



Future Society: Science, Religion and Parapsychology

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Abstract

Face the COVID-19 and various disasters, we consider future. First, we discuss scientific future and future society, and should take responsibility for pursuing truth, goodness and beauty. Next, based on the modern sciences, we research the seven possible mathematical and physical models on “soul”, which is future after death. Third, the main religions believe in the afterlife, so we discuss the Buddhist outlook on life, especially, we research epistemology, methodology and other philosophical thought in *The Sutra of Hui Neng* (六祖坛经). These will help to overcome world crises. We may welcome a bright future.

Keywords: Future; Society; Science; “Soul”; Religion; Buddhism.

1. Introduction

A sudden COVID-19 swept the world crazily, which casts a huge indelible shadow on the whole society and everyone's future. Science is powerful, but not omnipotent. It is an important problem that how to face unexpected disasters we must calm and fearless. Spread of disease and global terror had left no peaceful oasis on our beautiful Earth.

For this we should take a positive scientific attitude, at the same time have compassion of humanitarianism and the religious spirit. Further, it would be better if predictions could be made.

Rees (2003), published book *Our Final Century*, which expresses a terrible premonition of scientists: modern civilization has only half the chance to transition to the 22nd century. Looking around the now world, many people with insight are full of a deep sense of suffering for the 21st century. Earth, human “Noah’s Ark” in our vast universe, will be like the “Titanic” suffered the disaster of extinction? For 21st century we are full of suffering, and must try to pursuit a better future. In this paper, we research future, “soul”, religions and their relations.

2. Scientific Future and Future Society

A well-known physicist Wilczek (2015) found a beautiful question as nature’s deep design in scientific development from Pythagoras, Plato, Newton, Maxwell to Einstein and quantum theory, and proposed two basic methods: symmetry and frugality. A mathematician Stewart (2007) published book *Why Beauty Is Truth: The Story of Symmetry*. Mathematics as beauty and symmetry is group. This is also first basic principle in physics (Chang, 2018b).

We proposed three dimensional truth-goodness-beauty space of ideal society and life (Chang, 2018a), and beauty is a positive direction. Einstein said: “The search and striving for truth and knowledge is one of the highest of man’s virtues.” Scientific future will pursue necessarily microscopic particles, or huge Universe, or macroscopic complexity (Chang, 2021a).

Economy is base of developing society. The knowledge economy shows a new paradigm of economic growth. Based on its main characteristics, we proposed the four theorems of the knowledge economic theory (Chang, 2012b;2013b).

Some predictions are very accurate (Clarke and Eddy, 2017). Usual futurology is based on big data, but its difficulty lies in some complex factors, such as, the nonlinear causality, chaos and feedback, etc. We discussed general futurology as predictions of various future natural and social phenomena, and researched its six methods: natural scientific methods, social scientific methods, computer simulation methods, cultural methods (including Chinese traditional Yi), religious methods, and mystical methods (including parapsychology). Then mathematical and physical methods are discussed. Further, we search Back Map and its some results (Chang, 2019).

Entropy increase as a new world view (Rifkin and Toward, 1981) is always pessimism for future. But, we proposed possible entropy decrease for isolated systems in natural and social sciences due to internal interactions (Chang, 1997;2005), and discussed the entropy economics and entropy society, and obtained a total formula of entropy change (Chang, 2015a;2020b;2020c). Based on the basic social laws on energy and entropy, we proposed three social developed patterns: 1) The nonlinear limit and cycle pattern of three elements; 2) the synergetic pattern

on society-economy-environment developed together; 3) the promotion-restraint pattern on Five-Elements for future sustainable society (Chang, 2015a).

A well-known futurist (Toffler, 1970;1980;1990;1995;2006) published a series of books on futurology. Nicholas Negroponte (1970;1999) proposed some futurological ways. Adrian Berry (1974;1995) published some books on futurology. Howe and Wain (1993) edited *Predicting the Future* from science, economics, medical frontier, and Buddhist, etc. Slaughter (1995) researched the foresight principle for cultural recovery in the 21st century. Bell (1997), discussed foundations of futures studies in human science for new era. Sardar (1999), edited *Rescuing all of our Futures*. Brockman (2002), edited *The Next Fifty Years*. Canton (2007), proposed ten future problems in the next 20 years. Randers (2012), proposed the global forecast for 2052 as the next forty years. Sardar (2013), searched future of all that matters.

For the future and crisis usual analysis is divided into pessimism (Huntington, 2004; Laqueur, 2007) or optimism (Dator, 2002; Jumonville and Mattson, 2007; Rawls, 1971; Wolfe, 2009). Burrows (2014), pointed out that information technology will give the government unprecedented ability to monitor citizens, and it will become a powerful tool in the hands of dictators. Wolfe looks into future of liberalism. We believe in the real strength and the progress of the society for our world.

We proposed the theorem of transformation from quantity to quality for future social development. It should be a developed direction in the new century. We must discard single linear expansion, and a developing aim should transform into multi-levels, high quality and variety for human overall development (Chang, 2013a). Further, we researched the Chinese cultural-social ecology, whose aim is human and nature are completely harmonious, and reach the highest state of the unity of nature and human (Chang, 2020a). From this explore the way to resolve the human crises. Human futures have many uncertainties, Clegg (2015) searched ten billion tomorrows. But, human decision-making will shape the future of our world.

2021 Science's Sixth Five-Year Plan of Japan aims at "the super-intelligent society (Society 5.0)". It includes three aspects: social change, strengthening ability on research and development, and talent training. This should be consistent with breaking through ideological imprisonment and developing parapsychology. Recently, Vietnam has begun to attach and develop parapsychology.

3. Future after Death and "Soul"

Many great scientists, such as Schrödinger (1958) investigated mind and matter. Brian D. Josephson, winner of the 1973 Nobel Prize in physics, is director of Mind-Matter Unification Project. I. Prigogine, winner of the 1977 Nobel Prize in chemistry and founder of dissipative structure theory, always appreciated the mystery of experience of transcendence. He finally said to his students, if I were a young researcher now, I would study the mind-body problems. This is the great challenge of the 21st century.

Most Americans believe there is life after death, i.e., existence of "soul". This is an important problem in religion and life (Greeley and Hout, 1999; Harley and Firebaugh, 1993), and is also the issues worthy of study in modern science and sociology (Flannelly *et al.*, 2012; Lombard and Selverian, 2008; Thalbourne, 1996). We analyze and study a lot of information, then believe that different cases exist after death for different men and women: I. Men death and soul disappear. II. Short-term presence, then dissipation or reincarnation. III. Long-term presence, resurrection and into heaven, or into hell, or become long floating ghost.

Based on the modern sciences, we research the seven possible mathematical and physical models on "soul".

3.1. Phase Transformation Theory

According to general physics and phase transformation theory, there are various jumps among different human functional states, in particular, a jump between life and death. Further, bigger jump of life possesses stronger lag, which corresponding stronger inertia for bigger mass. This is also an extensive inertia. As a special example, lag from life to death should exist necessarily. This is perhaps a type of soul, and is more obvious for huge energy, stronger body or more sudden death. It is namely a physical and mathematical proof for a soul and the life after death.

3.2. Quantum mechanics and Tunnel Effect

Any living things have life and death. According to the extensive quantum mechanics (Chang, 2002;2012a;2018d), a life is surrounded by death, and corresponds to an infinite deep potential trap. Its energy spectrum and momentum of Schrödinger equation is necessarily discrete (Flugge, 1999; Landau and Lifshitz, 1977):

$$E_n = \frac{H^2 \pi^2}{2MR^2} n^2, \text{ and } p_n = \pm \frac{H\pi}{R} n. \quad (1)$$

Therefore, living things with energy are all quantization. It is basis of the extensive quantum biology (Chang, 2012a).

According to the tunnel effect of quantum mechanics, if the deaths of some men or women are not the infinite deep potential trap, and are a finite potential barrier V_0 (for $0 < x < a$), the transmission coefficient will be:

$$T = \left[1 + \frac{1}{\frac{E}{V_0} \left(1 - \frac{E}{V_0} \right)} sh^2 \left(a \sqrt{2(V_0 - E)} / H \right) \right]^{-1} \quad (2)$$

$$T \approx \frac{16E(V_0 - E)}{V_0} \exp[-2a\sqrt{2(V_0 - E)} / H]. \quad (3)$$

This is namely a possible soul reincarnation as gods or spirit, and has always a probability. Its strength may become bigger along with increase of self-energy E , or decrease of potential barrier V_0 . It will enter the universe, and resonance with the universal wave function.

According to New Testament, Jesus as great saints could heal the blind and other diseases, and created many miracles, so the self-energy of Jesus was huge, and his death was also a terrible injustice. When $E = V_0$ or $E > V_0$, $T=1$ from Eq.(2). Such it may describe the resurrection of Jesus as a whole.

The most amazing rainbow phenomenon in death process is that the body is completely transformed to light wave, photons and the wave function. A famous book *The Tibetan Book of the Dead* searched soul and reincarnation.

3.3. Nonlinear Wave and Soliton

Third possible mathematical-physical model of “soul” is the nonlinear waves of some equations. Based on the discrete life, it may be described by soliton solutions and shock wave, etc., which shows “soul” self goes out from body. Further, the nonlinear waves possess the recurrence, which corresponds to the reincarnation.

3.4. Wormhole Model

Fourth possible mathematical-physical model of the “soul” is the wormhole model, which is a tube passed through space-time based on general relativity (Chang, 2016).

3.5. Hawking Quantum Evaporate Theory

Fifth possible mathematical-physical model of “soul” is the Hawking quantum evaporate (radiation) theory for black hole (Birrell and Davies, 1982; Hawking, 1974). Here man or woman tends to death (human black hole), and a pair of macroscopic particles, even body and “soul” under certain conditions, is produced due to the quantum fluctuations. When a particle gets into death, another particle released is possibly a “soul”.

3.6. The Thought Field

Sixth possible mathematical-physical model of “soul” is the thought field (Chang, 2003), which is based on many experiments and the theoretical principles of modern science. The thought field is emitted when a living being has an idea or thought, whose energy is directly proportional to a frequency,

$$E = H\nu, \quad (4)$$

where ν is frequency, and H is an as yet undetermined coefficient. The thought field is characterized by many different factors: Its frequencies can be strong or weak, and concentric or disorderly. The thought field is probably a new fifth interaction, and is a special extensive quantum theory (Chang, 1990;2002;2012a). Under some conditions, the thought field outside the body may form a type of “soul”.

3.7. Quantum Entangled State

Seventh possible model of “soul” is the quantum entangled state (Fry, 1995; Ghosh and Mandel, 1987; Horne *et al.*, 1989; Yu *et al.*, 2008), which is a spooky action at a distance (Salart *et al.*, 2008). Epicurus believed that “soul” is also a physical object. According to the quantum entanglement and quantum teleportation (Bennett *et al.*, 1993; Bouwmeester *et al.*, 1997; Furusa *et al.*, 1998), the resurrection of Jesus may also be demonstrated and described.

Moreover, Blanke (2002), researched stimulating illusory own-body perceptions, which the parts of the brain that can induce out-of-body experience, which corresponds to soul.

Parapsychology shows possibly new interaction, higher dimensional space-time, new many worlds, and some special functions, which can sense and detect new information (Chang, 2018c). These are also related each other, and show existence of two fields: human thought field and outside information fields. W. Von Braun pointed out: science found that nothing disappears without leaving a trace. Nature will not die, it will only transform. This is the development of consciousness and mind, and is also related to the new field and wave. These are the detection of various information fields, and the new information field is also a new space.

Recently, we proposed three dimensional body-mind-spirit worlds on human society and parapsychology (Chang, 2020a;2021b), in which mind and spirit worlds are all related with religion and philosophy. So far, some observed results imply “ghosts” and “soul” are probably the existences of some biological or non-biological objects. Any observations and detections on mind and spirit worlds and on relations between both and matter are all valuable.

4. Religion and Buddhism in Modern Society

Einstein said: Science without religion is lame, religion without science is blind. Star and Bainbridge (1985) searched the future of religion.

The main religions (Buddhism, Christianity, Islam, etc.) believe in the afterlife. We discussed relations between modern social sciences, sociology of religion and Buddhism, and proposed the basic principles of Buddhism, which

are: (I) The essence of world principle, from formation, dwelling, decay and emptiness (成住坏空) of all bodies and phenomena, to birth, aging, sickness, and death of the mankind, or arising, abiding, changing and extinction of all existences, they are universal rule. This is the reality of life, and is also a fixed objective law of the universe and the essence of everything. It is a world outlook. (II) The Prajna (wisdom) principle is the Four Noble Truths, i.e., suffering, accumulating, extinction and the way (苦集灭道). Because all acts are transient, essential universal truths contain no ego-self, all desires are suffering, so nirvana is tranquility. Buddha says that nothing exists on its own, but always has come from earlier circumstances. It is an epistemology and methodology. (III). The Dependant Origination (the law of causality) and the Emptiness of Nature (缘起性空) principle. This is the most key principle. This is similar to cause and effect, and is the effect of karma power. It is an outlook on life, and is also a rule on doing good works (Chang, 2015b). We should be enlightenment: all things in the universe are the Essence of Mind itself, for which neither created nor can it be annihilated. In essence, the Buddha did not see a separate and benevolent creator who could act on our behalf. He saw the interdependence of all life and the cause and effect of actions which create their own future.

Based on (I), Buddhism leads us through (II) to reach (III). Further, from (III) we can enlighten (I) at a higher new level, and mind may reach peaceful and pleasure always. It forms the base and way of life on Buddhism. Other rules are supplement. For example, the Noble Eightfold path, and the commandments (the gauge rules) are supplements for (II). The Noble Eightfold path is Right Understanding, Right Intent, Right Speech, Right Action, Right Livelihood, Right Effort, Right Mindfulness and Right Concentration. We may pass through commandment and meditation to reach wisdom. The Karmas of three lives are supplement for (III).

Buddhism is rich and deep, and is also quite simple, in essence. Basis of Buddhism is that everyone has Buddha-nature. From the Emptiness of Nature and the same Essence of Nature, these derive necessarily the equality for every living being. Buddhism is the highest method of self-enlightenment and of mind-body pleasure, and is the only effective means which can be looked back after a long journey, and put down then obtain large comfortable (Shambhu) and large pleasure. Enlightenment has different levels, whose basis is looked back after a long journey, put down, and follow karma (accept what comes according to circumstances), therefore, we will be happy everyday.

Sixth Patriarch in China is Hui Neng (慧能, 638-713). He provided an apotheosis on “the lowest class may have the sharpest wit.” His book *The Sutra of Hui Neng* (六祖坛经) explains everyone possesses Buddha-nature, and may reach Buddhahood directly.

The Sutra of Hui Neng said: “The mind is very great in capacity, since it pervades the whole Universe. When we use it, we can know something of everything, and when we use it to its full capacity we shall know all. It is namely that all is one, and one is also all. When our mind works without hindrance and is at liberty to ‘come’ or to ‘go’, then it is in a state of ‘Prajna’”. The basic thinking line of *The Sutra of Hui Neng* is mostly mind, enlightenment, and own Essence of Mind. It carried on *Diamond Sutra*, in which “When they may realize their own Essence of Mind, and thereby reach Buddhahood directly” and “one should use one’s mind in such a way that it will be free from any attachment.” Then it aroused the Song-Ming Neo-Confucianism, and the Lu-Wang mind philosophy, etc.

Fifth Patriarch in China Hwang Yan said: “Sentient beings who sow the seeds of enlightenment. In the field of Causation will reap the fruit of Buddhahood. Inanimate objects void of Buddha-nature. Sow not and reap not.” Buddhism emphasizes Dependant Origination (the law of causality), while causality is base of various natural sciences and some social sciences. It expresses a relation of cause and effect, and is the principle that nothing can happen without a cause. Buddhism and science are the same for causality.

Further, we research some relations between *The Sutra of Hui Neng* and philosophical propositions:

1). Buddhism belongs to idealism. Hui Neng is a great philosopher of the most thoroughgoing subjective idealism. Descartes proposed: “Cogito, ergo sum.” This is that weltanschauung belongs to individual, and is human and mind philosophy. When Bhikkhus viewed the wind or the pennant motion, Hui Neng said to them: “It was neither, and that what actually moved was their own mind.” It has the advantage of harangue, and shows a relation of appearance and essence. This “all is mind, mind is all” is much visualized statement of Hume’s perception. *The Sutra of Hui Neng* said: “All things in the universe are the Essence of Mind itself”. “Who would have thought, that the Essence of Mind is intrinsically pure! Who would have thought that the Essence of Mind is intrinsically free from becoming or annihilation! Who would have thought that the Essence of Mind is intrinsically self-sufficient! Who would have thought that the Essence of Mind is intrinsically pure! Who would have thought that the Essence of Mind is intrinsically free from change! Who would have thought that all things are the manifestation of the Essence of Mind!” *The Sutra of Hui Neng* said: “Without enlightenment there would be no difference between a Buddha and other living beings; while a gleam of enlightenment is enough to make any living being the equal of a Buddha.” Buddha-nature is universal and the same for everyone. Only difference is that an enlightened man becomes Buddha, and an ignorant man is mortal. It is the most thoroughgoing monism. *The Sutra of Hui Neng* said: “He who is humble and meek on all occasions and polite to everybody has thoroughly realized his Essence of Mind, so thoroughly that his Path is free from further obstacles. This is the way to take refuge in ourself.” I think that Buddhism may be called the super-idealism. All is void, all is enlightenment, all is way, and all is the Essence of Mind (self-nature).

2). Epistemology. Shin Shau’s stanza is: “Our body is the Bodhi-tree. And our mind is a mirror bright. Carefully we wipe them hour by hour. And let no dust alight.” It is the gradual school. Hui Neng’s stanza is: “There is no Bodhi-tree. Nor stand of a mirror bright. Since all is void. Where can the dust alight?” It is the sudden school. The

Bodhisattva Sila Sutra says: “Our Essence of Mind is intrinsically pure, and if we knew our mind and realized what our nature is, all of us would attain Buddhahood.”

3). Methodology. The Descartes’ philosophy is method of inquiry and of doubt (Wolfe, 2009). *The Sutra of Hui Neng* has specially two chapters as methodology: *Questions and Answers* and *His Final Instructions*. Buddha said, “When the mind is pure, the Buddha Land is simultaneously pure.” “No matter where they happen to be, they are always happy and comfortable.”

4). The statements of *The Sutra of Hui Neng* concentrate on the main points, and are very simple and clear method for the broad masses of the people. It also obeys with the Occam’s razor. In actual life, *The Sutra of Hui Neng* may exert an imperceptible influence. Its modern value will be immeasurable.

Existentialism explores life and death, which is the eternal proposition of mankind, and is also the driving force of all religious pursuits, M. de Montaigne (1533-1592) said, med meditation on death is freedom. Whoever learns to die no longer has an enslaved mind, and ignores all the bound and enforced. Who teaches death, i.e., teaches life. Buddhism has the most thorough understanding for life and death. The simple life has less desire, and equality among all living beings has less contention. If people can understand thoroughly life and death, so they will be less attention of fame and wealth. Everyone is equal before death. Death proves that all fame and wealth are empty. Death can be one of the greatest life experiences.

Hui Neng’s thought is a towering tree. From this “in five petals the flower will be complete”. Lao-tzu, Confucius and Hui Neng are three Chinese great saints. For philosophical meaning, the Hui Neng’s thought is more close to philosophy. He is a great philosopher, and is first comprehensive expression of the mind philosophy. In history Hui Neng as an illiterate man is the greatest simon-pure genius in Chinese history. He may compare with only Joan of Arc (the Maid of Orleans) in 15 century (1412-1431) for world history. However, both prodigies show complete different aspects.

5. Summary

Future is the big data era, in which the essence of world is data, everything all is data (Feinleib, 2013; Schonberger and Cukier, 2013). Based on the social physics, Pentland (2014) emphasizes the idea-information flow beyond the material-energy flows, and derive the evolution and change of social structure and cognitive structure. Further, he proposed the idea flow as sources of cultural norms and innovation in future society, in which cooperation than competition, communication than trading, and flexible peer relations than cold class struggles are more important. An extended method of the idea flow is data commons and the new deals on data, they will build better society.

Human always pursue felicity. But, what is felicity? It is a find oneself. Dante’s *The Divine Comedy* describes visually different meanings of life. Philosophy and reason guide our through hell and purgatory, and belief guides into paradise. Three are unified. Reason and belief are duet of life. Hell, purgatory and paradise are trilogy of splendid life. These living movement and process are exceed epoch, and it is an eternal pursue. *The Divine Comedy* shows just this eternal truth of life. The highest paradise of felicity exists only in belief and religion. As long as belief is not fallacious, you with belief are namely happy. If you tasted happy, anyone cannot deprive your felicity.

In a word, life is very short, and is essentially simple. We should enjoy life, and love truth, goodness and beauty. Modern society brings man to alienate, and mazes oneself, and lose the Essence of Mind. Everyone can meditate self-questioning, and decrease desires and dispute. This should be a developed direction of future society, and a pursued aim of modern men. If you are full of life every day, you will be fearless. Buddhism emphasizes that “no evil and good practice” are the fundamental foundation of social harmony and world peace, so our world will surely become a society of peace, harmony, mutual assistance, mutual respect and mutual love. This will be a bright future.

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