



Unified Field Theory: Chinese Vision Through Yin-Yang Philosophy

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Abstract

This paper presents a brief review of the universal archetypal opposites yin and yang, the ancient Chinese philosophy, in relation to unified field theory. The researchers have given detailed account of the origin, history, application, and practice of the yin-yang philosophy in Chinese tradition. Its application and worthiness in unified field theory have been examined through yangton and yington hypothetical theory, use of yin-yang philosophy as virtual and physical duality, as bipolar dynamic logic, as complex mechanics etc. It remained to be examined by the theoretical physicists.

Key Words: *Unified Field Theory, Chinese Vision, Yin-Yang Philosophy, Virtumanity, Dialectical nature, Virtual and physical duality, Yangton and yington hypothetical theory, Complex-valued mechanics, Bipolar dynamic logic.*

Introduction

This paper starts from where the last paper [Paramguru 2025] ended. The particular portion may be cited here – “As regards the incompatibility between GR and QM is concerned, Beichler provides an interesting observation; he writes – ‘Relativity is first and foremost about form (structure) and the quantum is primarily all about function, which come together as one of the most fundamental dualities (known as non-commuting quantities in physics) in nature, but there is always a bit of each in other. However, these two ideas, form and function, are not necessarily incompatible since there is always a little of one in the other at a higher level of understanding’ [95]. Here, most interestingly, the author puts a picture of the ancient Chinese symbol called ‘T’ai-chi T’u’, or ‘Diagram of the Supreme Ultimate’, meaning – GR and QM can combine the same way as ‘yin and yang’, the universal archetypal opposite poles of nature combine” [232]. Thus, the subject matter of this paper is combining the dualities of form and function utilizing the universal archetypal opposites of yin and yang, the ancient Chinese philosophy.

Incidentally, significant amount of literature on this subject by a number of Chinese scholars are available. A resourceful software engineer cum entrepreneur Wei Xu has successfully combined philosophy of nature, universal field theory (UFT), natural cosmology and ontological evolution by using yin-yang philosophy to understand the virtual and physical dualities which exist in nature. Many of his publications are through

his own theoretical framework Virtumanity Inc which means sciences in dialectical nature of virtual and physical duality [Xu 2016, Xu 2017, Xu 2019a, Xu 2019b]. Another scholar Edward Tao Hung Wu (1952-), born in Taiwan, graduate from Tsing Hua University, PhD from UCLA, living in California, USA; besides his software and piezoelectric entrepreneurship interests, during last years, has developed yangton and yington hypothetical theory [Wu 2015a, Wu 2015b, Wu 2016a, Wu 2016b, Wu 2018, Wu 2024]. While, Wen-Ren Zhang, a PhD in electrical and computer engineering and a Professor teaching quantum computing has published on bipolar features of yin-yang philosophy [Zhang 2009, Zhang 2012]; Ciann-Dong Yang, a Distinguished Professor in the Department of Aeronautics and Astronautics at National Cheng Kung University, Taiwan, and a specialist in complex mechanics and quantum mechanics has thrown significant light on realization and verification of yin-yang theory [Yang 2010].

Literature on this subject continues to pour in. Luo Shan, working as a pharmacist in a staff hospital in China, keeps interest in the traditional Chinese yin and yang theory and its application to scientific understanding of matter and systems [Shan 2019]. Qiu-zi Cong, Xiang Yu and De-yang Yu, all of them Professors in China, have integrated theory of physical particles and yi field [Cong et al 2021]. Wutong T. Song and Hongxin Cao, Chinese researchers in the area of Traditional Chinese Medicine (TCM) with specific interest in concepts of yin-yang, consciousness, and psychosomatic health have published their work on reality and application of yin and yang [Song and Cao 2022]. Based on this treasury of literature, this paper aims at giving a brief account of this Chinese vision of yin-yang philosophy in relation to UFT.

What is Yin-Yang philosophy

The book, *The Tao of Physics*, written by the Austrian born American physicist Fritjof Capra [1975] has already been discussed by the present author in the pages of this journal. The origin of yin-yang philosophy is Taoism, in the words of Capra – ‘The Tao is the cosmic process in which all things are involved; the world is seen as a continuous flow and change’ [104]. He goes on further – ‘The principal characteristic of the Tao is the cyclic nature of its ceaseless motion and change’ [105]. Here comes the polar opposite yin and yang which give a definite structure and meaning to the cyclic patterns of the motion of the Tao, the nature. The Chinese believe that all manifestations of the Tao are the results of the dynamic interplay of yin and yang. This symbolism of the archetypal pair yin and yang is pretty old, might have been derived more than two thousand years ago, and afterwards generations of people built it up through their thought process into a fundamental Chinese concept. These two archetypal poles of nature represent not only bright and darkness, but also male and female, firm and yielding, above and below, and many more. Yang is believed to be the strong, male, creative power associated with heaven; whereas, yin is taken as the dark,



receptive, female representing the earth. In this symbol of yin and yang, the former is always denoted by black and the later by white; however, it is believed that there is always some black within the white and vice-versa. The Chinese people also believe that all things have yin and yang, which are universal and opposites, yet they complement and supplement each other with interdependence forming unity and harmony. In the course of this article, as will be seen, various authors will bring out various other essential characteristics of yin-yang.

The Yangton and Yington Hypothesis

As indicated above, this hypothesis has been built by the entrepreneur-thinker Edward Tao Hung Wu. The basis of this hypothetical theory is a circulating pair named as 'Yangton and Yington' with an inter-attractive force termed as 'Force of Creation'. When this pair, made up of some-sort-of superfine magic-like particles, moves in space is termed as 'Photon'; and when it sits in still is called as 'Wu's Particles' or 'Still Photon'. This particle named according to the name of the author is apparently imagined as the real 'Photon', and the circulating pair is given the apparent impression of yin-yang, though the author has never spelt out in this manner anywhere in his publications. He starts with the paper "Yangton and Yington – A Hypothetical Theory of Everything" [Wu 2015a] where, after defining the basic terms, he spells out that this pair can be spontaneously created at anywhere and anytime in the universe, and he proposes this to be the mode of creation of our universe. Then, he goes on explaining skillfully - how his proposition worked during the creation of our universe according to the Big Bang theory; how the free photon travelling at the speed of light combines Particle Physics and Quantum Mechanics explaining all the properties of light; how the Still Photon becomes the building block of all matters and the Force of Creation becomes the base for four forces. Finally, he explains Einstein's relativity equation and existence of dark matter according to his hypothetical Yangton and Yington theory.

In his subsequent papers he has expanded his hypothetical vision of Yangton and Yington theory to explain subatomic particle structures in relation to the unified field theory [Wu 2015b]; to interpret gravitational waves, Newton's Law and Coulomb's Law by particle radiation and interaction theory [Wu 2016a]; to define the meanings and inter-relations between mass, momentum, force and energy of photons and subatomic particles [Wu 2016b]; and finally brings out his book My Universe: A Theory of Yangton and Yington Pairs [Wu 2018], with a summary [Wu 2024]. Between 2015 and 2024, a total of 71 papers and a book have been published by the author highlighting all details about his hypothetical theory [Wu 2024]. In the words of the author himself, his theory is: 'As a result, Wu's Pairs is an excellent model in study of the universe. Even without direct proves of the existence by physical experiments, Wu's Pairs and Yangton and Yington Theory can be considered as the foundations of a binary universe. Just like the



binary system to the decimal system in mathematics, many theories and principles developed in the binary universe can be used effectively in the real universe' [2024, 13].

The Yin-Yang Theory

Unlike the entrepreneur-thinker Edward Wu whose work formed the previous section, the present section discusses three publications, the first by a specialized pharmacist working in a Chinese hospital, the second by three Chinese Professors, and the third by Chinese researchers in the area of TCM, all with specific interest in concepts of yin-yang and straightaway talk about applications of yin-yang theory. The pharmacist, Luo Shan's paper reads "The Law and Applications of the Theory of Yin and Yang" [Shan 2019]. Here, the author starts with the conventional nature of yin and yang which is according to him – 'the substance that constitutes the phenomena of matter system', where 'the scientific connotation of "Yin and Yang" is that "Yang" is the macro-structure of the quality system of matter phenomena, and "Yin" is the energy flow potential field matching with "Yang" [27]. Then he goes on deducing the laws and elaborating their meaning and interpretation. He points out that, during matching of yin and yang, since the latter represents the matter formation with mass M, it is easy to observe and measure it, and because the former represents the energy flow, it is difficult to observe and measure it. Then he presents the matching methods and finally concludes that 'To sum up, the law of Yin-Yang balance explains that the phenomena of the matter system are the projection of mass-energy interaction. The maintenance of phenomena must maintain the integration of the mass-energy state, and the change of phenomena is accompanied by the direction of state change, which can be judged by the change of state parameters' [31].

The second publication is the book The Theory of Physical Particles and Yi Field [Cong et al 2021] also deals with similar philosophy. The authors also term this theory as Li-Yi field theory, or, simply Liyi; and here, they combine the traditional Yi concept and the five-element theory of Li Yin and Yang, which integrates, with it, the analytical results of Western natural science. The authors claim that it also forms the LiYi time-space concept, and particularly add that these four fundamental principles are based on the Li Yin-Yang/mass-energy-time-space four-image principle of nature. Further, the conservation of field momentum, the Li Yin-Yang principle of interaction, and complex energy conservation are also supplemented with it.

The third title reads "The Reality and Application of Yin and Yang" [Song and Cao 2022], where the authors illustrate the origin, history, and characteristic of Yin and Yang philosophy in Chinese tradition, then explain how it functions, and finally demonstrate their application. 'Yin and Yang originated in Chinese civilization more than 2000 years ago. In the first stage, ancient philosophers discovered yin and yang and their laws of motion ---. In the second stage, yin and yang and the laws of yin and yang



movement are used to explore methods and techniques' [25]. Then the authors show that 'Yin and Yang reveal the nature and state of matter' [25], they also reveal 'the laws of physical motion' and 'transfer of energy conversion' [26]. Then they have shown their practical applications in the field of agriculture, heat transfer in different aquifer media, solar thermoelectric conversion, Chinese traditional medicine, and discovery of binary numbers for use in computation etc. 'In conclusion', they mention that 'yin-yang is a key to unlocking the treasures of traditional Chinese civilization, which can help to bring into play its original values, and continue to provide new insights and directions for the development of modern science and the advancement of humanities' [23].

Virtumanity – Yin Yang Physics - UFT

Wei Xu, originally a theoretical physicist from China, then an electrical and computer engineer from the United States of America, working in America as a resourceful entrepreneur, simultaneously delivered comprehensive innovations in information technologies as well as scientific principles and philosophies in natural cosmology and UFT. We are interested in the later. It seems that he 'received a set of the divine books in the old classic manuscripts: worlds in universe', during the period 2009 – 2019, from where the ground-breaking philosophies of theoretical physics, starting from constitution of elementary particles to inception of ontology of nature emerged' [Xu 2019b, ix]. Based on which he straightaway jumped to the statements – 'The year 2015 bids farewell to an intellectual age defined by classical physics, from Newton's mechanics of 1687, to General Relativity of 1915, to Quantum Theory of 1920s, and to mathematical physics of today... The vagueness of mathematized physics has been gone awry and pushed to extreme for a forty-year search on a "Theory of Everything", followed by another sixty-year period wasted on String or Superstring Theory, M-Theory, and other fairy-tale physics' [Xu 2019a, x]. From here he moves on to the solution – 'our ancestors discovered that duality orchestrated and harmonized their reality: sun-moon, warm-cold, materialization-consciousness, body-mind, male-female, thought-action, and more. -- What promise hides in the dualities of physics: space-time, wave-particle, energy-mass, spin-charge, positive-negative, symmetry-asymmetry? -- These dualities are balanced, interdependent, and inexorable. They are manifest in each particular action and movement, the outcome of a dialectical struggle for superiority. -- It is essential to believe that the true framework of our universe is a topological hierarchy of virtual and physical duality, flourishing everywhere among the great streams of life, inspiration, and enlightenment. -- Yinyang duality is rooted in the philosophy of seven millennia past, when our ancestors built a profound metaphysics. -- Now is the time to realize the duality of metaphysics and physics, and to unite these disciplines in a greater whole' [xi].



Then he created 'Virtumanity Inc', a platform to deal with the sciences in the dialectical nature of virtual and physical duality, where he put up all his thoughts as well as research work which he names 'yin-yang physics'. The basis of yin-yang is 'the supernatural principles in an environment of virtual space', that the 'Chinese tradition has developed the profound metaphysics and established scientifically the natural laws of Xing or YinYang duality: the reciprocal interaction of the opposite Matter and States is to cause all universal phenomena. -- The Yin or Yang, or simply – and +, are the states of or the operation on an element or object, which form a coherent fabric of our nature, as exhibited in all physical existence.' [Xu 2019b, 4]. From this basic principle, he proceeds with explaining the 'duality of nature'; 'energy and mass', where he shows these two to be one duality of yin-yang nature of universe; 'universal topology'; 'quantum fields'; 'symmetric and asymmetric fields'; 'principles of ontology'; with generation of essential equations at each stage. His last conclusion is – 'Finally, quantum ontology integrates general relativity, quantum curvature, gravitational fields seamlessly together' [180].

The following two sections deal with specific scientific issues, one, bipolar dynamic logic; and the other, complex-valued mechanics, linked with yin-yang theory.

Yin-Yang Theory and Bipolar Dynamic Logic

Wen-Ran Zhang, a computer engineer, alone or along with his co-authors, published many papers using the bipolar dynamic logic to link Yin-Yang to various phenomena such as, quantum cellular automation, quantum computing, equilibrium-based bio-system simulation, bipolar fuzzy logic etc. Here, just two of his publications have been picked for a brief discussion, one, where he uses 'bipolar Yin-Yang relativity' as 'a unifying theory of nature, agents, and life science' [2009]; and the other, how a 'Yin-Yang bipolar atom' can lead 'an eastern road toward quantum gravity' [2012]. In these two publications, the author has cited some significant references of Yin-Yang philosophy being used by prominent people in the past such as: 'the legendary German mathematician Leibniz invented binary numeral system in the 17th century and attributed his invention to YinYang trigrams' and 'now binary numeral system is a basis for all digital technologies' and 'according to the Daoist cosmology YinYang stands for "everything has two sides or two poles"', in the former [2009, 382]; and 'legendary Danish physicist Niels Bohr, a father figure of quantum mechanics, brought YinYang into quantum theory for his particle-wave complementarity principle' in the later [2012, 1261]. Even, later, Bohr designed his own coat having the Yin-Yang logo with the Latin statement "contraria sunt complementa" which means "opposites are complementary" [1262]. The two publications are based on this particular philosophy.

In the former publication, the author has introduced 'Yin Yang bipolar relativity and a real-world bipolar string theory as a unification of nature, agents, and life science.'

He has based his argument on the facts that, 'bipolarity as an integral and inherent part of equilibrium is inseparable from equilibrium-based holistic truth'; that, action-reaction forces, particle-antiparticle pairs, negative-positive energies, input and output, or Yin and Yang in general are the most fundamental opposites of nature; and that, 'the Yin-Yang bipolar sub-atomic particles discovered at the Fermi National Accelerator Laboratory show typical bipolar equilibrium/non-equilibrium properties'. Then, by introducing string theory and using 'nine axioms and 16 conjectures for microscopic and macroscopic agent interaction, regulation, coordination, and exploratory scientific discovery in physical and social sciences', he has proved that 'bipolar relativity constitutes an equilibrium-based axiomatization of physics – a partial but most general solution Hilbert's problem 6' [2009,377]. In conclusion, he mentions that 'the significance of this work lies in its equilibrium-based open-world open-ended unification of nature, life science, and socioeconomics as well as general relativity, electromagnetism, quantum mechanics, causality, and agent interaction' [382].

In the later publication, the author starts with the facts that 'Yin-Yang bipolar equilibrium-based approach to physics and science provides a fundamental super symmetrical alternative for scientific unification' and 'atom as a basic unit of matter should follow equilibrium or non-equilibrium conditions' [2012, 1261]. Then he introduces a causal theory of Yin-Yang bipolar atom based on bipolar dynamic logic and bipolar quantum linear algebra which 'provides a springboard to an equilibrium-based logical unification of particle and wave, matter and antimatter, relativity and quantum theory, strings and reality as well as big bang and black hole' [1262]. Finally, the author brings out five postulates: (1) 'Bipolar quantum entanglement is the most fundamental entanglement in quantum gravity', (2) 'YinYang bipolarity is the most fundamental property of the universe', (3) 'YinYang bipolar atom is a bipolar set of quantum entangled particle and antiparticle pairs', (4) 'Gravity is fundamentally large or small scale bipolar quantum entanglement', and (5) 'The speed of gravity is limited by the speed of quantum entanglement and not by that of light' [1269]. The final lines of his conclusion read – '--- the equilibrium-based approach to quantum gravity is fundamentally different from other approaches in philosophical basis. Since all beings must exist in a certain equilibrium or non-equilibrium, a scientific reincarnation of philosophy is predicted' [1270].

Yin-Yang Theory and Complex Mechanics

One very important publication here is "A scientific realization and verification of Yin-Yang theory: complex-valued mechanics" [Yang 2010] by an author who is a super-specialist in the real scientific domain of complex and quantum mechanics. He starts with the fact that the philosophy of Tai Chi believes that the Tao, meaning nature, contains two parts, one is yang which is the observable (real) part, and the other is yin

that is the unobservable (imaginary) part. Mathematically, it means that the nature is a complex-valued world and what we sense and measure is only the real physical world we experience in our daily life. The author compares it to be similar as the complex-valued mechanics, also known as quantum Hamilton mechanics with which he works in his laboratory, which is based on the same philosophy that the actual scenario of dynamic motion happens in complex space and the physical reality is merely its projection into the real space. Then he makes the statement – ‘Complex-valued mechanics (complex mechanics in short) is a rigorous physical realization of Yin-Yang theory, providing a unified approach to classical mechanics, quantum mechanics and relativistic mechanics under complex space.’ [136].

The author mentions that the symbol of Tai Chi is a combination of yin and yang, the former is marked with black and the later with white; although it is believed that always there is some white in the black and vice-versa. The author also believes that the Yin-Yang theory has remained an issue of pure-philosophy for a long time and this complex mechanics study of his is the first scientific realization of this theory through the mathematical language of complex variables and points out strong evidence of Yin-Yang duality in quantum mechanics. To prove his point, the author proceeds to first define a motion in complex space according to the Yin-Yang philosophy, then derives its equations of motion from the quantum Hamilton equations, and subsequently verifies ‘the Yin-Yang duality in quantum mechanics by showing how complex motions and their related real/imaginary interactions give rise to various quantum phenomena as observed from the real space’ [137]. All these quantum phenomena include tunnelling, spin, quantization, uncertainty principle, multiple paths and wave-particle duality, all originate from the Yin-Yang entanglement, i.e., the interaction between real and imaginary motions in complex space. Finally, he concludes – ‘--- just as the interaction between Yin and Yang creates the universe, the interaction between real and imaginary motions produces all the observed quantum phenomena. The couplet shown in Fig. 11 highlights the role of the complex mechanics as a bridge between the Yin-Yang duality in Tai Chi and the wave-particle duality in quantum mechanics.’ [154].

Conclusion

In the introduction, the objective of this paper was fixed to combine the dualities of form and function utilizing the universal archetypal opposites of yin and yang, the ancient Chinese philosophy. To what extent this objective is fulfilled? Obviously, many of the studies presented above have used the yin-yang philosophy as a combination of virtual and physical dualities, whether in hypothesis, in reality, as bipolar dynamic logic, or, as complex-valued mechanics. One citation demands a place here – ‘Therefore, yin and yang are created to describe the properties of natural substances, and the movement of yin and yang is to illustrate the change patterns of the natural substances.



Form and field are inseparable and can be transformed into each other under certain conditions. The properties of yin and yang are not absolutely fixed' [Song and Cao 2022, 25]. At least form and field find special mention. How all these studies will influence the theoretical physicists remains to be seen.

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