

A Review of Economic Relationship among Self, Society and Nation: Parallels between Behavioral Economics and Economics based on the Ultron-Logotron Theory

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Abstract

A scientific, economic relationship among self, society and nation is still not clearly known in philosophy, sociology and economics because of lack of concrete human data that would enable us to substantiate it. Humanity experienced many conflicting economic and political systems. The author published an article, “The Science of Self, Mind and Body”. On the basis of the article, the two articles, “Economic Relationship among Self, Society and Nation” and “A Review of the Ultron-Logotron Theory: Consciousness and Quantum Physics” of ontological research were published. In this study, the Behavioral Economics of Richard Thaler was compared with the economics based on the ultron-logotron theory. The results of the study revealed remarkable parallels between both economics, and also a possibility of explanation of the behavioral economics by the ultron-logotron theory (ULT).

Keywords: Behavioral Economics, Ultron-Logotron Theory, Confucianism, Jeong Yeok, Communal Freedom Democracy, Self, Society, Nation.

1. Introduction

A scientific, economic relationship among self, society and nation is still not clearly known in philosophy, sociology and economics because of lack of concrete historical human data that would enable us to substantiate it (Ringmar, 2005; Acemoglu and Robinson, 2012). In the history of human social evolution, humanity experienced conflicting socio-economic and political systems, and countless wars: feudalism, industrial revolution, capitalism, communism, autocracy, democracy, totalitarianism, imperialism, information technology revolution (IT) etc. (Smith, 1776; Marx, 1867; Polany, 2001; Ringmar, 2005; Acemoglu and Robinson, 2012). There were new waves of nationalization of some privately-owned companies and banks in capitalism by governments of the United States and some European countries in order to prevent companies' economic failures resulting in large-scale labor layoffs, and to keep means of generating wealth income in public control (Wikipedia, 2012).

In addition, there have been major different religions: Christianity, Buddhism, Islam, Hinduism, Judaism, Confucianism and Taoism prevailing in societies and nations of the world with histories of religious conflicts and wars (Ringmar, 2005; Chung, 2009; Acemoglu and Robinson, 2012). Consequently, philosophers, sociologists, economists and other researchers have been investigating to study the economic relationship among self, society and nation that may lead to a desirable, ideal human society and nation for individual and social prosperity, and further harmony and peace in societies and nations (Ringmar, 2005; Acemoglu and Robinson, 2012). On the basis of the author's previous articles (Chung, 2012a, 2012b), the author published the article, “Economic Relationship among Self, Society and Nation” (Chung, 2013). Further, the author developed the ultron-logotron theory (ULT) on the basis of Confucian philosophy, Jeong Yeock, 正易, “The Book of Right Change” (Chung, 2009, 2010). “Ultrons” are building blocks of the universe. “Logotrons” are building blocks of consciousness. If one thing related to the humanity in philosophy and science is really true, the truth discovered in philosophy and science is supposed to be similarly true and valid in economic science and vice versa (Chung, 2017b). The author assumes that the truth discovered in the economic science presented in the author's article, “Economic Relationship among Self, Society and Nation” based on Confucian philosophy is similarly true in economic science, the behavioral economics of Thaler.

In this study, the author compared the behavioral economics of Thaler, Nobel Laureate in Economic Science in 2017, and the economics described in the author's publication, "Economic Relationship among Self, Society and Nation" to find possible presence of parallels between both economics, and further to examine a possibility of explanation of the behavioral economics with the ultron-logotron theory.

2. The Science of Self, Mind and Body

The author proposed a theory of the science of self, mind and body (Chung 2012b) on the basis of his mathematical research in biomedical phenomena, personal experiences, and review of recent research results brought by psychologists, psychiatrists and neuroscientists. His mathematical research involves a general mathematical formula applicable to various biomedical phenomena (Chung, 1960, 1986, 2018). The theory of the science of self, mind and body is outlined below.

- (1) A human individual is composed of the inner self (soul) and the physical self/body that seem to correspond to the "I Will" self and "I Want" self named by McGonigal (2012) who discovered that a human individual has two minds, "I Will" and "I Want" selves.
- (2) The inner self does self-control with conscience, reason, willpower, morality, creative power, emotion regulation; and guide behavior, supervising the physical self/body that senses through the sensory organ and responds to the external world, impulsively behaving for pleasure-desire and living.
- (3) The inner self (soul) is the true and real self; the physical self/body is the false self that would fade and disappear at death.
- (4) The inner self controls the physical self/body by interacting with the prefrontal cortex (PFC) of the human brain (Sapolsky, 2004; Miller and Cohen, 2001; Greene et al., 2001).
- (5) The limbic system of the brain involves in pleasure-desire and instinctive behavior of the physical self/body, and is under control of the inner/super self that interacts with prefrontal cortex (PFC) (Carter, 2014).

3. The Ultron-Logotron Theory

Interactions between self and consciousness: mind and matter are not clearly understood in science. There seem to be, to my knowledge, no articles in the literature that clearly explain the relationship between self and consciousness: mind and matter. In the author's study, the relationship is investigated, and an attempt is made to explain it.

- (1) Findings and discoveries in modern science, quantum physics, string theory, especially entanglement in the arena of mind and matter are reviewed (Penrose, 2007; Penrose, Hameroff & Kak, 2011; Griffiths, 2005; Stapp, 1999; Tong, 2009; Ochsner et al., 2002; Schwartz et al., 2005; Mitchell & Staretz, 2011; Close, 2011; Laszlo, 2007, 2008; Suplee, 1999; Capra, 1999; Hands, 2015).
- (2) Philosophical teachings of major religions, especially the Eastern Confucian philosophy are reviewed and compared with quantum physics. Confucian philosophy is described in the I Ching, the Book of Changes (William, 1967) and Jeong Yeok, 正易, the Book of Right Change (Kim, 1885; Yi, 1992; Chung, 2009, 2010).
- (3) Review of some of relevant personal experiences of precognitive dreams of the author is included in the study (Chung, 2009, 2014a, 2017a).

Comparison of characteristic aspects of the author's proposed theory of ultron-logotron and quantum physics is done. Interpretation, theoretical reasoning and imagination are carried out to reasonably explain observed findings, precognitive dreams, entanglement, and proposed theories regarding the scientific relationship between self and consciousness: mind and matter (Chung, 2014a, 2015b).

3. 1. "Ultron", 極子

In Confucian philosophy, all things are created by power of the Creator, the Non-Ultimate, the Great Ultimate. The Great Ultimate created Two Forms, 兩儀, Yin and Yang, the two primary fundamental elementary particles that are represented by a solid line (—) and a broken line (- -). The author names Yin and Yang "yin-ultron", 陰極子(U⁻) and "yang-ultron", 陽極子(U⁺), respectively. All things of the universe are generated by movements of "ultrons", 極子 (Capra, 1999; Chung, 2009, 2014a, 2014b).

Table 1 shows comparison of characteristic aspects of the ultron-logotron theory and quantum physics. Basic elementary particles, ultrons, 極子 would be analogous to strings of string theory. The ultrons are the building blocks of matter of the physical world. The yang- and yin-ultrons are positively and negatively charged, respectively.

Table 1. Comparison of characteristic aspects of the "ultron"- "logotron" theory and quantum physics

| | | | |
|---------------------------|--|--|--|
| Characteristic aspects | The "ultron"- "logotron" theory | | Quantum physics |
| Basic elementary particle | Yin- and yang-ultrons | | Quarks and electrons |
| Form | A solid (-) and a broken (-) line | | An open (~) and a closed (0) string |
| Movement | Join, movement, stillness, advance, retreat, expansion and contraction | | Split, fission, break, pinch, join, spin and oscillation |
| Property | Triple: particle, wave and consciousness | | Triple: particle, wave and consciousness |
| Energy | Yes | | Yes |
| Force | Yes | | Yes |

If external force comes to a region of space, the regional space will be excited and pulsate, and then a hidden vertical pair of particle-antiparticle emerges in it, causing material actualization of real particle and antiparticle, creating matter. The author infers that when a matter and antimatter collide and disappear, becoming virtual matter and antimatter, consciousness in the excited state super positioning to each of the pair will disappear and become a virtual consciousness in the ground state. If the above is true, then it would imply that particles of matter would have a triple property of particle, wave and consciousness (Bohm, 2006). If a mental force is presumably created by the self, it will strike the regional space that could excite virtual consciousness in the ground state to become consciousness in the excited state, creating conscious mind (Chung, 2009, 2014a). Mind and matter are interrelated and interconnected (Capra, 1999; Chung, 2009, 2012, 2014a, 2015b).

3. 2. “Logotron”, 言子

Table 2 shows comparison of characteristic aspects of “ultrons” and “logotrons”. The author names “information” that is described by David Bohm in his quantum theory “logotron”, 言子. Logotrons in the study represent contents of consciousness of mind in humans such as thoughts, feelings, colors, sounds, concepts of all things of the universe that may be expressed by words (Greek: logos). All particles, electrons, atoms and molecules are in facts waves (Hawking, 1996, 2001; Laszlo, 2008; Suplee, 1999). Quarks and electrons are currently regarded as basic elementary particles. All physical processes in the physical world are based on particles and forces (Hawking, 1996). The force-carrying particle, graviton and photon of bosons are virtual particles. The deeper structure of quarks and electrons is not experimentally observed. A wave-particle duality of electron proved by Thomas Young and Richard Feynman’s double-slit experiment has not been explained (Nichol, 2006). According to David Bohm (2006), this phenomenon suggests that an electron seems to have consciousness, interacting with the environmental background field of space. This is a transformation from a wave to a particle, and vice versa like an organism than interacting parts of an inanimate machine (Nichol, 2006).

Matter, energy and mind are different aspects of the unknown, unbroken flowing movement of totality, the wholeness. Consciousness may be the essential nature of the universe and a more subtle form than matter of the universe (Bohm, 2006).

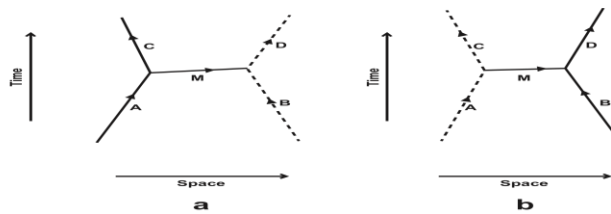
The totality, the wholeness is nonlocal and timeless; it seems to represent the Creator, the Cosmic Consciousness and his activities. Contents of consciousness are called by Bohm “information”. The author names “information” “logotron”, 言子 in this study. The quantum theory of David Bohm seems to be analogous to the teachings in Buddhism that all things of the universe are created by mind, and the universe is in a dust and aeon is in a moment (Dalai Lama, 2005); all is in one; one is in all. Logotrons are virtual particles, massless and have probably a triple property of particle, wave and consciousness, and have possessing inherent force, and having a property of spreading in space as well as remaining at an original, regional point in the holographic space. The wave propagation, if emitted from the logotron is postulated instantaneous in the non-local holographic space.

Table 2. Comparison of postulated characteristic aspects of "ultrons" and "logotrons"

| Characteristic | Ultrons | Logotrons |
|--------------------------------|---|--|
| aspects | | |
| Element of | Physical matter | Conscious mind |
| Nature | Physical | Conscious (spiritual) |
| Creation | Created by the Creator | Created by the Creator and co-creator |
| Property | Triple: particle, wave and consciousness | Triple: particle, wave and consciousness |
| State | Real and virtual | Virtual |
| Interaction between themselves | Graviton, electromagnetic force, weak and strong nuclear forces | Mental-force-carrying mentalon |
| (Speed of transmission) | (Maximum speed of light) | (Instant) |

3. 3. Interactions between Ultron and Logotron

Figure 3 illustrates Feynman’s space-time diagram of interactions between ultron and logotron. Mental-force-carrying “mentalons” exchanges between ultron and logotron, creating resonance-like effects, and perhaps exchanges between logotrons as graviton exchanges between ultrons of matter. The conscious mind of the inner self of an individual person has power to generate mentalon as well as logotrons with free will and free choice. Mentalon is virtual force like graviton; it has two states: the ground and excited states. The author infers that the quantum states result from the incoming neural stimulus in the neurons of human brain, then OR occurs (the quantum wave function collapses) when the physical self and the inner self have conscious perception through quantum computations in the microtubule automata (Penrose & Hameroff, 2011). In the quantum state of the prefrontal cortex of human brain, the quantum wave function collapses when the inner self who is an observer and does conscious cognitive action with free will and free choice, and with attention, efforts, thoughts and planning in the inner self’s mind; then logotrons in the excited state are generated from the ground state, generating conscious cognition in the inner self’s consciousness (**Fig. 1a**) ((Stapp, 1999; 2013; Kafatos, Tanzi & Chopra, 2011; Schwartz et al., 2005; Ochsner et al., 2002). The self (the true inner self) has power in the conscious mind to choose logotrons in the excited state from its ground state, changing the quantum state of the logotron with free will, free choice, attention and intention, guiding actions (Stapp, 1999; Chung, 2012). Ultrons in the excited state are generated by mentalon originated from the inner self’s conscious mind (**Fig. 1b**) (Schwartz et al. 2005; Ochsner et al. 2002). **Figure 1b** illustrates processes at the interface between mind/consciousness and brain. Existence of mentalons can be empirically recognized by their effects in the external world resulting from interactions between mind and matter in the PFC of human brain. In this matter-mind process, mentalons participate in generation of conscious mind (**Fig. 1a**) and vice versa (**Fig. 1b**). M line shows its origin on the left side with an apparent slightly upward right direction but is actually horizontal and parallel to the space axis, indicating instantaneous speed in space-time (**Fig.1a** and **1b**) (Penrose, Hameroff & Kak, 2011).



The author reviewed modern quantum physics and the Eastern Confucian philosophy. On the basis of the review and authors' personal experiences of valid precognitive dreams, the following theory is proposed (Chung, 2014a):

- (1) The “ultrons” are the building blocks of matter of the universe. The “logotrons” are the building blocks of consciousness of human mind. The “logotrons” are virtual particles. The “ultrons” and “logotrons” interact each other with mental-force-carrying “mentalon” in neurons of human brain. Mentalon exchanges between logotron and logotron or logotron of self's consciousness and logotron of consciousness superpositioned to particles of matter.
- (2) Entanglement could be explained by mental-force-carrying mentalon that exchanges between two entangled virtual quantum logotrons in particles or logotron in conscious mind and logotron in particles of matter at quantum levels.
- (3) There seem to be parallels between the “ultron”-“logotron” theory and quantum physics from the ontological perspectives, and a close agreement between the “ultron”-“logotron” theory and the Penrose-Hameroff's Orch-OR theory or the von Neumann-Heisenberg's orthodox quantum mechanics that seem to be correct descriptions and applicable to both the inner self and the physical self/body of humanity, respectively on the basis of the human individual self composed of two selves, one, the inner self and one, the physical self.

The physical world, the consciousness world and the spiritual world of our universe coexist in superposition and represent the macro-cosmos of the Creator God. The superpositioned worlds, the macro-cosmos of the Creator of our universe, the Self, seem to be analogous to the physical body, the conscious mind and the inner spiritual self in superposition that represent the micro-cosmos of the co-creator, the self of the humanity. The spiritual world is invisible but real. The spiritual world and the human world would unite in the coming kingdom of heaven on Earth where goodness will be boundless according to Jeong Yeok, 正易, the Book of Right Change of Confucius philosophy as the Bible predicts it. Virtual particles are in essence virtual logotrons (information) that are the archetype of real particles. Annihilation and creation of ultrons (matter) are secondary to action of underlying virtual logotrons in the Cosmic Consciousness (mind). This seems to suggest that the ultron-logotron theory possibly leads to the Theory of Everything (ToE).

The ultron-logotron-associated mental force, mentalon, is postulated to act on space in four different, undetermined ways, resulting in and generating four physical forces, gravitational force, electromagnetic force, and strong and weak nuclear forces. Cao, Cao & Qiang (2015) proposed a theory of everything (ToE). It describes twisted space caused by stretching and contraction as modeled by the Torque Grid as the fundamental unit of universe, generates four physical forces. The four physical forces could be similarly four different manifestations of the ultron-logotron-associated mentalon that would result in four differently distorted or shaped space of undetermined patterns.

Kak (2009) presented in his article the case of the existence of a separate principle of consciousness to complement physical law. Information of consciousness of the self, the observer, in cognition described by Kak seems to be analogous to logotrons of the ultron-logotron theory, and there appears to be a virtual agreement between the Kak's propositions and the author's hypothesis of the ultron-logotron theory.

On the basis of modern quantum physics and the ultron-logotron theory, the possible deeper structure of leptons and quarks is proposed (Chung, 2015b). A neutrino is composed of an equal number of yin-ultron and yang-ultron, and is postulated to be composed of one yin-ultron and one yang-ultron. Yin- and yang-ultron mass is 0.16 eV. Electric charge of yin-ultron is $-1.602176565 \times 10^{-19} \text{ C} / (3.19 \times 10^6 \cdot 2k)$; that of yang-ultron is $1.602176565 \times 10^{-19} \text{ C} / (3.19 \times 10^6 \cdot 2k)$. C denotes coulomb and k a number of neutrinos in a lepton. An electron is composed of two parts: one neutral part consisting of yin- and yang-ultrons and one electrical part of negative charge consisting of yin-ultrons.

Lehman & Persinger (2015, Teihard de Chardin, 1959) described in their recent article that the author integrated aspects of quantum physics with Confucian philosophy (Chung, 2015b).

It has been recently discovered that electrons split into two separate parts: a spinon carrying its spin (a neutral magnet behaving as a tiny compass needle) and an orbiton carrying its electron motion (negative electric charge) around the nucleus (Palus, 2017; Piazza, 2014; Paul Scherrer Institute, 2012). The spinon and orbiton seem to correspond to the neutral part of yin- and yang-ultrons composite and the negative part of yin-ultron predicted in the ultron-logotron theory, respectively (Chung, 2015b). Yin- and yang-ultrons in a spinon are postulated to line up in a tiny series magnet arrangement with a south and a north pole in one direction that can generate spin (Chung, 2015, 2017a; Shee, 2107).

This substructure of electron suggests that a quark in a proton is likewise composed of two separable particles, a magnetic particle of yin- and yang-ultrons composite and an electrical particle of yin- or yang-ultrons, further that a proton made of three quarks would have its spin potentially from the quark spins and its electric charge of the sum of the quark electric charges.

David Gross, Nobel Laureate in Physics, describes in his Theory of Everything that “the electron is not a fundamental, point-like particle. It must have structure to provide its dipole magnetic field. There must be orbital motion of charges within the electron...”. “The most collapsed form of matter is the neutrino, which has a vanishingly small mass. However, the neutrino must contain all of the charges required to form two particles- a particle and its anti-particle.” “The same model applies to the proton and the neutron. This model satisfies Einstein’s view that there must be some lower level of structure in matter to cause resonant quantum effects” (Gross, 2006). There seems to be an agreement among the recent findings in electrons, the Theory of Everything of Gross and the ultron-logotron theory.

In this study, when the author refers to the ultron-logotron theory, the author implies and means that the ultron-logotron theory based on the afore-mentioned science of self, mind and body.

4. The Science of Self, Society and Nation

The human self is composed of two selves, the inner self (soul) and the physical self/body coexisting in oneness. Characteristic aspects of the inner self are self-control, reason, conscience morality, willpower, wisdom, responsibility, goal, plan for future, creative work, good nature, mathematical reasoning, upholding social rules and law, sacrifice, love and compassion, free will, faith and precognitive dream. Characteristic aspects of the physical self lack the above-described aspects of the inner self but include desire of pleasure for instant gratification and instinct for living, impulsive behavior, selfishness. If the behavior is excessive beyond social rules and law, then it would become evil or even criminal (Baumeister, 2011; Chung, 2009, 2012b) since the physical self has no cognitive control and does not differentiate right from wrong.

The inner self does self-control and supervises the physical self/body with responsibility for ethics, morality, justice, and social rules and law. Consequently, the inner selves of people in organizations, societies and governments of nations establish rules and regulations, and the constitution and law in order to prevent the physical selves/bodies of people from immoral, evil acts as well as illegal, criminal acts; and keep law and order, and further harmony and peace in the society and nation.

The inner self has love and compassion. Therefore, the government likewise is responsible to establish and implement best economic and political policies for individual and social prosperity, provision of expenses for elderly population, welfare and assistance to people who are unable to work due to incurable illness or unemployment.

- (1) There seems to be a considerable agreement between characteristic aspects of the “communal freedom democracy” based on the author’s perspective of the science of self, mind and body (Chung, 2012b) and the Ringmar’s “*surviving capitalism*” (Ringmar, 2005).
- (2) Individuals of leaders and workers or citizens (self) shall perform their work to their full capacity with responsibility and obey social rules and law.
- (3) Governments of societies and nations shall perform their duties with responsibility, guide and govern activities of individuals and societies in order to achieve individual and social prosperity, and protect their human rights and freedom.
- (4) The “communal freedom democracy” based on the perspective of the science of self, mind and body seems to be a desirable economic and political institution for prosperity, harmony and peace in societies and nations.

Characteristic aspects of the inner self as the leader and the physical self/body as the worker are compared in case of their application to the “communal freedom democracy” based on the perspective of the science of self, mind and body. Compared characteristic aspects are illustrated in Table 3. The inner self representing the economic leader (or entrepreneur) accomplishes innovations of technology and scientific discoveries through research and development (R and D) that can bring improvements of productivity and a great economic success. The physical self/body representing the worker labors but his/her own inner self of the worker can also make innovations in technology for improvements of productivity. The leader represented by the inner self and the worker represented by the physical self/body produce goods and services through utmost mutual cooperation, bringing individual and social prosperity, physical wellbeing, economic equilibrium and harmony, and spiritual growth and happiness, so enjoying freedom and democracy in communities.

Table 3. Comparison of characteristic aspects of the "communal freedom democracy" of Chung (2009, 2013) and the "surviving capitalism" of Ringmar (2005).

| Characteristic aspects | Communal freedom democracy | Surviving capitalism |
|-----------------------------|----------------------------|----------------------|
| Free market | + | + |
| Supervision and labor | + | + |
| Productivity | + | + |
| Research and development | + | + |
| Cooperation | + | + |
| Competition | + | + |
| Government intrusion | - | - |
| Workers' solidarity | + | + |
| Protective arrangements | + | + |
| Monopoly | - | - |
| Profit | Fair | Fair |
| Prosperity | + | + |
| Social security | + | + |
| Social rules | + | + |
| Democracy | + | + |
| Welfare | + | + |
| Unemployment compensation | + | + |
| Surviving capitalism | + | + |
| National defense | + | + |
| Education | Free* | Free* |
| National health insurance | + | + |
| Friendship | + | + |
| Religion | + | + |
| Morality | + | + |
| Freedom of speech and media | + | + |
| Human rights | + | + |
| Harmony and peace | + | + |
| Love and compassion | + | ()* |
| Share in economy | + | ()* |
| Confucianism | + | ()* |
| Self-realization | + | ()* |
| Ideal society | + | ()* |
| Philosophy of "self"*** | + | ()* |

Free*: Free from basic education to college within the national budget allowed.

()*: Empty space means that no description of the issue is given.

Philosophy of "self"**: It is described in the author's article, *The Science of self, mind and body* published in *Open Journal of Philosophy*, 2 (2012) 171-178.

(+) means presence.

(-) means absence.

Individual activities are consisted of internal and external actions that involve in general the self, mind and body; and the self, society and nation, respectively. Major external actions of human individuals are associated with economic activities, involving his/her work or job as a member of family, society and nation and further of the world.

The author proposed a socio-economic and political theory of “communal freedom democracy”, an ideology related to economic and political institutions on the basis of the science of self, society and nation (Chung, 2013). The theory is outlined in this study and reexamined.

5. Communal Freedom Democracy

The constitution written on the basis of the fundamental principle that guarantees human rights and freedom will be protected throughout the society and nation. The constitution has just and fair representations of all citizens, and all citizens are created equal before the law (Okon, 2013). The economy is allowed to be built on a free-market principle (*laissez-faire* policies), not on an exclusively controlled, planned economy but shall have well-planned economic modifications to the free-market economy for non-market values, individual and social wellbeing, innovation and economic growth if needed. Outstanding and gifted entrepreneurs will work together with a hard-working labor force, mutually helping and sustaining each other with brotherly love, and unprecedented, admirable, constructive cooperation; and without exploitation between them (Porter and Kramer, 2011; Obisi et al., 2013; Chung, 2007). Free trade is potentially beneficial to all people, provided with appropriate social and international rules.

Each person in the nation will work to his/her full capacity. The reward to each person for the work shall be guaranteed and reasonably provided. All citizens are entitled to have sufficient food, clothes, housing, medical health insurance and best basic education as their birthrights, and to pursue, happiness, quality life, and prosperity (Ringmar, 2005; Chung, 2009, 2012b; Nikkhah, 2012). Personal property is legally recognized and protected. The government shall make its utmost decisive and efficient efforts to establish the best policies to promote economic growth and create jobs. The government shall not be intrusive and will not unreasonably interfere in personal and business affairs. The central bank shall be independent so that money will be properly supplied and circulate for good economic growth and prosperity as good blood circulation for good health (Lee, 2012). The government shall endeavor to its fullest capacity to provide people basic wellbeing and to establish policies to provide expenses to the elderly population and people who are unable to work, and to render assistances to unemployment.

The government shall implement the most appropriate financial and economic policies, allocate the revenue from the best and most appropriate tax code system, and provide funds for national education, medical health insurance, strong national defense, governmental expenses, scientific and technological research, construction of infrastructure for social prosperity and so forth. The government should attempt to control deficit spending and avoid over-taxation, provide tax cuts whenever possible, and keep a balanced budget, and it is obliged to implement the most appropriate financial and economic policies. The national education is principally free within the range that the budget allows. The government shall give opportunities for learning to all citizens. The education is the gate to individual and social success. Young students can receive the highest education and professional skills in their field of study as long as they have sufficiently qualifying talents, capabilities and will. Teachers shall have the highest standards at each level of education. Geniuses in any areas of culture, science, engineering, technology, economy, music, art, education, and so forth shall receive encouragement and financial aid from the government and/or private sectors so that they will be able to fully develop their gifted talents and abilities, and would benefit all people.

The roll of parents is very important in educating children about morality and right, appropriate human relationships of propriety 禮 (li) (Chung, 2009; 2010)

The national defense force must be maintained and strengthened with a holy mission to protect the sovereignty of the free democratic nation and human rights from foreign enemy invasions and terrorisms (Chung, 2009; Cho,

2012). Selfish uninhibited capitalism, racism, nationalism and Marx's communism would be abandoned (Polany, 2001; Ringmar, 2005, Chung, 2009; Acemoglu and Robinson, 2012). Unreasonable harm and pollution to the humanity and the natural environment of the planet Earth in industries and man-made products should be prevented with environmental protection policies. It seems to the author that the society of the "communal freedom democracy" based on the science of self, society and nation is explicitly demonstrated in Table 3. In the society of the communal freedom democracy, there would be eradication of poverty, dream and hope for future, industrialization and democratization in business with advanced scientific and technological discoveries and knowledge (R and D), and mutually beneficial and supportive, win-win, constructive cooperation among large-, middle- and small-scaled enterprises, that is, "joint growth" (shared growth) proposed as a new paradigm in economy by Yu (2013); and "creating shared value" of Porter and Kramer (2011). Governmental blueprints of people's happiness would help the poor have self-reliant jobs, leaving no one behind in enjoying their happy lives. In the society of the "communal freedom democracy", workers would work hard under economic leaders with admirable mutual constructive cooperation and be guaranteed for shared prosperity and wellbeing (Porter and Kramer, 2011; Obisi et al., 2013). Individual and social prosperity would lead to a family-like world under the heaven with harmony and peace.

6. Economic Relationship among Self, Society and Nation

Many countries of the world have been suffering economic depression, recession or crisis. People of those countries are worried about their financial insecurity and currently seeking better lives of happiness. To my knowledge, there seem to be no scientific articles in the literature of philosophy, sociology and economics that clearly and practically explain the economic relationship among self, society and nation (Ringmar, 2005; Bell, 2008; Acemoglu and Robinson, 2012). In this study, the author's previous theories are reexamined with further expanding to more practical aspects of social, economic and political realms of societies and nations, and comparing with other economic and political theories: Ringmar's "surviving capitalism", Marx's communism, Acemoglu and Robinson's economic and political theory, teachings related to economics in Confucianism and Islam and so forth. In the study, an attempt is made to propose a more practical, detailed theory of an economic relationship among self, society and nation on the basis of the perspective of the science of self, society and nation, and the ideology of "communal freedom democracy" that may help people achieve individual and social prosperity, and harmony and peace in societies and nations. Each person (self) of people, workers and leaders who are able to work in the society and nation shall do his/her best in carrying out his/her duty with responsibility and mutually beneficial, supporting cooperation in order to overcome any difficulties. Economic and political institutions based on ignorance, greed and falsehood could be abandoned and those institutions based on wisdom, compassion and truth shall be upheld.

Countless social difficulties and problems would be hopefully resolved by individual and governmental well-planned economic practices such as global economic growth, creative knowledge and discoveries in science and technology in IT, clean energy and biotechnology; job creation as a number-one governmental policy, environmental protection; appropriate implementation of austerity measure, financial compact and growth stimulus policy; investment in human resources, compliance with law and order; openness in international trade, and open, transparent market access (WTO, FTA) (Kenen, 1994) and so forth. IT revolution would advance globalization of business by direct contacts between companies and consumers, and freely available expert knowledge regarding businesses and latest technology through Internet for not only the rich but also the poor (Yunus, 2007).

Shared prosperity and shared welfare would be accomplished as done by millions of unknown and known philanthropic people, entrepreneurs and workers of the world through their taxes and donations, including the world-known Bill Gates and Warren Buffett of the United States (Lupo, 2008) as well as governments of prosperous nations (Foroohar, 2012).

The social business of microcredit of Yunus shall be fully supported, together with implementation of measures and policies suggested by the communal freedom democracy in order to achieve alleviation and/or eradication of economic and social problematic difficulties, economic balance and equilibrium between supply and demand, and between individual welfare and economic growth, further to achieve harmony and peace in the society and nation of the world.

A following theory is proposed in this study on the basis of the author's previous researches and review of relevant recent discoveries brought by philosophers, sociologists and economists, and Confucian and Islamic economic teachings, including the review of the "social business" of microcredit developed by Yunus and "creating shared value" of Porter and Kramer: (1) There seems to be a considerable agreement in general between characteristic aspects of the "communal freedom democracy" based on the science of self, society and nation (Chung, 2013) and "the surviving capitalism" of Ringmar (2005), Acemoglu and Robinson's economic and political institution theory (2012), Yunus's "social business" of micro-credit (2007) or "creating shared value" of Porter and Kramer (2011).(2) A considerable agreement seems to be present between fundamental principles of the "communal freedom democracy" and Confucian or Islamic teachings related to economics (Chan, 2012; Chen, 2012; Sardar, 2007; Okon, 2013).(3) Capitalism based on free-market principle (with modifications of well-planned economy if needed for non-market values, individual and social wellbeing, innovation and economic growth as well as "creating shared value" (Porter and Kramer)) is a fundamental economic system that will bring individual and social prosperity.(4) The governments of the state, districts and communities shall perform their duties with responsibilities, promote, guide, monitor and govern effectively and decisively economic activities of individuals and societies in order to achieve individual and social prosperity as well as to sustain and preserve non-market values and "shared value" (physical wellbeing, morality, spiritual happiness, freedom, democracy, human rights as well as social needs and companies' growth, environmental protection etc. that may require modifications with planned economy and political centralization for law and order) with a partner of the government and private sector. (5) Each person (self) of workers and leaders shall work to his or her full capacity with admirable cooperation and mutual support for individual and social shared prosperity and welfare; and with responsibility; and shall obey social and state rules (the constitution and law) and serve other people as well as themselves with morality and propriety 禮 (li).(6) The "communal freedom democracy" based on the perspective of the science of self, society and nation seems to be a desirable economic and political policies for prosperity, harmony and peace of societies and nations of the world.

7. Comparison of Behavioral Economics and Economics Based on the Ultron-Logotron Theory

Economists have been developing various theories and models of human behavior and interactions in markets and other economic settings. Those theories are proposed to explain people's behavior in spending, saving and other household behavior. Richard Thaler, Nobel Laureate in Economic Science in 2017, found bounded rationality and limited self-control in people's decision-making in behavior.

In human behavior, there can be significant differences in cognition, self-control, willpower and motivations among individuals. Thaler introduced behavioral economics by incorporating insight from human psychology into economic analysis. He documented how economic designs are influenced by the aspects of human psychology: cognitive limitedness, self-control problems, and social preferences (Akademien, 2017).

The author postulates that there could be Gaussian normal distribution in degrees of cognition, self-control or social preference in humans as observed in many other biomedical phenomena (Chung, 1960, 1986, 2013).

7. 1. Self-Control Model

Thaler and Shefrin (1981) proposed a self-control model with a two-self economic man, a two-self model, in economic decision-making with limitedness. The conflict between short-run and long-run preferences is introduced by viewing the individual as an organization. At any point of time the organization consists of a planner and a doer. The willpower of the planner suppresses and controls people's behavior of the doer. There are different degrees of self-control in different people (Akademien, 2017).

In the ultron-logotron theory (ULT), human consciousness is occupied by the inner self and the physical self. The inner self supervises and controls the physical self/body. This can explain the limitedness of self-control in human behavior. There seems to be a virtual complete agreement between the behavioral economics and the economics based on the ULT regarding self-control.

7. 2. Hyperbolic Discounting Model.

Thaler (1981) provided the first empirical evidence of hyperbolic discounting model and loss aversion decision-making. Strotz (1956) hypothesized that people are born with a tendency to overvalue current consumption. Some myopic people want present gratification and discount future pleasure. "Children are known to discount the future."

Interactions between the pleasure of consuming a good (or gain) and the pain of paying (or loss) are observed in mental accounting of people's decision-making. Sensitivity to loss and gain is greater in the present events than in the future events (Akademien, 2017).

In the ULT, the physical self has no cognition of time of present or future, accepts immediate gratification of pleasure-desire and is concerned of current consumption. The physical self's decision making would follow the hyperbolic discounting model.

7. 3. Planner-Doer Model

Thaler and Shefrin (1981) proposed the planner-doer model in decision-making by people. A person has two selves, a short-sighted, myopic doer and a far-sighted planner. The planner is concerned with life-times utility, while the doer wants to do only one period and is completely selfish or myopic. The planner is concerned of the maximization of lifetime utility, while the doer cares only current utility and unconcerned of future. There are conflicts between two selves, the far-sighted planner and the near-sighted myopic doer (Akademien, 2017; Thaler and Sunstein, 2008; Shefrin and Thaler, 1988).

In the ULT, the inner and the physical selves coexist in an individual. The inner self makes the future plan and goals, and behaves, following the plan and for the goals. The physical self/body behaves for pleasure-desire without consideration of future plan. There seems to be a virtual, complete agreement between behavioral economics and economics based on the ULT. The behavioral economics seems to be explained by the ULT.

7. 4. Dual Self Model

As above described, the dual self model proposed by Thaler and Shefrin (1981) corresponds to the dual selves described in the ULT. Strotz (1956) presented a hypothesis of the different selves, current self vs. future self. The conflicting two different selves result in limited self-control and deviations from standard rationality decision-making and behavior. Thaler and Sunstein (2008) described the two cognitive systems, the automatic system and the reflective system in human brain. The automatic system is instinctive, "uncontrolled, effortless, associative, fast, unconscious, and skilled as its key features". The reflective system is thinking, "controlled, effortful, deductive, slow, self-aware and rule-following as its key features". The key features of the two systems of Thaler and Sunstein are virtually analogous to the characteristic aspects of the physical self and the inner self of the ultron-logotron theory regarding behavior.

7. 5. Neuroscientific View Model

Shefrin and Thaler (1988) noted the planner located in the prefrontal cortex (PFC) of the human brain and the doer located in the limbic system. In this neuroscientific view, the PFC is functionally the executive of the brain and the limbic system involves in pleasure-desire and emotion (McLure et al, 2004). McLure and his collaborators demonstrated that the dopaminergic limbic system is activated by decision involving immediate available rewards. In contrast, the prefrontal cortex is associated with subject's preferred choice. Higher cognitive function located in the PFC.

In the ULT, the inner self interacts with the prefrontal cortex and controls the physical self/body by suppressing the limbic system in a competition between the inner self and the physical self. There seems to be a remarkable agreement between the neuroscientific view model and the ULT. Animals have consciousness but no conscious mind (Chung, 2017b). Primates have a large brain but do not show behavior like human behavior for future planning and goals (McLure et al, 2004). There seems to be a remarkable agreement between the neuroscientific view model and the ultron-logotron theory regarding neuroscientific propositions.

7. 6. Impulsiveness Model

Ainslie (1974, 1975) proposed an impulsiveness model in decision-making as observed in his pigeon experiments. "Pigeons were given a small, immediate food reinforcement for pecking a key, and a large delayed food reinforcement for not pecking the key. Most pigeons pecked more than 95 % of trials." They failed to make a choice of not pecking the key for the delayed, large food. Choice is a function of mind. In the ULT, the physical self/body behaves with impulsiveness for immediate gratification of pleasure-desire and instinct for living. The inner self of human beings has the conscious mind with willpower and free choice. Animals have consciousness but lack mind as afore-mentioned (Chung, 2017b). People who have poor cognition and self-control, and weak willpower impulsively behave for pleasure-desire and are unconcerned with the future. The pigeons' instinctive acts seem to be explainable by the ultron-logotron theory.

7. 7. Default Decision, Automatic Enrollment and Libertarian Paternalism

Default decision, automatic enrollment and libertarian paternalism in applications of the behavioral economics are inferred to be explainable as follows: in these economic applications, minimal invasion policy, liberal decision and option of discontinuation of policy, and far-sighted planned policy are presented to people, resulting in better decision-making and happy consequences with better data (Benartzi and Thaler, 2013; Thaler and Sunstein, 2008; Akademien, 2017). In these practices, the physical self's decision making is suppressed, and the inner self's self-control is lessened and alleviated and/or replaced by other external policy-makers' plans and policies in organizations, a government or companies. By these policies, "the policy-makers, a government or companies are acting as an external self-control device "(much like parents who tell children that money gifts at Christmas must go into a savings account)" (Thaler and Sunstein, 2008; Strotz, 1975). It seems to the author to possibly explain from the standpoint of the ULT that the physical self's decision-making is suppressed, and the inner self's self-control is lessened, alleviated and/or replaced with plans and policies of other external policy-maker, a government or social planner of companies, a nation or organizations.

7. 8. The Summary of Comparison of Both Economics

A remarkable agreement is present between the behavioral economics and the economics based on the ultron-logotron theory. The behavioral economics seems to be explainable by the ultron-logotron theory. The behavioral economics provide empirical and possible experimental evidence of existence of the inner self and the physical self/body coexisting in individual humans. The results of this study further reveal the scientific, economic relationship among self, society and nation. Animals' behavior strongly suggests and explains the physical self/body's behavior of humans. There seems to be, to my knowledge, no articles in the literature of economics that describe the inner self (the true self) and the physical self (the false self) coexisting in an individual human that would determine the human behavior in decision-making in various economic circumstances. (Thaler, 1981; Thaler and Shefrin, 1981; Shefrin and Thaler, 1988; Ainslie, 1975; Thaler and Sunstein, 2008; Benartzi and Thaler, 2013; Akademien, 2017; Sugden, 2013).

Applications of the truth discovered by Thaler and his collaborators in the behavioral economics seem to have greatly contributed to people, societies and nations for improving health, wealth and happiness (Thaler and Sunstein, 2008).

8. Ideal Society and Nation

Each person (self) of people, workers and leaders who are able to work in the society and nation shall do his/her best in carrying out his/her duty with responsibility and mutually beneficial, supporting cooperation in order to overcome any difficulties. Economic and political institutions based on ignorance, greed and falsehood could be abandoned and those institutions based on wisdom, compassion and truth shall be upheld. Current countless social difficulties and problems would be hopefully resolved by individual and governmental well-planned economic practices such as global economic growth, creative knowledge and discoveries in science and technology in IT, clean energy and biotechnology; job creation as a number-one governmental policy, environmental protection; appropriate implementation of austerity measure, financial compact and growth stimulus policy; investment in human resources, compliance with law and order; openness in international trade, and open, transparent market access (WTO, FTA) (Kenen, 1994) and so forth. IT revolution would advance globalization of business by direct contacts between companies and consumers, and freely available expert knowledge regarding businesses and latest technology through Internet for not only the rich but also the poor (Yunus, 2007).

Shared prosperity and shared welfare would be accomplished as done by millions of unknown and known philanthropic people, entrepreneurs and workers of the world through their taxes and donations, including the world-known Bill Gates and Warren Buffett of the United States (Lupo, 2008) as well as governments of prosperous nations (Foroohar, 2012).

The social business of microcredit of Yunus shall be fully supported, together with implementation of measures and policies suggested by the communal freedom democracy in order to achieve alleviation and/or eradication of economic and social problematic difficulties, economic balance and equilibrium between supply and demand, and between individual welfare and economic growth, further to achieve harmony and peace in the society and nation of the world.

Science and technology would advance and accomplish unimaginable discoveries for human needs and convenience (Kaku, 2008; Franklin, 2012). In the human evolution, current societies would evolve to an inconceivable, ideal society, the kingdom of God (*the Holy Bible, Jeong Yeok, 正易*). Kim Hang (1885) was the author of *the Book of Right Change, Jeong Yeok, 正易* and a great Korean scholar and a master of Confucianism, Buddhism and Taoism. He saw extraordinary symbols of the coming new world in his vision after eighteen years of hard study and meditation. He admired and respected Confucius, calling him an eternal teacher of ten-thousand generations. Both of Confucius (*the I Ching*) and Kim Hang (*Jeong Yeok 正易*) predicted the coming kingdom of heaven and a year of 360 days without leap years (Chung, 2009; 2010; 2012b; 2013). Current theory in the human evolution holds that the modern human, *Homo sapiens* migrated from Africa to the Middle East about 120,000 years ago (The National Geography Society, 2007; Chung, 2015a). According to *the Book of Right Change, JeongYeok*, the year of 1884 A. D. was 118,643 year (Chung, 2010, 2012). It is suggested that the East and the West would unite and there would be boundless goodness in the kingdom of God. Kim Hang wrote that right human relationships of three thousands of propriety 禮 (li) and one righteousness 義 (yi); and beautiful music 樂 (yuè) will prevail in the coming world and bring peace and harmony (Chung, 2010). Kim Hang said that he wrote what Heaven and Earth, the Creator said to him, and that it was time and order. Kim Hang is said to have completed Confucianism teachings, *the I Ching*, the oldest Chinese philosophy.

Confucian teaching includes four principles (Chung, 2013b, 2018):

1. To cultivate one's own self first,
2. To well manage one's family second,
3. To ideally govern his/her country if elected by people to do,
4. To contribute to peace and harmony of the world finally.

In the Dragon and Flower Era predicted in Buddhism, human intelligence will be far advanced, so that there will be no antagonism or conflicts in the human world. The hearts of the people will be as follows: where people today regret when they cannot take another's property by force, defeat or hurt others, people in the coming world will be worried when they cannot give to others or help others. Where people today's individuals, families, societies and nations defend themselves by erecting fences and walls, there will be harmony without limitations in the coming world. Whereas people today are ruled by material civilization, people in the coming world will control material civilization with strengthened spiritual culture, as they will have highly advanced morality (Chung, 2005).

Christianity teaches the doctrine of trinity of Holy Father, Holy Son and Holy Spirit. In Confucianism, there is a doctrine of three origins of '10 and 5 and 1 Word'. 10 represents the Non-Ultimate (无極, Wu Chi), Creator; 5 the Ultimate Emperor (皇極, Huang Chi), Saint; and 1 the Great Ultimate (太極, Tai Chi), Power of Creator. There seems to be an agreement between Christianity and Confucianism (Chung, 2009, 2010, 2012b, 2013).

The author wishes to share the above described story of Confucius and Kim Hang with readers because of its important philosophical implications. Confucianism represented by Confucius and Kim Hang upholds moral and religious values as the supreme goal in human lives as other major religions, Christianity, Buddhism, Islam, Judaism and Hinduism teach.

9. Conclusions

The following conclusion is proposed on the basis of results of this review and comparative study of both behavioral economics and economics based on the ultron-logotron theory.

1. There is a remarkable agreement between the behavioral economics and the economics based on the ultron-logotron theory (ULT).
2. The behavioral economics seems to be explainable by the ultron-logotron theory (ULT).
3. The behavioral economics and the neuroscientific view of McLure and his collaborators provide empirical evidence of the dual selves, the inner self and the physical self/body that coexist in individual humans. The inner self controls the physical self by interacting with the prefrontal cortex (PFC). The physical self is associated with the limbic system. Both selves in an individual interact through the PFC and the limbic system.
4. The communal freedom democracy is presented as desirable economic and political policies.
5. An ideal society and nation in the future for the humanity is described.
6. The results of this study reveal a scientific, economic relationship among self, society and nation.

7. Applications of the truth discovered by Thaler and his collaborators in the behavioral economics seem to have greatly contributed to people, societies and nations for improving health, wealth and happiness. Further research would be needed for verification of the conclusion.

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