-550, 2005
- Hartle, J.B. and Hawking, W.S. (1983), "Wave function of the Universe", *physical review* 28(12), pp.2960-2975, December
- Heisenberg, K. Werner (1965) "Das Naturbild der heutigen physik", 『ハイゼンベルグ～現代物理学の自然像』, みすず書房

- Heisenberg, K.Werner(1984) "Werner Hesenberg" world-view by Hesenberg with edit by Ken Wilber "Quantum Questions"
- Hayai, Kawao(2002) "Travel to Navajo ~ scenery of soul~" 『ナバホへの旅～たましいの風景～』, 朝日新聞出版社
- Immanuel, Kant(1787) "Critique of Pure Reason",『純粋理性批判』, 岩波文庫
- Jahn, G. Robert and Dunne, J. Brenda(2001), "A Modular Model of Mind/Matter Manifestation(M⁵)", Journal of scientific Explanation, 15, No.3
- Jahn G. Robert and Dunne J. Brenda(2005), "The PEAR Proposition", Journal of Scientific Exploration, 19, No.2,
- Jung, Gustav.Carl and Pauli, Wolfgang (1955) "The Interpretation of Nature and Psyche, Psyche", New York: Pantheon Books
- Kaufman, A.Stuart (2000) "Investigations2: Oxford University Press, Inc.
- Khroutski, S.Konstantin (2007) "Arousing a Dspute over BioCosmology.Areply to Stephen Modell", E-Logos Electronic Journal for philosophy
- Khroutski, S.Konstantin(2007) " BioCosmological Approach in World Bioethics", pp.170, Eubios Journal of Asian and International Bioethics 17
- Khroutski, S.Konstantin (2009), "Biomedicine as the all-embracing science: Biocosmological perspective", For the Third Joint UNESCO-Kumamoto University Bioethics Roundtable: What is Medical? ,Kumamoto, 12-13 December
- King Chris(2006), "Quantum Cosmology and the Hard Problem of the Conscious Brain", "The Emerging Physics of Consciousness", Springer (Ed.) Jack Tuszynki
- King Chris(2008), "The Central Enigma of Consciousness", Nature Precedings No.5 November
- Koestler, Arthur(1978), "Janus: A Summing Up", Random House, 『ホロン革命』, 工作舎
- Kouno Tetsuya(2006), "Mind exists outside of body", 『「心」はからだの外にあるー「エコロジカルな私」の哲学』, NHK books
- Krishnamurti Jiddu(1978), "The Wholeness of Life ~Abridgement of discussions held between Krishnamurti, physicist David Bohm, and psychiatrist David Shainbert~, London, Gollancz,『生の全体性』大野純一訳 平河出版社
- Yao Kwok-Ming Yao, Zhijian, Sha Mi, Lu Zhijian, and Wong G.Gordon(1997), "Molecular Analysis of a Novel Winged Helix Protein, Win Expression Pattern, Dna Binding Property, And Alternative Splicing Within The Dna Binding Domain", The Journal Of Biological Chemistry 272, No. 32, Issue of August 8, pp. 19827-19836, 1997
- Laozi(1988), "Laozi", Tamaki Ogawa translation, 『老子・荘子』小川環樹, 世界の名著4, 中央公論社
- Laszlo, Ervin (1974)"Introduction to Systems Philosophy": Harper & Row, 『システム哲学入門』, 紀伊國屋書店
- Laszlo, Ervin (1987)"Evolution : The Grand synthesis:" New Science Library,『進化の総合真理』, パベルプレス
- Laszlo, Ervin (2004) "Science and the Akashic Field: An Integral Theory of Everything" : Inner Traditions International 『叡智の海』, 日本教文社
- Laszlo, Ervin (2008) "Quantum shift in the Global Brain", Inner Traditions Rochester, Vermont
- Leibniz Wilherm Gottfried(1714)," The Monadologie", 『モノドロジー・形而上学叙説』, 中公クラシックス
- Lovelock, James (1965) "A physical basis for life detection experiments": Nature 207, No. 4997, pp. 568-570, August 7, 1965.
- Lovelock, James(1992), "A numerical model for biodiversity", Philosophical Transactions:Biological Science, The Royal Society, pp.383-391
- Lossky, O.N(1951), "History of Russian Philosophy", International Universities Press
- Ludwig, Von Bertralnffy (1967) "Robots, Men and Minds Psychology in the modern world", 『人間とロボット』, みずほライブラリー
- Ludwig, von Bertalanffy (1969) "General System theory: Foundations, Development, Applications", New York :George Braziller,『一般システム論』, みずず書房
- Luhmann, Niklas(1981) "Wie ist soziale Ordnung möglich?" in Niklas Luhmann, Gesellschaftsstruktur und Semantik, Bd.2.Frankfurt am Main, Suhrkamp, S.195-285, 『社会システム理論の視座ーその歴史的背景と現代的展開』(1985), 木鐸社
- Maturana, R.Humberto and F.J.Varela(1980), "Autopoiesis and Cognition: the Ralization of the Living "Springer 『オートポイエーシスー生命システムとは何か』, 国文社
- McNamara, Andrew(2001), "The Aboriginal Medium: Negotiating the Caesura of exchange", In Hent de Vries, & Samuel Weber(Eds.)Religion and Media, Stanford University press
- Mindell, Arnold (2000) "DREAMING WHILE AWAKE techniques for 24-hours lucid dreaming", 『24時間の明晰夢ー夢見と覚醒の心理学』, 春秋社
- Mindell, Arnold,(1989) "Coma Key To Awakening", Shambala
- Nakazawa, Sinichi (1993) " The tenet of Dead for 30 thousand years- Worldview of Thibetan Book of the Dead-", 中沢新一, 『3万年の死の教えーチベット「死者の書」の世界』, 角川書店
- Nagasawa, Tetsu(1994), " The tenet of dead and life", pp46-63, in Culture of life and death in Tibet – inner psychological world by Mandala as Book, 永沢哲, ニチヤン・リンボチェ「チベット生と死の教え」, フジタ・ヴァンデ編『チベット生と死の文化ー曼陀羅の精神世界ー』(1994), 東京美術
- Nakata, Tsutomu(2006), "Water molecule in the brain", 「脳の中の水分子ー意識が創られるとき」 紀伊國屋書店
- Nelson, D. Roger (2002), "Coherent Consciousness and Reduced Randomness:, Correlations on September 11, 2001", Journal of Scientific Exploration, pp.549-570
- Neil, Cherry (2001), "Schumann Resonances, a plausible biophysical mechanism for the human health effects of Solar/Geomagnetic Activity", Natural Hazard 26.
- Ohnuki Tierney. Emiko(1972), "Spatial Concepts of the Ainu of the Northwest Coast of Southern Sakhalin", American Anthropologist 74
- Penrose, Roger(1997)"The Large, the small and the human mind", The press syndicate of the University of Cambridge, 『心は量子で語れるかー21世紀物理の進むべき道をさぐるー』, ブルーバックス
- Fritz-Albert Popp1 & ZHANG Jinzhu(2000), "Mechanism of interaction between electromagnetic fields and living organisms", Science In China 43-No.5, pp.508-518
- PoPP Fritz-Albert(2001)," About the Coherence of Biophotons", International Institute of Biophysics
- PoPP Fritz-Albert(2001), "Biophysical Aspects of the Psychic Situation," International Institute of Biophysics", URL: http://www.lifescientists.de/ib0203e_1.htm
- PoPP Fritz-Albert(2003), "Consciousness as Evolutionary Process based on Coherent States" , International Institute of Biophysics
- Popp Fritz-Albert, Sophie Cohen Sophie, and Yan, Yu(2003) "Nonlocal effects of biophoton emission from the human body", International Institute of Biophysics
- R. Brandenberger, V. Mukhanov, and T. Prokopec(1992), "Entropy of a Classical Stochastic Field and Cosmological Perturbations", Physical Review Letters, vol69, No.25,
- Reigle, David (2001), "The Original Sankaracarya", A Quarterly Publication of Edmonton Theosophical Society, 5, no.3, Fall 2001, pp.57-66, 70-71

- Restak, M. Richard (1993) "Receptors:" Bantam Book, 『化学装置としての脳と心—リセプターと精神変容物質—』, 新曜社
- Pribram H. Karl (2006) What makes man human: thirty-ninth James Arthur lecture on the evolution of the human brain, 1970: *Journal of Biomedical Discovery and Collaboration*
- Pribram H. Karl (1982), edit Ken Wilber, "The Holographic Paradigm and Other Paradoxes—Exploring the Leading Edge of Science", Shambhala 『空像としての世界—ホログラフィをパラダイムとして—』, 青土社
- Princeton University (2009) "Global Consciousness project": <http://noosphere.princeton.edu/>
- Prigogine, Ilya (1984) "From being to becoming ~ Time and Complexity in Physical Science", 「存在から発展へ—物理化学における時間と多様性—」, みすず書房
- Puthoff, E. Harold (1989) "Source of vacuum electromagnetic zero-point energy", *Physical Review*, vol 40 No.9
- Robert, G. Jahan and Brenda, J. Dunne (2001), "A Modular Model of Mind/Matter Manifestation (M^5)", *Journal of Scientific Explanation*, 15, No.3
- Robert, G. Jahan and Brenda, J. Dunne (2005), "The PEAR Proposition", *Journal of Scientific Exploration* *Journal of Scientific Exploration*, 19 No.2
- Rogers R. Carl (1980), "A Way of Being", Houghton Mifflin Company, 『人間尊重の心理学—わが人生と思想を語る—』, 創元社
- Sanematsu, Katsuyoshi (2005) "Dialogue with Shaman in Andes—Cosmology that religious anthropologist observed—", 「アンデス・シャーマンとの対話」, 現代書館
- Schrödinger, Erwin Rudolf Josef Alexander (1983) "My View of the World", Ox Bow Press
- Schrödinger, Erwin Rudolf Josef Alexander (1984) "Erwin Schrödinger" world-view by Schrödinger with edit by Ken Wilber "Quantum Questions"
- Shankara, Adi (1988) "Upadesahasri", Sengaku Maeda translation 『ウパデシャ・サーハスリー』, 前田專学訳, 岩波文庫
- Singer, Peter (1993) "How are we to live? — Ethics in an age of self-interest—", Reed International Book Australia Pty Ltd., Victoria, 「私たちはどう生きるべきか—私益の時代の倫理」, 法律文化社
- Singer, Peter (1993) "Practical Ethics — Second Edition", Cambridge University, 「実践の倫理」, 昭和堂
- Ralph, Adolphs (2003) "Cognitive Neuroscience Of Human Social Behaviour", *Nature Review Neuroscience* 4
- Sorokin, A. Pitirim (1941) "The Crisis Of Our Age", Oneworld Publications Ltd
- Sorokin, A. Pitirim (1957) "Social & Cultural Dynamics A study of Change in Major Systems of Art, Truth, Ethics, Law and Social Relationship", Porter Sargent Publisher
- Sorokin, A. Pitirim (1965) "Sociology of yesterday, today and tomorrow": *American sociological review* 30, No.6, Dec, 1965
- Ueda, Tetsuo (2002) "Does Myxomycete have intelligence?", 「粘菌に知性はあるか?」, JT生命誌ジャーナル 2002年秋号
- Sudakov, Viktorovich Konstantin (2008) "System Quanta As Discrete Units Of Behavior", *Zbornik Matice srpske za prirodne nauke / Proc. Nat. Sci. Matica Srpska Novi Sad*, No. 115, 5—19, pp5, pp.7
- Stanley, Milgram (1974) "Obedience to Authority ~ An Experimental View ~", Harper Collins Publishers
『服従の心理』, 河出書房新社
- Takahashi, Takao (2008), "Life, Environment and Care—Possibility of Japanese way of bioethics" *Kyusyu*
- Daigaku Shuppan-kai. 『生命・環境・ケア—日本の生命倫理の可能性—』, 九州大学出版会
- Takahashi Takao (2001) 「自己決定時代の倫理学—意識調査に基づく倫理的思考—」, 九州大学出版会
- Talcott Parsons (1950), "The Prospects of sociological theory", *American Sociological Review* 15-No.1, pp.3-16
- T, John Gray, G. Berntson, G. Gray (2002) "Social Neuroscience" *Foundations in Social Neuroscience*, pp4-pp.10
- Thagard, Paul and Zhu, Jing (2001) "Acupuncture, Incommensurability, and Conceptual Change", *International conceptual change* July 11.2001, Mahwah, NJ: Erlbaum
- Uejima, Kayo (2008) "The creation of a harmonized society by the holistic approach: Lab Link suggests free think tank for the integration of all science and thought as challenges of modern philosophy", *EJAIB* 18(5) 130-8.
- Uemura, Katsuhiko (1992) "Bhagavad Gita", 「バガヴァッド・ギータ」岩波文庫
- Weil Andrew (1996), "Spontaneous healing how to Discover and Embrace Your Body's Natural Ability to Maintain and Heal Itself", BALLANTINE BOOK,
- Whitehead, North Alfred (1919) "The concept of Nature", The tarner Lecture, 『自然という概念』, 松籟社
- Whyte Law Lancelot (1995) "Aspects of Form-A Symposium on Form in Nature and Art", 『形の全自然学—自然と芸術の形態をめぐるシンポジウム—』, 工作社, 1985.
- Wiener Norbert (1948), "Cybernetics: Or Control and Communication in the Animal and the Machine. Press. Cambridge, 『サイバネティックス 第2版』, 岩波書店
- Wiener, Norbert (1950), "The Human Use of Human Beings", 「人間機械論」
- Wiener, Norbert (1956), "I am a Mathematician", Doubleday & Co. Inc, New York, 『サイバネティックスはいかにして生まれたか』, みすず書房
- Wilber, Ken (1984), "Quantum Questions Mystical Writings of the world's Great Physicists" Shambhala, 「量子の公案」, 工作社
- Wilber, Ken (1977), "The Spectrum of Consciousness", The Theosophical Publishing House, 「意識のスペクトル」, 春秋社
- Wilber, Ken (2000), "A Theory of everything (philosophy) Theory of Everything: An Integral Vision for Business, Politics, Science and Spirituality", Shambhala
- Wolbring Gregol, (2009) "What next for the human species? Human performance enhancement, ableism and pluralism.", *DEVELOPMENT DIALOGUE* AUGUST pp141-pp.161.
- Wright, von, George, Henrik, (1981) "Explanation and understanding", Cornell University Press.

Acknowledgements

Since first design of Nous Self System as diagram and concept 6 years ago for solution of environmental ethical problem and construction of sustainable society, I keep on researching the mechanism of Nous Self System by achievement of modern western science and philosophy in diverse people. Of course, I recognize that I cannot elucidate the precise scientific mechanism of the Nous Self System with comprehensive philosophical perspectives. Therefore, a lot of diverse experts around the world have educated and supported me. I recognize that I cannot suggest the Nous Self System in this paper without collaboration by diverse people.

I express my deepest gratitude about daily guidance and support of Dr. Takao Takahashi who is supervisor in